

STATE: Missouri
 DECISION NO.: MO83-4086
 Supersedeas Decision No. MO82-4047 dated October 1, 1982 in 47 FR 43524.
 DESCRIPTION OF WORK: Building projects, (excluding single family homes and apartment up to and including 4 stories).

COUNTY: Greene
 DATE: Date of Publication

DECISION NO. MO83-4086

LABORERS CLASSIFICATION DEFINITIONS

- Group 1 - Common labor, handling and carrying of reinforcing steel pumps of all types and heaters
- Group 2 - Asphalt raker, crusher feederman, cement finisher tender, jack-hammer and air tool operator, power tamper operator, pipe layer (concrete or clay), sand blast and gunnite nozzlemen, vibrator operator, wagon drill operator, cat-drill operator, and all work of a semi-skilled nature not listed
- Group 3 - Mason tenders: Including plasterers tender, mortar mixer and fork lift operator
- Group 4 - Powderman

POWER EQUIPMENT OPERATORS CLASSIFICATION DEFINITIONS

- Group 1 - Crane, dragline, derrick, drum or tower hoist (2 drum), power shovel or back hoe (on tracks), piledriver, power blade, motor patrol, mechanic, hydraulic, self-propelled crane, stinger or cherry picker crane
- Group 2 - Bulldozer, dirt scoop or pan, elevating grader, drum or tower hoist (1-drum), loader (track or rubber tire), tractor pusher, roller (asphalt), tractor or backhoe (on rubber tires), tractor (compaction roller or pull blade track)
- Group 3 - Fork lift, roller, tractor (compaction roller or pull blade-rubber tire), distributor, (bituminous), finishing machine (concrete paving), concrete saw (self-propelled), air compressor (500 cu. ft. or over)
- Group 4 - Oiler, oiler-driver

FOOTNOTE: a - Employer contributes 8% of basic hourly rate for over 5 years' service, and 6% of basic hourly rate for 6 months to 5 years Vacation Pay Credit, also 7 Paid Holidays.

b - 1 Paid Holiday (Labor Day)

c - \$51.00 per/week

"Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5 (a)(1)(ii))."

[FR Doc. 84-117 Filed 1-5-84; 8:45 am]

BILLING CODE 4510-27-C

	Basic Hourly Rates	Fringe Benefits	Basic Hourly Rates	Fringe Benefits
Asbestos Workers	\$16.92	2.25	\$13.63	2.10
Boilermakers	17.345	3.00	13.15	2.10
Bricklayers, Stonemasons & Tuck Pointers	13.37	1.45	12.55	2.10
Carpenters	13.13	1.43	11.95	2.10
Millwrights & Pile-drivers	13.38	1.43		
Cement Wason	12.75			
Electricians	14.55	9%+		
		1.89		
Cable Splicers	14.95	9%+	10.25	c+1.10
		1.89		
Elevator Constructors:				
Elevator Constructors	16.53	a+	10.30	c+1.10
		2.465		
Prob. Helpers	70%JR	a+		
		2.465		
Glaziers, Outside	16.50	b	10.40	c+1.10
Ironworkers	16.125	4.25	10.45	c+1.10
Labors:				
Group 1	9.55	2.35		
Group 2	9.83	2.35		
Group 3	9.98	2.35		
Group 4	10.15	2.35		
Marble Wasons, Tile Layers & Terrazzo Workers	12.82	1.45		
Painters:				
Brush & Roller	13.73	1.00		
Spray, Sandblasting, Tapers, & Paperhangers	14.23	1.00		
Plasterers	12.75			
Plumbers & pipefitters	15.17	1.33		
Roofers	12.00	.66		
Sheet Metal Workers	16.18	1.95		
Tile Finishers	10.85			

Friday
January 6, 1984

Part IV

Department of Labor

**Occupational Safety and Health
Administration**

29 CFR Parts 1910 and 1917

**Grain Handling Facilities; Safety Hazards;
Proposed Rulemaking**

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910 and 1917

[Docket H-117]

Grain Handling Facilities

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Proposed rulemaking.

SUMMARY: This notice contains proposed minimum requirements for the control of fires, grain dust explosions and other safety hazards associated with grain handling facilities. Employees in grain handling facilities have been exposed to and continue to be exposed to, fires and explosions. Additionally, employees are exposed to other safety hazards such as the dangers associated with entry into bins, silos and tanks. The proposed requirements in this notice are intended to decrease the number and mitigate the effects of fires and explosions, and to control other known safety hazards in grain handling facilities.

DATE: Comments and requests for a hearing must be postmarked by March 9, 1984.

ADDRESS: Comments, information and hearing requests should be submitted in quadruplicate to the Docket Officer, Docket H-117, U.S. Department of Labor, Occupational Safety and Health Administration, Room S6212, 200 Constitution Avenue, NW., Washington, D.C. 20210.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, U.S. Department of Labor, Occupational Safety and Health Administration, Room N3637, 200 Constitution Avenue, NW., Washington, D.C. 20210, (202) 523-8151.

SUPPLEMENTARY INFORMATION:

I. Background

National attention was focused on the hazards associated with grain handling facilities as a result of a series of devastating explosions that occurred in these facilities in late 1977 and early 1978. During December 1977 alone, 59 deaths and 49 injuries resulted from explosions (Reference 1).

The U.S. Congress, the industry and its organizations, unions, federal agencies and other interested groups responded immediately to these tragedies. Responses included an examination of the history of explosions in grain handling facilities as well as the recent tragic occurrences, an evaluation of the causes and prevention of these

explosions, and initiation of actions to contribute to the understanding and mitigation of explosions. The following discussion highlights some of the activities undertaken by the different groups identified above.

The U.S. Congress held several important hearings on the matter of fires and explosions in grain handling facilities. For example, in 1978 hearings were held by the Subcommittee on Compensation, Health and Safety of the House Committee on Education and Labor, to examine the causes of grain elevator explosions and to determine the action needed to prevent such occurrences (Reference 2).

As recently as July 1982, the Subcommittee on Wheat, Soybeans and Feed Grains of the House Committee on Agriculture held hearings to review research on methods of preventing dust explosions in grain elevators.

Additionally, as a result of several Congressional requests, the U.S. General Accounting Office conducted a study which was released in 1979 (Reference 3). The study scrutinized various aspects of grain dust explosions including the roles of certain federal agencies. One recommendation resulting from the study was that the Department of Labor evaluate the adequacy of coverage of grain elevators in the existing OSHA general industry standards (29 CFR Part 1910).

Trade associations in the grain handling industry also have been actively involved in educational efforts, scientific endeavors and dissemination of information to assist their members in minimizing the possibility of further explosions.

One major trade association, the National Grain and Feed Association (NGFA), issued guidelines in January 1978, to assist association members in improving fire and explosion safety. The guidelines addressed welding and cutting, safety training and fire drills, review of emergency procedure plans, safety communications, preventive maintenance, good housekeeping and enforcement of no-smoking rules (Reference 4).

NGFA has also held special industry conferences that have resulted in the publication of important documents relating to the design of grain elevator facilities (Reference 5) and dust control (Reference 6).

Another important step taken by NGFA was the creation of the Fire and Explosion Research Council (the Council) within the association. Funded and staffed by members of NGFA, the Council has maintained a continuing program of research activity (Reference 7). The Council's goals, as stated in a

NGFA report to Congress (Reference 8, p.3), are:

1. To gather the best information possible on the technology available to control, prevent and eliminate grain dust fires and explosions.

2. To conduct an extensive research effort to learn more about how explosions are caused and ways to control and prevent them.

3. To disseminate written and oral information to all who are interested—information that will add to the knowledge and awareness of how explosions can be mitigated.

Another industry trade association, the Grain Elevator and Processing Society (GEAPS), has been actively emphasizing training and education within the grain handling industry. In 1980, GEAPS was awarded funds under OSHA's New Directions Program. (The goal of the New Directions Program is to assist non-profit groups in providing employer and employee training programs to complement and augment the effectiveness of OSHA standards.) With that assistance, GEAPS embarked on a study of the industry's safety and health training needs (Reference 9). This has led to the development of several excellent slide/tape presentations concerning safety in grain handling facilities. These slide/tape presentations are available from GEAPS and are also available in certain OSHA Area Offices (Reference 10).

Unions representing employees in grain handling facilities (the American Federation of Grain Millers and the Allied Industrial Workers of America—both of the AFL-CIO) have been very active, through training and education, in increasing the safety awareness of those employees they represent in grain handling facilities. The Food and Beverage Trades Department of the AFL-CIO received a New Directions grant to assist in the development of a training program for the American Federation of Grain Millers (Reference 11).

The U.S. Department of Agriculture (USDA), through its various agencies has been actively concerned with the fire and explosion hazards in grain handling facilities. One of these agencies, the Federal Grain Inspection Service (FGIS), is responsible for the quality, grading and weighing of grain that is exported. Thirteen FGIS inspectors lost their lives in grain elevator explosions in December 1977.

Based on its concern for the safety of its employees, USDA set up a special task force on grain elevator safety and explosions. The task force report was issued in 1979; it included a historical

overview of fire and explosion experience in grain elevators and feed mills and contained numerous recommendations that the task force believed would prevent dust explosions in elevators (Reference 1).

In addition, USDA has been a sponsor of two major symposia relating to grain handling facilities. In 1978, the *Symposium on Grain Elevator Explosions* was held on behalf of USDA by the National Academy of Sciences (Reference 12). This symposium will be discussed later in this notice. A second, *Symposium on Grain Dust*, was held in 1979 and was sponsored by USDA together with GEAPS, NGFA, and Kansas State University. Its purpose was to present the latest research on grain dust (Reference 13). In addition to these activities, USDA has since 1978, developed and implemented a system of tracking grain elevator and feed mill explosions.

OSHA undertook several important actions directed toward increasing the safety and health of employees in grain handling facilities. In January 1978, OSHA issued the *Grain Elevator Industry Hazard Alert* (the Alert) (Reference 14) which was distributed to over 10,000 grain handling facilities and other interested concerns. The purpose of the Alert was to provide employers, employees and other officials with available information on safety hazards, as well as health hazards, associated with the storage and distribution of grain. Additionally, a listing of free consultative services was included with the Alert.

In late 1978, OSHA initiated a contract with the National Academy of Sciences (the Academy) to study the causes and prevention of grain elevator fires and explosions. The scope of the study was later expanded to include mills. OSHA believed that this additional inquiry into fires and explosions in grain handling facilities was needed before the Agency could determine how best to address these hazards. Discussion of the Academy contract and reports appears later in this notice.

On February 15, 1980, OSHA published in the *Federal Register* (45 FR 10732) a request for comments and information, and notice of public meetings concerning the safety and health hazards in grain handling facilities. Although the contract efforts with the Academy were still underway, OSHA believed it was appropriate to provide the public an early opportunity to submit views, data, and information regarding the possible development of a standard for grain handling facilities. Responses to the notice were to be

received by May 5, 1980, but due to numerous requests, the comment period was extended to June 30, 1980 (45 FR 21265).

Over 225 comments were received in response to the notice. In addition, approximately 2000 pages of testimony were received at the three public meetings which were held in Superior, Wisconsin; New Orleans, Louisiana; and Kansas City, Missouri in April-May 1980. Several points were raised consistently throughout the comments and testimony, including the following:

1. OSHA should not develop a standard until the results of research projects were available (e.g., National Academy of Sciences).
2. If OSHA determines that there is a need for a standard, it should be performance-oriented and cost-effective.
3. OSHA should emphasize consultation, education and training.
4. If OSHA develops a standard it should address the known hazards.

Information received as a result of the notice has been invaluable in assisting to focus on those factors which OSHA believes have the greatest potential to mitigate fires and explosions in grain handling facilities.

In conjunction with these information-gathering activities, OSHA increased inspections of grain handling facilities. Since there are no specific standards for grain handling facilities, OSHA relied primarily on the application of housekeeping requirements and other existing general industry standards. In some cases OSHA issued citations under the general duty clause (section 5(a)(1) of the OSH Act, supported by various national consensus standards, such as the National Fire Protection Association's standard 61-B, *Prevention of Fires and Explosions in Grain Elevators and Facilities Handling Bulk Raw Grain* (Reference 15). Significant problems were encountered in attempting to apply the existing standards and national consensus standards (e.g., numerous contested citations).

As indicated above, OSHA initiated a contract with the National Academy of Sciences to study the causes and prevention of grain elevator and mill explosions. OSHA believed it was important to increase the understanding of the problem of fires and explosions, as well as to obtain recommendations on corrective actions. OSHA chose to contract with the Academy for several reasons. First, the Academy was already working in related areas, such as the classification of dusts present in hazardous locations. Additionally, as noted earlier, the Academy had held an international conference in 1978 on

behalf of the OSHA, *Symposium on Grain Elevator Explosions*, for the purpose of developing a "common understanding of the state of the art and available courses of action regarding the grain dust hazard" (Reference 12). Finally, the Academy had the ability to gather noted scientists, engineers and other experts in related areas. Accordingly, upon initiation of the contract, the Academy established a special panel of experts to study the grain handling problem.

Subsequently, the contract effort was expanded and additional funding was contributed by the National Institute for Occupational Safety and Health (NIOSH) and USDA. The ultimate objectives of the contract are contained in the following reports:

1. An evaluation of OSHA's investigations of grain elevator disasters (Reference 16).
 2. A comprehensive discussion of the major aspects of grain elevator and mill fires and explosion problems (Reference 17).
 3. A manual including the design, installation and maintenance criteria for pneumatic dust control systems (Reference 18).
 4. A report on investigations of explosions (Reference 19).
- OSHA believes that the Academy reports are significant contributions to the literature on the safety of employees in grain handling facilities. In particular, the second report, *Prevention of Grain Elevator and Mill Explosions*, establishes corrective actions as first, second and third priority, based upon the Academy's assessment of their relative efficacy, feasibility, and cost-effectiveness (Reference 17, pp. 10-12).

The Academy's first priority actions (Reference 17, pp. 10-11) are set forth as follows:

1. Continue research on methods for reducing the dust concentration in legs to a level below the lower explosive limit.
2. Establish a housekeeping program involving a mechanical dust collection system supplemented by manual or other means.
3. Conduct rigorous preventive maintenance, especially on all parts of bucket elevators.
4. Use a pre-established and enforced permit procedure whenever welding, cutting, or other open flame work is to be done.
5. Incorporate a system to indicate belt slippage and misalignment.
6. Incorporate a method to check frequently the temperature and vibration of critical bearings.

7. Use devices to extract foreign materials from the incoming grain stream.

8. Ground all conveying and electrical equipment.

In an effort to share information resulting from the Academy contract, USDA and OSHA have distributed thousands of copies of the Academy's reports to interested persons and groups throughout the country.

Over the last several years, OSHA has received numerous communications regarding the inadequacy of current OSHA standards to deal with the hazards of grain handling facilities and requesting the development of a specific standard for grain handling facilities. In fulfilling its mission of assuring insofar as possible that the nation's employees have a safe and healthful workplace, OSHA believes that available evidence supports the need for a standard for grain handling facilities. However, OSHA also believes that it is important to provide a sound basis for the development of such a standard. It is for this reason that OSHA did not proceed with a proposed standard until it had reviewed all data and information submitted to the record, and until the Academy's reports had been published, widely distributed, and reviewed.

II. Agency Action

OSHA believes there is now sufficient data and information upon which a reasonable standard can be based to mitigate fire, explosion, and certain other known safety hazards associated with grain handling facilities. The standard being proposed by OSHA reflects this determination.

Employees in the grain handling industry are exposed to safety hazards associated with fires and explosions as well as those associated with confined spaces and the repair and maintenance of mechanical systems. There are approximately 200,000 employees exposed to these various hazards in this industry which has about 16,000 workplaces. The death and injury experience, which is described in References 1, 2, 3, 14, 17, and 21, is compelling evidence that OSHA needs to take action to reduce or eliminate these deaths and injuries. These reports clearly show that there is a significant risk to employees in this industry, and that mandatory standards are necessary. This proposal meets that need for mandatory standards.

The record indicates that fire and explosion hazards have existed in grain handling facilities for many years (e.g., Reference 20). USDA, in its task force report (Reference 1), evaluated grain elevator and feed mill explosion

experience for the period 1958 through 1978 during which time there were at least 250 explosions. Based on data from USDA and OSHA for the four years since the task force report was prepared, there were at least 29 explosions in 1979; 47 in 1980; 23 in 1981; and 13 in 1982.

In addition to the explosion experience, USDA examined grain elevator and feed mill fire experience for the years 1958 through 1975 (the source used was the National Fire Protection Association). The totals reflect only reported fires and vary from 1800 to 5300 a year. USDA, based on its experience in export elevators, estimates that there may be as many as 11,000 fires in grain handling facilities each year.

Additionally, OSHA has conducted several special studies that have indicated the existence of other safety hazards in grain handling facilities such as entry into bins, silos and tanks, and the repair and maintenance of mechanical systems. One study (Reference 21) analyzed the fatality investigations made by the OSHA field staff between the years 1977 through 1981. Over 100 fatality investigations are discussed which accounted for 126 deaths that occurred in this industry. Thus, OSHA believes that a standard developed for grain handling facilities should contain criteria for other known safety hazards.

III. Summary and Explanation of the Proposal

In paragraph (a), OSHA identifies the scope for the proposed standard for grain handling facilities. The standard would contain requirements for the control of fires, grain dust explosions, and other safety hazards associated with grain handling facilities in general industry and maritime employments including marine terminals. It is the intent of OSHA that the scope of this standard include all grain handling facilities, specified in proposed paragraph (b) of this standard, whether such facilities are located inland or near water.

In paragraph (b), OSHA is proposing that the standard apply to grain elevators, dust pelletizing plants, feed mills, rice mills, flour mills, and corn and soybean milling operations. OSHA intends the proposed standard to apply to all grain elevators, including those which may be only a segment of a facility. For example, even though the proposed standard is not intended to apply to all portions of such facilities as breweries, or vegetable oil extraction plants, it is intended to apply to grain

elevators which are segments of such facilities.

Thus, the proposed standard would cover many types of grain handling facilities of all sizes. OSHA invites interested parties to comment on the applicability of each of the provisions to various types of facilities and, in general, the appropriateness of covering the many diverse types of operations by a single standard. OSHA is particularly interested in comment, data and views on the appropriateness of coverage of small facilities. It has been suggested to OSHA that coverage not be extended to small elevator facilities under the standard or at least limited based upon the comparative risks found in large and small facilities. The possible limitation of coverage of small facilities based upon comparative risk data presents some extremely difficult issues, which OSHA anticipates will be fully addressed during the rulemaking process. On the one hand, a comparison of the incidence data for fatalities in large and small facilities reveals a considerably lower likelihood of death in the small facilities. However, the risks of injury and of fire and explosion—the principal causes of injuries and deaths in grain facilities—are very similar in small and large operations.

OSHA believes that it is important to explore the reasons for this apparent disparity in order to determine whether small facilities should be covered. OSHA also is concerned about the relatively heavy burdens of compliance imposed on small facilities by the proposal. For example, while large elevators have accounted for almost five times as many deaths from fires and explosions as country elevators between 1976 and 1982, the cost of compliance for all country elevators will be several times that for large facilities. OSHA seeks comment on ways to reduce the regulatory burdens on such facilities without reducing the protections afforded.

The proposed standard would not apply to seed plants or to those segments of facilities dedicated to oil extraction. The oil extraction process usually utilizes flammable liquids (such as hexane) which are currently covered by existing OSHA standards.

Not all grain handling facilities would have to comply with all of the paragraphs contained in the proposed standard. Paragraph (c) of the proposed standard would apply only to grain dryers which are associated with grain elevators. Paragraph (p) and (q) of the proposed standard would apply only to grain elevators which have inside or partially-inside bucket elevator legs.

The proposed standard is intended to focus on the most serious hazards in grain handling facilities. Information collected by OSHA indicates that the elevator leg is the most dangerous location with respect to initial or primary dust explosions (Reference 17). Therefore, as will be discussed below, OSHA believes it is appropriate to propose additional safeguards for those bucket elevators which are inside or partially-inside the grain elevator facility.

It has been suggested to OSHA that the proposed standard apply only to the elevator portion of a mill because the function, design, equipment, and conditions of other portions of a mill vary significantly from those of an elevator. It has also been asserted that while grain elevators and mills both handle agricultural commodities, they do not have the same history and potential for explosions.

On the other hand, the report from the National Academy of Sciences, *Prevention of Grain Elevator and Mill Explosions* (Reference 17), provides a separate Appendix entitled, "Explosions in Mills Handling Grain Products."

The report states, "Mills of any type (feed, flour, soy, rice, etc.) are subject to the same dust explosion hazards as grain elevators since their input is grain and, before processing, it is handled in the same manner as in elevators. . . . Mills, however, are subject to additional dust explosion hazards because of the actual processing of the grain" (Pg. 123).

OSHA is proposing that the standard apply to mills, but the information it possesses on mill explosions is limited. To assist the Agency in determining the appropriate application of the standard, OSHA requests fire and explosion data pertaining to mills, and information on the following questions. Should OSHA apply the standard to any other grain processing facility? Should OSHA limit the application of the standard in mills, to the receipt of bulk raw grain (mill elevators) up to equipment such as hammer mills, grinders, and pulverizers? Which provisions of the standard should apply to mills, and why?

In paragraph (c), OSHA proposes definitions for the following terms: acute debilitating health effects, choked leg, fugitive grain dust, grain elevator, hot work, inside bucket elevator, jogging, lagging, partially-inside bucket elevator, and small elevator facility. These definitions would clarify the meaning and intent of certain terms contained in the proposed standard.

In paragraph (d), OSHA proposes that an emergency action plan be developed and implemented. The plan may be

communicated orally to employees and the employer need not maintain a written plan. OSHA believes it is necessary that employees in grain handling facilities know what actions to take if an emergency occurs.

Information and comments received by OSHA support the need for preplanning for emergencies. OSHA also proposes that the emergency action plan meet the requirements currently contained in § 1910.38(a), which specifies certain minimum elements to be addressed. These include the establishment of an employee alarm system, the development of evacuation procedures, the development of procedures to account for all employees after emergency evacuation has been completed, and for training employees in those actions they are to take during an emergency.

OSHA is proposing training requirements in paragraph (e). There is widespread agreement that the implementation of an effective training program is one of the most important steps that employers can take to enhance employee safety in grain handling facilities. OSHA believes that an effective training program will help employees understand the nature and causes of dust fires and explosions, and will increase employee awareness with respect to the other hazards associated with grain handling facilities.

OSHA realizes that there may be wide variability among grain handling facilities as to the details necessary for an effective training program. Therefore, the proposed training requirements contained in paragraph (e) are performance-oriented to provide the flexibility needed by employers to develop training programs which will reflect the needs of their own particular facility.

OSHA proposes in paragraph (e)(1) that employees be provided training at least annually and when job assignment changes will expose employees to new hazards. OSHA believes that annual training is the minimum frequency for providing employees with adequate training; more frequent training may be necessary to reflect the tasks that employees are to perform.

OSHA also proposes in paragraph (e)(1) that current employees, and new employees prior to starting work, be trained in at least the recognition of and preventive measures for the hazards associated with their work tasks, and the procedures and safety practices established by the employer.

Additionally, OSHA is proposing that the training include where applicable, but not be limited to, clearing procedures for choked legs,

housekeeping program procedures, hot work procedures, preventive maintenance program procedures, rules pertaining to smoking and other common ignition sources, and lock-out/tag-out procedures.

OSHA also wants to assure that employees are aware of the hazards associated with any special or unique tasks that they may be assigned to perform. Accordingly, OSHA is proposing in paragraph (e)(2) that employees assigned special tasks such as bin entry or handling of flammable or toxic substances, be provided training to handle safely these materials and work tasks.

In paragraph (f), OSHA is proposing that a permit system be developed and implemented for hot work and for work requiring entry into bins, silos, and tanks. OSHA believes that a permit system is necessary to institute a systematic and consistent manner of evaluating and controlling hazards associated with these types of work tasks.

OSHA does not intend the permit to be a record which must be retained for a specific length of time. Instead, the permit would be a written authorization by the employer for employees to perform identified work operations subject to specified precautions.

It is not the intent of OSHA to require a hot work permit for those welding shops authorized by the employer.

In paragraph (g), OSHA is proposing that certain precautions be taken if employees are to enter bins, silos, and tanks. The hazards associated with entering and working in such confined spaces are not unique to the grain handling industry. However, incidence data obtained and evaluated by OSHA indicate that a number of deaths and injuries have resulted from employees entering and working in bins, silos, and tanks (e.g., Reference 20). Standing directly on the grain without taking necessary precautions, including the failure to wear personal protective equipment, has been responsible for many employee deaths and injuries. The most common cause of death in these incidents has been the suffocation of employees by the grain.

Consequently, the proposed requirements contained in paragraph (g) specify those precautions that OSHA believes are necessary to minimize the hazards associated with employees entering and working in bins, silos, and tanks.

OSHA proposes in paragraph (g)(1) that certain precautions be taken before employees enter bins, silos, or tanks. The precautions include: Assuring that

mechanical and electrical equipment which present a danger to employees inside bins, silos, or tanks, are disconnected or locked-out and tagged; testing the atmosphere within a bin, silo or tank for the presence of combustible gases, vapors, and toxic agents when there is reason to believe they may be present; and testing the atmosphere within a bin, silo, or tank for oxygen content, unless there is continuous forced-air ventilation.

OSHA is also proposing in paragraph (g)(1) that if the oxygen level is less than 19.5%, or if combustible gas or vapor is detected, or if toxic agents are present, that ventilation be provided until the unsafe condition is eliminated. If toxic conditions cannot be eliminated by ventilation, OSHA is proposing that employees wear an appropriate respirator when entering any such bin, silo, or tank.

In paragraph (g)(2), OSHA is proposing that a body harness with lifeline be worn by employees or a boatswain's chair be used when entering bins, silos, or tanks from the top. Information compiled by OSHA indicates that a number of employee deaths and injuries have occurred because adequate steps had not been taken to facilitate the quick removal of employees from inside bins, silos, and tanks when needed. OSHA believes that a body harness with lifeline or use of a boatswain's chair, along with appropriate planning procedures, will provide a necessary degree of safety for those employees who enter bins, silos, or tanks from the top.

OSHA is proposing in paragraph (g)(3) that an observer be stationed outside the bin, silo, or tank being entered by an employee, and that communications be maintained between the observer and employee entering the bin, silo, or tank. Communications may be visual, by voice, or by use of a signal line. The purpose of this requirement is to assure that an employee inside a bin, silo, or tank has an effective means of communication to request assistance when needed, and that an observer will be available and prepared to provide such assistance.

In paragraph (g)(4), OSHA proposes that equipment be provided for rescue operations and that such equipment be specifically suited for the bin, silo or tank being entered. OSHA realizes that employees may be assigned to work inside bins, silos, or tanks to perform various tasks in various situations, and will require different precautions. Accordingly, this proposed requirement is performance-oriented to permit the employer enough flexibility to provide

the type of equipment necessary for the particular situation.

OSHA proposes in paragraph (g)(5) that the employee acting as observer be trained in rescue procedures, including notification methods for obtaining additional assistance. OSHA believes that the first priority of an observer is to obtain additional assistance in an emergency. OSHA also believes that proper training is necessary in order to conduct an effective rescue that will not jeopardize the safety of the employee needing to be rescued, and the employee making the rescue.

OSHA is proposing in paragraph (g)(6) that an employee trained in cardio-pulmonary resuscitation be available to provide assistance. Since suffocation is a major potential hazard to employees entering bins, silos, and tanks, OSHA believes it appropriate for an employee, trained in cardio-pulmonary resuscitation, to be available to provide such assistance.

In paragraph (g)(7), OSHA is proposing that employees not be permitted to enter a bin, silo, or tank underneath a bridging condition, or underneath a buildup of grain or grain products on the sides of a bin, silo, or tank. The intent of this proposed requirement is to address the hazard of large quantities of grain or grain products falling on employees and burying them.

OSHA is proposing in paragraph (h) that the employer inform contractors working at the facility of any potential fire and explosion hazards, and of applicable safety rules of the facility. OSHA also proposes that the applicable provisions of the facility emergency action plan be explained to contractors. The purpose of these proposed requirements is to assure that contractors are aware of both the hazards associated with the work being performed at the facility, and the actions to be taken during emergencies. Construction contractors would use this information in complying with the relevant provisions of Part 1926, such as Subpart J—Welding and Cutting.

Paragraph (i) contains proposed requirements for housekeeping. OSHA believes that dust control is the most effective and fundamental means of reducing the number of dust fires and explosions in grain handling facilities. OSHA also believes that a sound housekeeping program is the foundation for effective dust control. Accordingly, OSHA is proposing in paragraph (i)(1) that a housekeeping program be developed and implemented, consisting of a dust control and removal method, or combination of methods, that will

minimize dust accumulations on ledges, floors, equipment, and other exposed surfaces.

Paragraph (i)(1) would not require ship, barge, and rail receiving and loadout areas to be addressed in the housekeeping program. Additionally, truck dumps which are open on two or more sides would not have to be addressed by the housekeeping program.

This proposed housekeeping provision is performance-oriented in that it does not require a specific method or frequency of dust control. Instead, the employer would have the flexibility to specify in the facility housekeeping program those methods which would be the most effective in controlling dust in that particular facility. However, the housekeeping program must specify the methods which will be used to control airborne dust emissions as well as the frequency and methods which will be used to remove dust accumulations.

Although OSHA is proposing a performance-oriented provision regarding methods and frequency of dust control, OSHA is interested in receiving information concerning what would constitute an adequate housekeeping program in order to provide guidance to employers.

There has been a great amount of controversy concerning the issue of what constitutes a "safe level" of dust accumulation. It has been suggested that dust accumulations should not even exceed $\frac{1}{16}$ of an inch (0.4 mm). OSHA does not believe that any level of dust accumulation can be considered completely safe. However, OSHA also realizes it is not feasible, and may be impossible, to remove all dust accumulations at all times. Therefore, it is the intent of OSHA that dust accumulations be minimized through the use of an ongoing housekeeping program which utilizes the most efficient and feasible methods of dust removal.

OSHA is cognizant that there may be several types of housekeeping programs that will effect substantial reductions in the risks of fires and explosions in grain handling facilities. Therefore in paragraph (i)(2), OSHA is proposing to allow employers to choose among three different methods of achieving the goal of reduced dust accumulation and meeting the requirements of this proposed standard.

The first option would require immediate corrective action whenever dust accumulations reach a predetermined depth. The proposal terms this predetermined level of dust accumulation an "action level," rather than a level of dust accumulation considered to be "safe." Accordingly,

under this option, the employer would establish an action level not to exceed a $\frac{1}{8}$ inch (3 mm) layer of fugitive dust when averaged over a 200 square foot (18.9 m²) floor area. OSHA realizes that dust accumulations near a dust emission source will be larger than those accumulations further away from the source. Consequently, dust may not normally be evenly distributed within any 200 square foot area. To allow for this, the proposal calls for the $\frac{1}{8}$ inch action level to be determined as an average depth of the dust accumulation in the area.

OSHA is also proposing that, if employers select this method and dust accumulations reach the established action level, designated means or methods be initiated immediately to remove such accumulations to a safe location.

Should the dust accumulations in a particular part of the facility exceed $\frac{1}{8}$ inch, OSHA would consider the employers who have selected this option to be in compliance only if immediate action has been initiated to remove the dust accumulations. Conversely, if dust accumulations exceed $\frac{1}{8}$ inch and efforts have not been initiated to remove the dust accumulations, this would constitute a violation of the standard.

Under the second option, the employer would remove hazardous accumulations of dust not less often than once per shift, when the facility is in operation. The program would also have to specify procedures for cleaning and dust disposal and what equipment the employer will use. The employer would, in addition, require training of employees and maintenance of equipment. This option would allow the operators of each facility the flexibility to determine how best to meet the regulatory goal of having a workplace environment free of the fire and explosion hazards of grain dust.

The final option would permit an employer to use an engineering approach to dust control. There is evidence that the installation and maintenance of a pneumatic dust control system would substantially reduce the grain dust hazards of fire and explosions, is the most technologically efficient approach to take in solving the safety problems associated with grain dust and would actually spur modernization and updating of grain handling facilities. The technology exists for implanting this option. A number of grain handling facilities have already installed such dust control systems. Although pneumatic dust control systems may not be practical or feasible for all grain handling facilities, many facilities could adopt, and are

adopting, such systems. Adoption would both modernize the facility and eliminate the safety hazards associated with grain dust.

The Agency would also like those submitting comments to respond to questions concerning these options.

1. Do these options provide effective protection against the hazards associated with explosions and fires? If not, are there other options that would be appropriate?

2. Is the option economically feasible:

(a) For large facilities (elevators, mills),

(b) For small facilities (elevators, mills),

(c) For the industry as a whole (elevators, mills),

(d) For the long run, *i.e.*, should the options be phased in for all or part of the industry, and how long should the phase-in period be?

(e) What is the expected cost of compliance with these options?

3. Are these options technologically feasible:

(a) For large facilities (elevators, mills)?

(b) For small facilities (elevators, mills),

(c) For the industry as a whole (elevators, mills)?

4. What compliance problems do these options present?

5. How could these compliance problems be solved?

Please submit any data which support your answers, and indicate the source for such data.

As discussed further in the Regulatory Impact Analysis section of this Proposal, a preliminary assessment of the compliance costs associated with the Proposal indicates that proposed paragraph (i)(2) may have a greater economic impact on small grain elevator facilities than larger facilities. To mitigate compliance burdens, OSHA is proposing an extended period for compliance with paragraph (i)(2) for small grain elevator facilities.

Accordingly, OSHA is proposing that, effective July 1, 1985, paragraph (i)(2) apply to all grain handling facilities except small grain elevator facilities. Effective July 1, 1988, paragraph (i)(2) would also apply to small grain elevator facilities.

In paragraph (i)(3), OSHA is proposing that the use of compressed air to blow dust from ledges, walls, and other areas which may create a dust explosion hazard (*i.e.* result in dust concentrations above the lower explosive limit), be permitted only when all machinery that represent an ignition source in the area is shut-down, and all other sources of

ignition are removed. OSHA realizes that the use of compressed air with long lances may sometimes be effective to blow down dust from inaccessible areas. The purpose of this proposed requirement is to assure that proper precautions are implemented before the blow down procedures are initiated. OSHA believes these precautions will mitigate potential hazards associated with any suspended dust concentrations resulting from the blow down procedures.

In paragraph (i)(4), OSHA is proposing that grain or product spills not be considered fugitive grain dust accumulations and, additionally, that the housekeeping program address procedures for removing such spills from the work area. Grain or product spills would not meet the definition that OSHA is proposing for the term "fugitive grain dust." Therefore, the purpose of this proposed requirement is to clarify OSHA's intent that the proposed action level requirements concerning fugitive grain dust accumulations would not apply to spills.

OSHA is proposing in paragraph (j) that receiving-pit feed openings, such as truck or railcar receiving pits, be covered by grates. OSHA is also proposing that the length and width of openings in the grates be a maximum of two and one-half inches (6.35 cm). OSHA believes that grates are essential for removing foreign objects from the grain stream. The size of openings permitted (2½") in this proposed paragraph should be large enough for the free-flow of most agricultural commodities. However, OSHA is aware that some facilities, handling ear corn and other commodities which are not free-flowing, may need larger grate openings than the 2½ inch openings specified in the proposed standard. Therefore, OSHA is proposing in paragraph (j) that larger grate openings would be permitted, provided that magnets are used to remove ferrous material from the stream.

OSHA is also considering, as alternatives to proposed paragraph (j), provisions that would afford some measure of regulatory flexibility to small grain handling facilities. This could be achieved by requiring small facilities to comply with paragraph (j) only upon the installation of new grates after the effective date of the standard. Another approach would be to permit such a "grandfathering" of existing grates only with respect to outside legs of small facilities. OSHA seeks comment generally on such alternatives and requests specific information concerning (1) any differences in the level of

protection that would result from such a change and (2) the comparative costs and regulatory burdens associated with the two alternatives.

In paragraph (k), OSHA is proposing requirements for fabric dust filter collectors which are a part of pneumatic dust collection systems. OSHA is proposing in paragraph (k)(1) that, effective January 1, 1985, all fabric dust filter collectors be equipped with a monitoring device that will indicate when the filter becomes blinded, and that such indication be observable at a designated inspection or work location. The purpose of this proposed requirement is to assure that a reliable instrument is provided to indicate when the filter is blinded, and to assure that the instrument can be read at an accessible location.

Filter collectors will contain a large amount of grain dust that can support a fire or an explosion. Therefore, OSHA believes that filter collectors should be located outside of the facility, or be located in a protected area inside the facility, to minimize exposure of employees from the potential hazards of filter collectors.

Accordingly, in paragraph (k)(2), OSHA is proposing that filter collectors installed after the effective date of this standard be located outside of the facility; or be located in an area inside the facility protected by a fire or explosion suppression system; or be located in an area inside the facility provided with explosion venting to the outside and separated from other areas of the facility by construction having at least a one hour fire-resistance rating.

Paragraph (l) contains proposed requirements concerning preventive maintenance. OSHA considers preventive maintenance to be a major and necessary function of a grain handling facility because of its importance in eliminating potential ignition sources. Equipment such as bearings, belts, milling machinery, and dryers are potential ignition sources. Periodic inspection and lubrication of such equipment through a scheduled preventive maintenance program is an effective method for keeping equipment functioning properly and safely. Therefore, OSHA is proposing in paragraph (l)(1) that the employer develop and implement a program of scheduled maintenance which includes inspection and lubrication of at least the mechanical and safety control equipment associated with dryers, removal of ferrous objects, dust collection systems, and grain elevator legs.

Although OSHA considers the inspection of all mechanical and safety

control equipment to be equally important, it also believes that when certain potentially hazardous conditions are detected, prompt corrective action is necessary. Accordingly, OSHA is proposing in paragraph (l)(2) that prompt corrective action be taken when the following conditions are detected: overheated bearings and slipping or misaligned belts that are associated with inside bucket elevator legs; and, blinded filter collectors.

OSHA is not proposing a specific frequency for performing preventive maintenance. However, in paragraph (l)(3), OSHA is proposing that a system be implemented for identifying the date, maintenance performed and/or results of the equipment inspection. This information, along with manufacturers' recommendations for effective equipment operation, will assist the employer in determining the appropriate interval for preventive maintenance.

OSHA is aware of a number of instances where deaths and injuries have occurred to employees working on equipment because of the equipment being inadvertently started or energized. As a control measure for preventing these types of situations from occurring, OSHA is proposing in paragraph (l)(4), that the employer develop and implement procedures consisting of tags and locks which will prevent the inadvertent application of energy or motion to equipment being repaired, serviced, or adjusted, which could result in employee injury. OSHA is also proposing that such locks and tags be removed in accordance with established procedures and only by the employee installing them, or if unavailable, by his or her supervisor.

In paragraph (m), OSHA is proposing that grain stream processing equipment, such as hammer mills, grinders, and pulverizers, be equipped with an effective means of removing ferrous material from the incoming grain stream. The purpose of this proposed requirement is to prevent ferrous material from entering the processing equipment and creating an explosion hazard. It is the intent of OSHA that magnets installed in accordance with proposed paragraph (j) are acceptable as meeting proposed paragraph (m).

Currently, grain handling facilities must comply with 29 CFR Part 1910, Subpart E, with respect to means of egress. By definition, a means of egress consists of three separate and distinct parts: the way of exit access, the exit, and the way of exit discharge (§ 1910.35(a)). Additionally, fire-resistance rated enclosures are required for stairways used as exits (§ 1910.37(b)(1)). Most existing grain

handling facilities have at least two means of escape, but these means of escape do not technically meet the requirements for means of egress. Therefore, OSHA is proposing, in paragraph (n), that at least two means of escape be provided from certain areas of the facility, and that the escape routes be separated from each other to the extent feasible. The intent of this proposed requirement is to recognize windows, emergency escape ladders, controlled descent devices, and other alternative measures, as acceptable means of escaping from certain areas of the facility during an emergency. Rather than requiring existing facilities to comply with the more stringent requirements for means of egress, OSHA believes that specifying two means of escape would provide adequate egress because these means of escape can safely handle the small number of employees using them as would systems meeting the more stringent requirements of §§ 1910.35 through 37.

Paragraph (o) contains proposed requirements pertaining to bulk raw grain dryers. These requirements are intended to apply only to those dryers directly associated with grain elevators and not to those dryers which are a part of the processing and milling segments of a facility, such as those used in the processing of rice.

Information obtained and evaluated by OSHA indicates that grain dryers are a major potential source of fires, and that implementation of certain precautions could potentially reduce the number of fires. Accordingly, OSHA is proposing in paragraph (o)(1) that direct heat grain dryers be equipped with automatic controls that will shut-off the fuel supply in case of power of flame failure or interruption of air movement through the exhaust fan; and, that will stop the grain from being fed into the dryer if the grain discharge mechanism becomes clogged, or if excessive temperature occurs in the exhaust of the drying section. The purpose of the proposed requirement is to assure that dryers are equipped with devices which will activate automatically to control certain conditions which could potentially be hazardous.

OSHA is also considering, as an alternative to proposed paragraph (o)(1), a provision that would afford some measure of regulatory flexibility to small grain handling facilities. This could be achieved by requiring small facilities to comply with paragraph (o)(1) only upon the installation of new dryers after the effective date of the standard. OSHA seeks comment generally on such an alternative and requests specific

information concerning (1) any differences in the level of protection that would result from such a change and (2) the comparative costs and regulatory burdens associated with the alternative.

Because of the number of fires associated with grain dryers, OSHA believes they should be located outside of the facility, or located in a protected area inside of the facility. Therefore, OSHA is proposing in paragraph (o)(2) that direct-heat grain dryers, installed after the effective date of this standard, be located outside of the facility; or, be located in an area inside the facility protected by a fire or explosion suppression system; or be located in an area inside the facility which is separated from other areas of the facility by construction having at least a one hour fire-resistance rating.

Information available to OSHA indicates that hazards associated with inside bucket elevator legs are the source of many grain elevator fires and explosions (e.g., References 6 and 17).

To mitigate these hazards, OSHA is proposing several requirements in paragraph (p) which would only apply to grain elevators with inside legs. Additionally, OSHA is proposing a phase-in period for some of the requirements to provide employers the time necessary for planning and implementing these provisions.

OSHA recognizes that some of the proposed requirements of paragraph (p), particularly paragraphs (p)(5) and (p)(7), would entail significant burdens for small grain handling facilities. OSHA requests comment on whether more extended phase-in periods should be provided in order to reduce those burdens and whether alternatives to those provisions are available, in addition to proposed paragraph (p)(8), which would provide equivalent protection and be less burdensome.

In paragraph (p)(1), OSHA is proposing that elevator legs not be jogged to free a choked leg. The purpose of this proposed requirement is to assure that safer, alternative methods are utilized to clear a choked leg.

Paragraphs (p)(2) and (p)(3) contain proposed requirements concerning electrical grounding and conductivity to minimize the possibility of electrical arcs which can result from static electricity. In paragraph (p)(2), OSHA is proposing that effective January 1, 1985, the employer assure that elevator legs are electrically grounded.

OSHA is proposing in paragraph (p)(3) that belts and lagging installed after January 1, 1985, be conductive, and that belts have a surface electrical resistance which does not exceed 300 megohms.

OSHA is proposing in paragraph (p)(4) that, effective July 1, 1985, inspection doors be provided in the head pulley section. These doors would facilitate inspection of the head pulley lagging, belt, and discharge throat of the elevator leg. OSHA is also proposing in paragraph (p)(4) that boot sections be provided with doors to facilitate cleanout of the boot, and for inspection of the boot pulley and belt.

In paragraph (p)(5), OSHA is proposing that, effective July 1, 1985, elevator legs be equipped with a motion detection device which would initiate an alarm to employees when belt speed is reduced by no more than 15% of the normal operating speed, and would shut-down the leg when the belt speed is reduced by no more than 20% of the normal operating speed. OSHA is also proposing that conveyor equipment which feeds the leg be equipped with an interlock to shut-down these conveyors in the event that the leg they are serving is shut-down. The purpose of the proposed requirement is to assure that an early warning is provided, which will indicate that a potential problem exists, so that corrective action can be implemented before the potential problem becomes one of a more serious nature.

OSHA is aware that overheated bearings can be a potential ignition source, and if bearings are mounted inside the leg casing, it is difficult to inspect their condition. Accordingly, OSHA is proposing in paragraph (p)(6) that, effective July 1, 1985, bearings be mounted externally to the leg casing; or, that bearings mounted totally or partially inside leg casings be equipped with a temperature monitoring device that can be read at a designated inspection or work location.

OSHA is proposing in paragraph (p)(7) that, effective January 1, 1986, elevator legs be equipped with a belt alignment monitoring device that will initiate an alarm to designated employees when the belt is not tracking properly. The purpose of this proposed requirement is to assure that employees are alerted to the problem so that the corrective action specified in the preventive maintenance program can be implemented.

Information available to OSHA (e.g., Reference 7h) indicates that sufficient protection of the elevator leg can be provided by fire and explosion suppression devices. Additionally, OSHA is aware of the recent advances made with aspiration of the leg which maintains dust concentrations, inside the leg, at well below the lower explosive limit. Accordingly, in paragraph (p)(8), OSHA is proposing that the employer would not have to

comply with paragraphs (p)(5), (p)(6), and (p)(7) if bucket elevators are equipped with an operational fire and explosion suppression system capable of protecting at least the head and boot section of the leg; or if bucket elevators are equipped with a pneumatic or other dust control system that keeps the dust concentration inside the leg casing below 50% of the lower explosive limit at all times during operation.

OSHA believes it is necessary to make a distinction between bucket elevator legs installed inside a grain elevator facility, and those installed only partially-inside a grain elevator facility. However, OSHA also believes that there are some potential hazards common to both types of installations, and that these can be addressed by the same proposed requirements, i.e., the proposed requirements pertaining to the installation of motion detection devices and the prohibition of jogging the leg.

Accordingly, OSHA is proposing in paragraph (q)(1) that partially-inside bucket elevators comply with the proposed requirement concerning the jogging of a choked leg, (p)(1), and the proposed requirement concerning the installation of a motion detection device, (p)(5).

OSHA invites comments on the appropriateness of this proposed requirement, and whether partially-inside legs should comply with other requirements contained in proposed paragraph (p).

In paragraph (q)(2), OSHA is proposing that when partially-inside bucket elevators meet the proposed requirements of paragraphs (p)(8)(i) or (p)(8)(ii), the employer would not have to comply with the proposed requirements of paragraph (p)(5).

IV. References

1. U.S. Department of Agriculture (USDA). *Prevention of Dust Explosions in Grain Elevators—An Achievable Goal*. Washington, D.C.: USDA, 1979.
2. *OSHA Oversight—Grain Elevator Explosions*. Hearings, Subcommittee on Compensation, Health and Safety of the Committee on Education and Labor, House of Representatives. Washington, D.C.: Government Printing Office, 1978.
3. U.S. General Accounting Office (GAO). *Grain Dust Explosions—An Unsolved Problem*. Washington, D.C.: GAO, 1979.
4. National Grain and Feed Association (NGFA). "Grain Industry Guidelines to Increase Fire and Explosion Safety." Washington, D.C.: NGFA, 1978.
5. National Grain and Feed Association (NGFA). *A Practical Guide to Elevator Design*. Washington, D.C.: NGFA, 1979.
6. National Grain and Feed Association (NGFA). *Dust Control for Grain Elevators*. Washington, D.C.: NGFA, 1981.

7. National Grain and Feed Association, Fire and Explosion Research Council. "Mission: Saving Lives and Property. An Industry Research Effort," and the following research reports:

- a. *Grain Dust Utilization*, 1979.
- b. *A Survey of Grain Elevator Facilities for the Presence of Combustible Gases/Vapors*, 1980.
- c. *Electrostatic Characterization of Grain Products*, 1980.
- d. *Study of Static Electricity on Grain Conveying Belts*, 1980.
- e. *Survey of Literature on Ignition of Dust by Friction and Impact Sparks*, 1981.
- f. *Grain Dust Ignition by Frictional Sparks, A Preliminary Investigation*, 1981.
- g. *A Survey of Fumigant Levels in Grain Elevators Following Fumigation*, 1981.
- h. *Explosion Venting and Suppression of Bucket Elevators*, 1981.
- i. *Electrostatic Grounding Characteristics of Grain Facilities*, 1982.
- j. *Reducing Dust Concentrations in Bucket Elevators by Prior Screening of Aspiration of Wheat*, 1982.
- k. *Examining the Use of Additives to Control Grain Dust*, 1982.

8. National Grain and Feed Association (NGFA). Statement of the National Grain and Feed Association before the House Agriculture Committee, Subcommittee on Wheat, Feed Grains and Soybeans, 1982.

9. Grain Elevator and Processing Society (GEAPS). *Analysis of Safety and Health Training Needs in the Grain Industry*. Minneapolis, Minnesota: GEAPS, 1981.

10. Occupational Safety and Health Administration (OSHA). "Grain Elevator Explosion Prevention Program Now Available From OSHA," News Release, 1982.

11. Food and Beverage Trades Department, AFL-CIO. *The Exploding of the Grain Belt*. Washington, D.C.: Food and Beverage Trades Department.

12. National Academy of Sciences (NAS). *International Symposium on Grain Elevator Explosions*, Vol. I and II. Washington, D.C.: NAS, 1978.

13. U.S. Department of Agriculture, Grain Elevator and Processing Society, National Grain and Feed Association, and Kansas State University. "Symposium of Grain Dust," Pamphlet, 1979.

14. Occupational Safety and Health Administration (OSHA). *Grain Elevator Industry Hazard Alert*. Washington, D.C.: OSHA, 1978.

15. National Fire Protection Association (NFPA). *Standard For the Prevention of Fires and Explosions in Grain Elevators and Facilities Handling Bulk Raw Agricultural Commodities*, No. 61-B. Quincy, Massachusetts: NFPA, 1981.

16. National Academy of Sciences (NAS). *The Investigation of Grain Elevator Explosions*. Washington, D.C.: NAS, 1980.

17. National Academy of Sciences (NAS). *Prevention of Grain Elevator and Mill Explosions*. Washington, D.C.: NAS, 1982.

18. National Academy of Sciences (NAS). *Pneumatic Dust Control in Grain Elevators*. Washington, D.C.: NAS, 1982.

19. National Academy of Sciences (NAS). *Guidelines for the Investigation of Grain Dust Explosions*. Washington, D.C.: NAS, 1983.

20. Price, David J. "Dust Explosions in Grain Elevators." Twelfth Annual Convention, American Association Port Authorities, December 10, 1923.

21. Occupational Safety and Health Administration (OSHA). *Fatalities Related to Grain Handling as Found in Reports of OSHA Fatality/Catastrophe Investigations*. Washington, D.C.: OSHA, 1983.

V. Preliminary Regulatory Impact and Regulatory Flexibility Analysis and Environmental Assessment

A. *Preliminary Regulatory Impact Analysis*. The Occupational Safety and Health Administration (OSHA) is proposing a standard to protect workers from occupational exposure to fires, explosions, and other safety hazards in grain handling facilities. The following economic analysis has been prepared in accordance with the requirements of Executive Order 12291 (February 17, 1981), and the Regulatory Flexibility Act of 1980 (Pub. L. 96-354, 94 Stat. 1164 [5 U.S.C. 601 et seq.]). It is based in large measure on a report prepared for OSHA by Arthur D. Little, Inc. Due to the complexities of this proposal, OSHA has contracted with Booz-Allen, Inc. to scrutinize the ADL study's cost methodology and alternatives during the rulemaking. Booz-Allen will prepare a supplemental economic report that will be available to interested parties prior to the hearings.

Overview of Nonregulatory Environment

Nonregulatory alternatives (including insurance) to mitigate grain handling hazards have resulted in baseline risks of 25.7 explosions and 2,200 reported fires per year, causing an average 23.5 deaths and 950.5 injuries annually.

Other hazards, such as those where employees suffocate in bins and silos or get caught in augers or in machinery, account for an additional 41.3 deaths and 512.6 injuries annually. The most significant cause of death from such other hazards is worker suffocation in grain bins, which accounts for 15 deaths per year. The total annual baseline risk is therefore 64.8 deaths and 1,463.5 injuries on average, with the latter representing 30,040 lost workdays (Table 1).

In addition to the estimated 64.8 deaths and 1,463 injuries per year, the annual economic loss owing to property damage and business interruption is \$170 million (1982 dollars).

Overview of the OSHA Proposal

The proposed standard would cover an estimated 16,164 facilities employing about 200,000 workers. The major Standard Industrial Classification (SIC) codes affected are Grain Elevators and Storage (0723, 4221, 5153), Prepared Feed and Feed Ingredients for Animals, and Fowls (20481), Wet Corn Milling (2046), Soybean Oil Mills (2075), Flour and Other Grain Mill Products (2041), Rice Milling (2044), Dog, Cat, and Other Pet Foods (2047), Cereal Breakfast Foods (2043), and Malt (2083).

The population at risk includes not only employees at grain handling facilities but also firefighters, federal grain inspectors, state and local government workers, contractors, farmers, and bystanders. All of these nongrain handling groups have suffered casualties as a result of fires and explosions at grain handling facilities.

TABLE 1.—BASELINE RISK OF VARIOUS HAZARDS IN GRAIN HANDLING INDUSTRIES

Segment	Number of facilities 1982	Type of hazard						Other hazards *		
		Explosions per year *			Reported fires per year *			Bin suffocation	Other deaths	Other injuries
		Events	Deaths	Injuries	Events	Deaths	Injuries			
Grain elevator and Storage.....	11,200	16.4	15.7	30.3	1,391	3.0	567.5	6.0	10.5	203.5
Country elevators.....	10,415	7.7	1.1	7.6	1,100	2.3	448.8	4.7	8.3	161.0
Inland terminals.....	460	6.4	1.3	7.6	194	.5	79.2	0.3	0.5	9.7
High throughput terminal elevators.....	325	2.3	13.3	15.1	97	.2	39.5	1.0	1.7	32.8
Export terminal elevators.....										
Prepared feeds and feed ingredients.....	4,070	4.7	1.3	6.1	129	.3	52.8	3.7	6.5	127.7
Small feed mills.....	3,030	3.1	0.7	3.8	97	.2	39.8	1.1	2.0	39.0
Large feed manufacturing.....	1,040	1.6	0.6	4.3	32	.1	13.2	2.6	4.5	68.7

TABLE 1.—BASELINE RISK OF VARIOUS HAZARDS IN GRAIN HANDLING INDUSTRIES—Continued

Segment	Number of facilities 1982	Type of hazard						Other hazards ^c		
		Explosions per year ^a			Reported fires per year ^b			Bin suffocation	Other deaths	Other injuries
		Events	Deaths	Injuries	Events	Deaths	Injuries			
Oilseed processing.....	216	1.0	0.2	0.4	129	.3	52.8	1.7	2.9	56.4
Flour and grain mills.....	388	1.8	0.2	13.5	259	.6	105.6	1.1	1.9	38.4
Rice mills.....	57	.8	0.2	0.2	65	.1	25.4	0.4	0.6	12.3
Other grain processing.....	253	1.0	1.1	1.5	226	.5	92.4	2.1	3.9	76.3
Total.....	16,164	25.7	18.7	54.0	2,200	4.8	896.5	15.0	26.3	512.6

^a Based on 1977-1981 explosion frequency and distribution of events by segment 1971-81.

^b Based on 1977-1981 for major fires and 1960-1973 for minor fires. Major fires had property damage in excess of \$10,000, business interruption loss in excess of \$5,000 and usually, casualties.

^c Other injuries and deaths are based on employment. Deaths are based on averages for 1976-1981, and injuries on averages for 1974-1976 and 1979-1981.

Source: Arthur D. Little estimates are based on the analysis of NFPA Fire Incident Data; on U.S. Department of Agriculture data; on data in U.S. Department of Agriculture, *Prevention of Dust Explosions in Grain Elevators*.

The proposed standard has provisions for the following items, as identified by the appropriate paragraph of the standard (1910.272):

- Emergency action plan (d)
- Training (e)
- Permit system (f)
- Entering into bins, silos, and tanks (g)
- Contractors (h)
- Dust control (i)
- Grate openings (j)
- Filter collectors (k)
- Preventive maintenance (l)
- Grain stream processing equipment (m)
- Emergency escape (n)
- Bulk raw grain driers (o)
- Inside bucket elevator legs (p)
- Partially-inside, bucket elevator legs (q).

Most importantly, the proposed standard would establish several alternative methods that employers can undertake to substantially reduce dust levels in grain handling facilities. One alternative would set an action level for triggering a housekeeping program. The action level would not exceed a 1/8-inch

layer of fugitive dust averaged over a 200 square-foot floor area. Alternatively, employers may meet the proposed dust control provision by installing pneumatic dust control systems or by cleaning up hazardous accumulations of dust not less than once-a-shift. Paragraphs (d) through (n) apply to grain elevators, dust pelletizing plants, feed mills, corn mills, rice mills, and flour mills. Paragraph (o) applies to grain driers associated with grain elevators. Paragraph (p) applies to inside elevator legs, and paragraph (q) applies to partially inside elevator legs.

Grain elevators that have less than a 1-million-bushel storage capacity and less than a 4-million-bushel throughput during the previous 12-month period, if they choose to comply with the 1/8-inch action level, would have a deferred effective date. The delayed effective date would also apply to small elevators that could meet the proposed dust control provision if they install a pneumatic dust control system or clean up the dust levels once-a-shift.

OSHA estimates that if fully implemented, the proposed standard could eliminate as many as 18 explosions and 1,617 fires annually. Based on a risk analysis performed by Arthur D. Little for OSHA, these accidents at present result in an average of 17 deaths and 697 injuries per year. In addition, as many as 21 deaths and 70 injuries could be prevented by controlling grain handling hazards other than fires and explosions. Thus, the proposal could prevent a total of approximately 38 deaths and 767 injuries annually (Table 2).

In addition, OSHA estimates that \$98.31 million (1982 dollars) in annualized property damage and business interruption loss could be averted by the proposed standard.

It should be emphasized that these benefit estimates are based on the 1/8-inch proposed action level. OSHA invites interested parties to comment on the relative effectiveness of the alternatives proposed to comply with the dust control provisions.

TABLE 2.—REDUCTION IN DEATHS AND INJURIES FROM THE PROPOSED STANDARD IN GRAIN HANDLING INDUSTRIES

Segment	Averted explosions			Averted Fires			Averted other ¹		Total reduction in casualties	
	Events	Deaths	Injuries ²	Events	Deaths	Injuries ²	Deaths	Injuries	Deaths	Injuries
Grain Elevator & Storage:										
Country Elevators.....	5.5	0.8	5.3	809	1.7	329.0	6.6	22.0	7.6	356.3
Inland Terminals.....	4.5	0.9	5.3	143	0.4	56.2	.4	1.3	1.7	64.8
High-Throughput Terminal Elevators/Export Terminal Elevators.....	1.6	9.5	10.7	71	0.1	29.0	1.4	4.5	12.5	44.2
Proposed Feeds & Feed Ingredients:										
Small Feed Mills.....	2.1	0.5	2.7	71	0.1	29.0	1.6	5.4	2.2	37.1
Large Feed Manufacturing.....	1.1	0.4	3.0	24	0.1	9.6	3.6	12.1	4.1	24.7
Oilseed Processing.....	0.7	0.1	0.3	95	0.2	38.7	2.3	7.7	2.6	46.7
Flour & Grain Mills.....	1.3	0.1	9.5	190	0.4	78.5	1.5	5.0	2.0	93.0
Rice Mills.....	0.5	0.1	.2	48	0.1	19.2	0.5	1.7	0.7	21.1
Other Grain Processing.....	0.7	0.8	1.1	166	0.4	67.8	3.1	10.5	4.3	79.4
Total.....	18.1	13.2	38.1	1,617.0	3.5	659.0	21.0	70.2	37.7	767.3

Source: Estimates by Arthur D. Little, Inc., *Technical Feasibility and Economic Impact Analysis (EIA) for Various Standards Provisions*. Applicable to Hazards in Grain Handling Industries, Vol. 1, p. IV-83.

¹ Distribution according to employment in each segment (15 grain suffocation and 6 other deaths avoided).

² Of these injuries 74 percent are to employees; others are to firefighters, contractors, and other parties.

³ Of these injuries 52 percent are to employees; others are to firefighters.

Overview Of Compliance Costs Of The Proposal

The cost impact analysis of the proposal is based on the ADL cost methodology. As noted above, Booz-Allen is currently examining alternative cost methodologies.

Industry conditions and practices in 1982 were used as the baseline to measure the costs of complying with the proposed standard. The unit cost and cost equations were combined with the estimated number of facilities and employees affected by the proposed regulation to estimate the total cost of compliance (in 1982 dollars). Several provisions of the proposed standard have deferred effective dates. As a consequence, capital expenditures and other initial costs associated with various provisions will occur in 1984, 1986, and, for small elevators, in 1988. Thus, the recurring costs associated with the standard do not reach a steady state until 1989. To capture the variations in cost during the first few years of the regulation, the costs of compliance are presented in several formats.

Assuming that all employers complied with the $\frac{1}{8}$ -inch dust action level alternative, the annualized costs over a 10-year period with a 10-percent discount rate are estimated at \$122.5 million a year, of which \$105.6 million or 86 percent represents dust control costs. If instead all employers installed pneumatic dust control systems, annualized costs are estimated at \$950.7 million a year, of which dust control accounts for \$933.8 million. This assumes that pneumatic dust control costs are roughly comparable to those estimated for the $\frac{1}{4}$ -inch dust level alternative described in the next section.

OSHA also calculated the number of annual labor hours required per facility to meet the once-a-shift alternative. The estimated dust control costs for the once-a-shift alternative range between \$22.2 and \$77.6 million, depending on the assumed cleaning rate. The lower cost for the sweeping requirement results largely from elimination of expensive capital equipment purchases such as vacuum cleaners and pneumatic control devices. In order to compare these costs directly to those associated with the $\frac{1}{8}$ -inch proposal, these labor costs must be annualized, taking into account discount rates, recovery factors and delayed effective dates of various provisions. Based on the calculations, the estimated annual cost of the proposed standard assuming all employers comply with the once-a-shift alternative ranges between \$29.2 and \$66.4 million compared to \$122.5 million for the $\frac{1}{8}$ -inch action level

alternative and \$950.7 million for the pneumatic control alternative. Since employers may select some combination of these compliance alternatives, actual costs to the industry could fall in-between this range.

OSHA performed a cost effectiveness analysis on the $\frac{1}{8}$ -inch alternative. The first step is to subtract the \$98.31 million in avoided property and business interruption loss from the \$122.5 million annualized cost (Table 3). Using this \$24 million in annualized costs, the estimated adjusted cost per death avoided is \$642 thousand, \$32 thousand per injury avoided, and \$30 thousand per casualty (death and injuries) avoided.

TABLE 3.—COST PER CASUALTY AVOIDED FOR THE PROPOSED OSHA STANDARD
(One-eighth-inch action level)

	Annualized cost (1982 dollars in thousands)	Casualties avoided		
		Deaths	Injuries	Total
Total	122,521	37.7	767.3	805.0
Benefit related to property damage and business	98,309			
Net costs	24,212			
Costs/casualty avoided (1982 dollars in thousands)		642	32	30

Source: Arthur D. Little, Inc. and U.S. Department of Labor, Occupational Safety and Health Administration, Office of Regulatory Analysis.

The total annualized cost of the proposed standard for the $\frac{1}{8}$ -inch alternative is insignificant when compared to the value of grain traded. This cost is 0.24 percent of the value of grain traded in the United States. Also, the annualized cost of compliance is only 0.58 percent of the value of U.S. grain exported. This leads OSHA to conclude that domestic and international market structures would not be affected significantly by the proposed standard.

At present, most industry segments are experiencing a trend toward a reduction in the number of small grain handling facilities, while the number of larger facilities appears to be increasing slightly. The proposed standard would not affect this pattern of consolidation.

Average-size and large-size facilities would need a long-term revenue increase of about 1 percent to cover compliance costs for the $\frac{1}{8}$ -inch alternative. Revenue would need to increase from 1 to 3 percent to cover the costs of compliance for small firms.

The proposed standard does not force substitution of capital for labor. The proposed OSHA standard may, however, encourage the improvement of new dust control technologies for grain handling industries. It may also

reinforce the trend in new facility design to use inclined belts instead of elevator legs. On balance, the proposed standards is not expected to reduce the demand for labor. In fact, additional labor will be required to comply with the dust control provisions. The relative increase in labor, in terms of full-time equivalents, would be the smallest for country elevators, because additional labor would only be needed at these elevators during the harvest season.

Overview of Other Alternatives Considered

A less comprehensive alternative than the proposed standard was also evaluated by OSHA. This alternative would have all of the provisions of the proposal but the scope would be limited to grain elevators. The restricted scope would not protect workers in mills associated with feed, soybean, corn, and other agricultural commodities. This alternative would prevent 13.7 fewer deaths and 264.9 fewer injuries annually than would the proposal.

OSHA also considered a more stringent alternative regulation. The more stringent alternative would have an action level for paragraph (i)(2) not to exceed $\frac{1}{4}$ inch. All other provisions would be the same as the proposed standard. OSHA rejected this alternative on several grounds. For example, OSHA estimated that there are virtually no facilities currently in compliance with a $\frac{1}{4}$ -inch dust level requirement. OSHA concluded that even if the more stringent standard were technically feasible, economic feasibility constraints would prevail. The estimated annualized cost of the more stringent alternative would be 676 percent greater than the proposed $\frac{1}{8}$ -inch alternative.

B. Regulatory Flexibility Analysis. The Regulatory Flexibility Act of 1980 (Pub. L. 96-354, 94 Stat 1164, [5 U.S.C. 601 et seq.]) requires that special consideration be given to the mitigation of economic impacts of a proposed regulation on small entities. Those small business facilities affected include primarily grain elevator facilities, feed mills, and a few small grain processing plants. For purposes of this proposal, a small elevator facility is defined as having a capacity of less than 1 million bushels and a throughput of less than 4 million bushels during the previous 12-month period. The other small entities (mills and processing plants) are defined as those that have 10 or fewer employees. As indicated in Table 4, 13,756 of the 16,164 facilities affected by the proposed regulation are small facilities. Of these 13,756 small facilities,

12,232 are small elevators. The number of employees at work in the small facilities is 69,808.

TABLE 4.—NUMBER OF SMALL FACILITIES BY INDUSTRY SEGMENT, 1982

Grain handling industry/ segment (SIC code)	Total facilities	Facilities with under 10 employees	Small elevators	Number of employees at small facilities
Grain elevators and storage (4221, 5153):				
Country elevators	10,415	10,415	9,501	55,635
Inland elevator	460	NA		
High-throughput inland/river terminals	250			
Export terminal elevator	75			
Prepared feeds and feed ingredients for animals and fowls, NEC (2048, other):				
Small feed mill with/without country elevator (2048, other)	3,030	3,030	2,731	12,459
Large feed manufacturing plant (2048)	1,040			
Oilseed processing plants:				
Wet corn milling (2046)	39	6		36
Cottonseed oil mills (2074)	83	18		108
Soybean oil mills (2075)	94	20		120
Grain processing plants:				
Flour and other grain mill products (2041)	368	167		1,002
Rice milling (2044)	57	17		102
Malt (2083)	40	7		42
Cereal breakfast foods (2043)	24	6		24
Dog, cat, and other pet foods (2047)	145	57		228
Other (2082, 2085, other)	44	13		52
Total	16,164	13,756	12,232	69,808

Source: Arthur D. Little, Inc., Reference No. 88042, p. VIII-17.

OSHA examined various means of achieving adequate worker protection without unduly affecting small entities. In addition to other regulatory alternatives previously discussed, OSHA also evaluated selective exemptions, delayed implementation, and the use of performance language in terms of their potential impact on small entities. OSHA has concluded that today's proposal will not have a significant impact on small business. In fact the standard was designed with an eye toward lowering small firm impacts. To this end, the proposal contains a delayed effective date for some provisions. For example, small entities receive an extra three-year extension to comply with dust control provisions.

The compliance date for all grain handling facilities (except small elevator facilities), to meet the alternative housekeeping requirements would be July 1, 1985. For small entities, the

compliance date would be extended to July 1, 1988. This deferral would save small entities adopting the 1/8-inch standard an estimated 43 percent in annualized costs. In addition, the once-a-shift alternative could reduce the compliance costs of dust control by over 60 percent for the small facilities involved.

Finally, some parts of the standard were written to require a level of performance rather than specific equipment. Consequently, the small facility could choose the combination of methods that would minimize costs. For example, the emergency action plan would require an alarm system, whereas compliance in the small facility would be achieved by a verbal alert. Under the provision for dust control, the small facility would satisfy the 1/8-inch action level alternative by increasing the number of housekeeping hours rather than undertaking the same capital investment that may be necessary for a larger facility to come into compliance.

The above discussion summarizes the key findings of the Preliminary Regulatory Impact and Regulatory Flexibility Analysis of the proposed grain handling facilities standard as prepared by OSHA. This analysis includes (1) a profile of the grain handling industry; (2) an assessment of technological feasibility; (3) estimates of compliance costs; risk reduction and benefits; and (4) an analysis of cost-effectiveness and of the effects on employment, market structure, and on small businesses.

OSHA's Preliminary Regulatory Impact and Regulatory Flexibility Analysis are available in the record of this rulemaking. OSHA solicits public comments, data, and arguments on the contents of both these documents. Also, Booz-Allen, Inc. will prepare a supplemental economic report that will be available in the docket prior to the hearings.

C. Environmental Impact Assessment—Finding of No Significant Impact. This proposed rule and its major alternatives have been reviewed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321, et seq.), the Guidelines of the Council on Environmental Quality (CEQ) (40 CFR Part 1500), and OSHA's DOL NEPA Procedures (29 CFR Part 11). As a result of this review, the Assistant Secretary for OSHA has determined that the proposed rule will have no significant environmental impact.

Although safety standards rarely impact on air, water or soil quality, plant or animal life, the use of land or

other aspects of the environment, it is appropriate to examine whether the reduction of dust in grain handling facilities might increase the industry's burden to comply with the Environmental Protection Agency's (EPA) air quality standards or otherwise alter the quality of the environment. Under the Clean Air Act (42 U.S.C. 1857 et seq.), EPA is responsible for maintaining ambient air quality by preventing or controlling air pollution. Grain dust emissions have been recognized as a significant contributor or air quality problem. Grain dust is therefore covered under EPA's National Ambient Air Quality Standards for Total Suspended Particulates. Although the removal of increased amounts of dust from the workplace air might seem to contribute to the pollution of ambient air surrounding grain handling facilities, this is not anticipated because direct exhaust to the external environment would be in violation of EPA air quality standards, and because direct capture systems are already in place to comply with these standards. Such controls include the use of baghouses—which can attain a 99.9 percent efficiency factor—cyclones, or induced-draft/negative pressure systems to capture particulates vented from the workplace to the ambient atmosphere.

Finally, because wet control methods are not practical in controlling dust accumulations in grain handling facilities, it is therefore reasonable to assume that there will be no increased wastewater effluents or significant water quality impact generated as a result of the proposed standard.

Based on this discussion and other information presented in this notice, OSHA concludes that there will be no significant environmental impact as a result of this proposal. OSHA, of course, reserves the right to reevaluate this determination based on additional environmental data and evidence that may be presented in response to this proposed action. Interested persons are invited to submit written data, views, and comments on these or other environmental issues relevant to this Notice.

VI. Public Participation

Interested persons are invited to submit written data, views and arguments with respect to this proposal. These comments must be postmarked by March 9, 1984, and submitted in quadruplicate to the Docket Officer, Docket H-117, U.S. Department of Labor, Occupational Safety and Health Administration, Room S6212, 200

Constitution Avenue, N.W., Washington, D.C. 20210.

The data, views and arguments that are submitted will be available for public inspection and copying at the above address. All timely submissions received will be made a part of the record of proceeding.

Additionally, under section 6(b)(3) of the OSH Act and 29 CFR 1911.11, interested persons may file objections to the proposal and request an informal hearing. These objections and hearing requests should be submitted in quadruplicate to the Docket Officer at the address above and must comply with the following conditions:

1. The objection must include the name and address of the objector;
2. The objections must be postmarked by March 9, 1984;
3. The objections must specify with particularity the provisions of the proposed rule to which objection is taken and must state the grounds therefor;
4. Each objection must be separately stated and numbered; and
5. The objections must be accompanied by a detailed summary of the evidence proposed to be adduced at the requested hearing.

VII. List of Subjects

29 CFR Part 1910

Fire prevention, Grain handling, Occupational safety and health, Protective equipment, Safety, Welding.

29 CFR Part 1917

Longshoremen, Occupational safety and health.

VIII. State Plan Standards

The 24 States with their own OSHA-approved occupational safety and health plans must adopt a comparable standard within six months of the publication date of the final standard. These States are: Alaska, Arizona, California, Connecticut (for State and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, Wyoming. Until such time as a State standard is promulgated, Federal OSHA will provide interim enforcement assistance, as appropriate, in these States.

IX. Authority

This document was prepared under the direction of Thorne G. Auchter, Assistant Secretary of Labor for Occupational Safety and Health, U.S.

Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210.

Accordingly, pursuant to sections 6(b) and 8 of the Occupational Safety and Health Act of 1970 (84 Stat. 1593, 1599; 29 U.S.C. 655, 657), Section 41 of the Longshoreman's and Harbor Workers' Compensation Act (44 Stat. 1444; 33 U.S.C. 941), Secretary of Labor's Order No. 9-83 (48 FR 35736), and 29 CFR Part 1911, it is proposed to amend 29 CFR Part 1917 and to add a new § 1910.272 to 29 CFR Part 1910, as set forth below.

Signed at Washington, D.C. this 28th day of December, 1983.

Thorne G. Auchter,
Assistant Secretary of Labor.

PART 1917—MARINE TERMINALS

Part 1917 of Title 29 of the Code of Federal Regulations is proposed to be amended as set forth below:

1. Section 1917.1 would be amended by adding a new paragraph (a)(2)(ix) to read as follows:

§ 1917.1 Scope and applicability.

(a) * * *

(2) * * *

(ix) *Grain handling facilities.* Subpart R, § 1910.272.

* * * * *

§ 1917.72 [Removed]

2. Section 1917.72 *Grain elevator terminals*, which is currently reserved would be removed.

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Part 1910 of Title 29 of the Code of Federal Regulations is proposed to be amended by adding a new § 1910.272 and Appendices A, B, and C to § 1910.272 to read as follows:

§ 1910.272 Grain handling facilities.

(a) *Scope.* This section contains requirements for the control of fires, grain dust explosions, and other safety hazards associated with grain handling facilities in general industry and maritime employments.

(b) *Application.* (1) Paragraphs (d) through (n) of this section apply to grain elevators, dust pelletizing plants, feed mills, rice mills, flour mills, and corn, and soybean milling operations.

(2) Paragraph (o) of this section applies only to grain dryers associated with grain elevators.

(3) Paragraphs (p) and (q) of this section apply only to grain elevators which have inside or partially-inside bucket elevators respectively.

(c) *Definitions.* (1) "Acute debilitating health effects" means health effects resulting from toxic agents which are in

such concentrations that exposed employees would not be able to effect self-rescue or communication to obtain assistance.

(2) "Choked leg" means a condition of material buildup in the bucket elevator that results in the stoppage of material flow and bucket movement.

(3) "Fugitive grain dust" means the dust particles which result from the breakage and handling of grain and grain products which are 400 microns in size or smaller and which are emitted from the stock handling system.

(4) "Grain elevator" means a facility engaged in the receipt, handling, storage, and shipment of bulk raw agricultural commodities such as corn, wheat, oats, barley, sunflower seeds, and soybeans.

(5) "Hot work" means work involving electric or gas welding, cutting, brazing, or similar flame producing operations.

(6) "Inside bucket elevator" means a bucket elevator inside the grain elevator structure and is the enclosed conveying device containing a series of equally spaced buckets which are attached to a continuous belt or chain. The buckets are loaded with grain or other stock at the boot, and then the material is elevated to the elevator head where it is emptied into a chute or spout. Inside bucket elevators include those elevators where only the head pulley is located inside the grain elevator structure.

(7) "Jogging" means repeated starting and stopping of drive motors in an attempt to clear choked legs.

(8) "Lagging" means a covering on drive pulleys used to increase the coefficient of friction between the pulley and the belt.

(9) "Partially-inside bucket elevator" means a bucket elevator which has no more than the boot section (and the portion of the leg casing in the rail or truck dump shed area) located inside the grain elevator facility, with the portion of the leg casing which is located outside the facility being constructed of materials which can vent a primary explosion.

(10) "Small elevator facility" means a grain elevator which has less than one million bushel storage capacity and less than a four million bushel throughput during the previous 12 month period.

(d) *Emergency action plan.* The employer shall develop and implement an emergency action plan meeting the requirements contained in § 1910.38(a) except that the plan may be communicated orally to employees and need not be maintained in writing.

(e) *Training.* (1) The employer shall assure that employees are provided training at least annually and when changes in job assignment will expose

them to new hazards. Current employees, and new employees prior to starting work, shall be trained in at least the following:

- (i) Recognition of and preventive measures for the safety hazards associated with their work tasks;
- (ii) procedures and safety practices established by the employer including where applicable, but not limited to, clearing procedures for choked legs, housekeeping program procedures, hot work procedures, preventive maintenance program procedures, rules pertaining to smoking and other common ignition sources, and lock-out/tag-out procedures.

(2) The employer shall assure that employees assigned special tasks such as bin entry and handling of flammable, or toxic substances, are provided training to handle safely these materials and work tasks.

(f) *Permit system.* (1) The employer shall develop and implement a permit system for hot work, except for hot work performed in welding shops authorized by the employer, and for work requiring entry into bins, silos, and tanks.

(2) The permit shall be the written certification by the employer authorizing employees to perform identified work operations subject to at least the following precautions:

(i) Hot work operations must meet the requirements contained in § 1910.252(d);

(ii) Entry into bins, silos, and tanks must meet the requirements contained in paragraph (g) of this section.

(g) *Entry into bins, silos, and tanks.*

(1) The employer shall assure that the following precautions have been taken before employees enter bins, silos, and tanks:

(i) Mechanical and electrical equipment which present a danger to employees inside bins, silos, or tanks, shall be disconnected or locked out and tagged.

(ii) The atmosphere within a bin, silo, or tank shall be tested for the presence of combustible gases, vapors, and toxic agents when there is reason to believe they may be present. Additionally, the atmosphere within a bin, silo, or tank, shall be tested for oxygen content unless there is continuous natural air movement or continuous forced-air ventilation before and during the period the employee(s) are inside.

(iii) If the oxygen level is less than 19.5% or if combustible gas or vapor is detected in excess of 10% of the lower flammable limit, or if toxic agents are present in excess of the ceiling levels listed in Subpart Z of this Part, or if toxic agents are present in concentrations that will cause acute debilitating health effects, the following provisions apply.

(A) Ventilation shall be provided until the unsafe condition or conditions are eliminated, and the ventilation shall be continued as long as there is a possibility of recurrence of the unsafe condition while the bin, silo, or tank is occupied by employees.

(B) If toxic conditions cannot be eliminated by ventilation, the employer shall assure that any employee entering a bin, silo, or tank wears an appropriate respirator. Respirator use shall be in accordance with the requirements of § 1910.134.

(2) The employer shall assure that employees wear a body harness with lifeline, or that a boatswain's chair meeting the requirements of Subpart D of this Part is used, when employees enter bins, silos, or tanks from the top.

(3) The employer shall assure that an observer, equipped to provide assistance, is stationed outside the bin, silo, or tank being entered by an employee. Communications (visual, voice, or signal line) shall be maintained between the observer and employee entering the bin, silo, or tank.

(4) The employer shall assure that equipment is provided for rescue operations which is specifically suited for the bin, silo or tank being entered.

(5) The employee acting as observer shall be trained in rescue procedures including notification methods for obtaining additional assistance.

(6) The employer shall assure that an employee trained in cardio-pulmonary resuscitation is available to provide assistance.

(7) Employees shall not be permitted to enter bins, silos, or tanks underneath a bridging condition or a buildup of grain or grain products on the side which could bury them.

(h) *Contractors.* (1) The employer shall inform contractors performing work at the facility of any potential fire and explosion hazards. The employer shall also inform contractors of the applicable safety rules of the facility.

(2) The employer shall explain the applicable provisions of the facility emergency action plan to contractors.

(i) *Housekeeping.* (1) The employer shall develop and implement a housekeeping program consisting of a dust control and removal method or combination of methods which will minimize fugitive grain dust accumulations inside grain handling facilities on ledges, floors, equipment, and other exposed surfaces.

(2) Effective July 1, 1985, all grain handling facilities except small elevator facilities shall be required to implement one of the three following alternatives as part of the employer's housekeeping program; effective July 1, 1988, the

following requirements shall also apply to small elevator facilities:

(i) *Action level.* (A) The employer shall establish an action level not to exceed a $\frac{1}{2}$ " layer of fugitive dust averaged over a 200 square foot floor area.

(B) If fugitive grain dust accumulations exceed the $\frac{1}{2}$ " level specified in paragraph (i)(2)(i) of this section, designated means or methods shall be initiated to remove immediately such accumulations to a safe location; or

(ii) *Once per shift cleaning.* The employer's housekeeping program shall ensure the removal of hazardous accumulations of dust. In setting up such a housekeeping program, the employer shall:

(A) Establish and implement a schedule of no less than once per shift for cleaning the workplace of dust, when the facility is in operation,

(B) Set out procedures for cleaning and disposal of the dust and what equipment is to be used,

(C) Alert employees as to where this equipment is stored, and train these employees in the use of the equipment,

(D) Maintain the equipment so that it is functional and operational; or

(iii) *Pneumatic dust control system.* The employer shall install and maintain in its facility a pneumatic dust control system, covering dust emission points from its stock handling system, such that there are no visible dust emissions coming from the stock handling system.

(3) The use of compressed air or other means to blow dust from ledges, walls, and other areas which may create a dust explosion hazard (i.e., result in dust concentrations above the lower explosive limit), shall only be permitted when all machinery that present an ignition source in the area is shut-down, and all other sources of ignition are removed.

(4) Grain or product spills shall not be considered fugitive grain dust accumulations. However, the housekeeping program shall address the procedures for removing such spills from the work area.

(j) *Grate openings.* The employer shall assure that receiving-pit feed openings, such as truck or railcar receiving pits, are covered by grates. The length and width of openings in the grates shall be a maximum of two and one-half inches (6.35 cm). If the required grate openings are too restrictive for an adequate flow of grain through the grating, larger openings in grates are permissible where magnets are used to remove ferrous material from the grain stream.

(k) *Filter collectors.* (1) Effective January 1, 1985, the employer shall equip

all fabric dust filter collectors, which are a part of a pneumatic dust collection system, with a monitoring device that indicates when the filter becomes blinded. Such indication shall be observable at a designated inspection or work location.

(2) Filter collectors installed after the effective date of this standard shall be:

- (i) Located outside the facility; or
- (ii) Located in an area inside the facility protected by a fire or explosion suppression system; or
- (iii) Located in an area inside the facility provided with explosion venting to the outside and separated from other areas of the facility by construction having at least a one hour fire-resistance rating.

(l) *Preventive maintenance.* (1) The employer shall develop and implement a preventive maintenance program consisting of:

- (i) Regularly scheduled inspection of at least the mechanical and safety control equipment associated with dryers, removal of ferrous objects, dust collection systems including filter collectors, and grain elevator legs; and,
- (ii) Lubrication and other appropriate preventive maintenance of the equipment to assure continued, safe operation.

(2) The employer shall promptly correct the following conditions: overheated bearings and slipping or misaligned belts that are associated with inside bucket elevators, and blinded filter collectors.

(3) The employer shall implement a system for identifying the date, maintenance performed and/or results of the equipment inspection.

(4) The employer shall develop and implement procedures consisting of tags and locks which will prevent the inadvertent application of energy or motion to equipment being repaired, serviced, or adjusted, which could result in employee injury. Such locks and tags shall be removed in accordance with established procedures only by the employee installing them or, if unavailable, by his or her supervisor.

(m) *Grain stream processing equipment.* The employer shall assure that grain stream processing equipment (such as hammer mills, grinders, and pulverizers) is equipped with an effective means of removing ferrous material from the incoming grain stream.

(n) *Emergency escape.* (1) The employer shall provide at least two means of escape from tunnels, galleries, scale floors, and work areas normally occupied by employees.

(2) The employer shall assure that escape routes are separated from each other to the extent that a single event,

such as a fire, will not reasonably prevent access to all means of escape.

(o) *Bulk raw grain dryers.* (1) Effective July 1, 1985, the employer shall assure that all direct-heat grain dryers are equipped with automatic controls that:

- (i) Will shut-off the fuel supply in case of power or flame failure or interruption of air movement through the exhaust fan; and,
- (ii) Will stop the grain from being fed into the dryer if the grain discharge mechanism becomes clogged, or excessive temperature occurs in the exhaust of the drying section.

(2) Direct-heat grain dryers installed after the effective date of this standard shall be:

- (i) Located outside the facility; or
- (ii) Located in an area inside the facility protected by a fire or explosion suppression system; or
- (iii) Located in an area inside the facility which is separated from other areas of the facility by construction having at least a one hour fire-resistance rating.

(p) *Inside bucket elevators.* (1) The employer shall assure that elevator legs are not jogged to free a choked leg.

(2) Effective January 1, 1985, the employer shall assure that elevator legs are electrically grounded.

(3) The employer shall assure that belts and lagging installed after January 1, 1985, are conductive. Belts shall have a surface electrical resistance not to exceed 300 megohms.

(4) Effective July 1, 1985, the employer shall assure that inspection doors are provided in the head pulley section to allow inspection of the head pulley lagging, belt, and discharge throat of the elevator leg. Boot sections shall be provided with doors for cleanout of the boot and for inspection of the boot pulley and belt.

(5) Effective July 1, 1985, the employer shall equip elevator legs with a motion detection device which initiates an alarm to employees when belt speed is reduced by no more than 15% of the normal operating speed and which will shut-down the leg when the belt speed is reduced by no more than 20% of the normal operating speed. Conveyor equipment which feeds the leg shall be equipped with interlock to shut-down these conveyors in the event that the leg they are serving is shut-down.

(6) Effective July 1, 1985, the employer shall assure that:

- (i) Bearings are mounted externally to the leg casing; or
- (ii) Bearings mounted totally or partially inside leg casings are equipped with a temperature monitoring device which can be read at a designated inspection or work location.

(7) Effective January 1, 1986, the employer shall equip elevator legs with a belt alignment monitoring device which will initiate an alarm to employees when the belt is not tracking properly.

(8) The employer does not have to comply with paragraphs (p)(5), (p)(6), and (p)(7) of this section where:

(i) Bucket elevators are equipped with an operational fire and explosion suppression system capable of protecting at least the head and boot section of the leg; or

(ii) Bucket elevators are equipped with pneumatic or other dust control systems that keeps the dust concentration inside the leg casing below 50% of the lower explosive limit at all times during operations.

(q) *Partially-inside bucket elevators.*

(1) All partially-inside bucket elevators shall comply with the requirements of paragraphs (p)(1) and (p)(5) of this section.

(2) When partially-inside bucket elevators meet the requirements of paragraph (p)(8)(i) or (p)(8)(ii) of this section, the employer does not have to comply with the requirements of (p)(5) of this section.

Note.—The following appendices to § 1910.272 serve as nonmandatory guidelines to assist employers and employees in complying with the requirements of this section in Subpart R, as well as to provide other helpful information.

Appendix A to § 1910.272 Grain handling facilities

1. *Scope.* The standard contains requirements for new and existing grain handling facilities in both general industry and maritime employments. Country, inland terminal, and export grain elevators are covered by this standard, as well as dust pelletizing plants and certain grain processing plants.

2. *Application.* All grain elevator facilities including those elevators that are a part of a mill must comply with all of the requirements contained in the standard including paragraphs (p) and (q) if appropriate. The standard does not apply to seed plants which handle and prepare seeds for planting of future crops.

3. *Emergency action plan.* The standard requires the employer to develop and implement an emergency action plan. There is an appendix to § 1910.38(a) which employers should review since it contains information that will be helpful in developing emergency action plans for grain handling facilities.

The emergency action plan (§ 1910.38(a)) covers those designated actions employers and employees are to take to ensure employee safety from fire and other emergencies. The plan specifies certain minimum elements which are to be addressed. These elements include the establishment of an employee alarm system.

the development of evacuation procedures, and training employees in those actions they are to take during an emergency.

The standard does not specify a particular method for notifying employees of an emergency. Public announcement systems, air horns, steam whistles, a standard fire alarm system, or other types of employee alarm may be used. However, employers should be aware that employees in a grain handling facility may have difficulty in hearing an emergency alarm, or distinguishing an emergency alarm from other audible signals at the facility, or both. Therefore, it is important that the type of employee alarm used be distinguishable and distinct.

The means of emergency escape from grain handling facilities may necessitate the use of controlled descent devices or emergency escape ladders, especially if escape must be made from bins, silos, or galleries. Employees are to know the location of the nearest escape routes. This is especially important for elevator employees working in tunnels, galleries, etc., where escape routes may be limited. The use of floor plans or workplace maps which clearly show the emergency escape routes should be included in the emergency action plan; color coding will aid employees in determining their route assignment. The employer should designate a safe area, outside the facility, where employees can congregate after evacuation, and implement procedures to account for all employees after emergency evacuation has been completed.

It is also recommended that employers seek the assistance of the local fire department for the purpose of preplanning for emergencies. Preplanning is encouraged to facilitate coordination and cooperation between facility personnel and those who may be called upon for assistance during an emergency. It is important for emergency service units to be aware of the usual work locations of employees in elevators or mills.

4. Training. It is important that employees be trained in the recognition and prevention of hazards associated with grain handling facilities, especially those hazards associated with their own work tasks. Employees should understand the factors which are necessary to produce a fire or explosion, i.e., fuel (such as grain dust), oxygen, ignition source, and (in the case of explosions) confinement. Employees should be made aware that any efforts they make to keep these factors from occurring simultaneously will be an important step in reducing the potential for fires and explosions.

The standard provides flexibility for the employer to design a training program which fulfills the needs of a facility. The type, amount, and frequency of training will need to reflect the tasks that employees are expected to perform. Although training is to be provided to employees at least annually, it is recommended that safety meetings or discussions and drills be conducted at frequent intervals, and the program varied to keep the interest of the employees.

The training program should include those topics applicable to the particular facility as well as topics such as: hot work procedures; lock-out/tag-out procedures; bin entry procedures; bin cleaning procedures; grain

dust explosions; fire prevention; procedures for handling hot grain or other hot agricultural products; housekeeping procedures, including methods and frequency of dust removal; pesticide and fumigant usage; proper use and maintenance of personal protective equipment; and, preventive maintenance. The types of work clothing should also be considered in the program at least to caution against using polyester clothing that easily melts and increases the severity of burns as compared to wool or cotton.

In implementing the training program, it is recommended that the employer utilize films, slide-tape presentations, pamphlets, and other information which can be obtained from such sources as the Grain Elevator and Processing Society, The Cooperative Extension Service of the U.S. Department of Agriculture, Kansas State University's Extension Grain Science and Industry, and other state agriculture schools, industry associations, union organizations, and insurance groups.

5. Permit system. The permit system requirements are intended to assure that employers maintain control of operations involving hot work and entry into bins, silos, and tanks, and to assure that employees are aware of and utilize appropriate safeguards when conducting these activities.

Precautions for hot work operations are specified in 29 CFR 1910.252(d) and include such safeguards as relocating the hot work operation to a safe location if possible, relocating or covering combustible material in the vicinity, providing fire extinguishers, and provisions for establishing a fire watch. Permits are not required for hot work operations conducted in welding shops or when work is conducted outside and away from the grain handling facility.

Precautions for entry into bins, silos, and tanks are specified in paragraph (g) of the standard. The same permit system may be issued for hot work operations or entry into bins, silos, or tanks; two different types of permit forms are not required.

The permit should contain at least the following information: Date, time, duration, and location of work to be performed; nature of work to be performed; safety and health precautions to be implemented; personal protective equipment to be worn; fire suppression equipment needed; signature of person performing work; signature of person authorizing work to be performed; time that work was completed; and, time that work completion inspection was made.

It should be noted that the permit is not a record which must be retained for a predetermined length of time but, instead, is a written authorization of the employer for employees to perform identified work operations.

6. Entry into bins, silos, and tanks. Employees should have a thorough understanding of the hazards associated with entry into bins, silos, and tanks. Employees are not to be permitted to enter these spaces from the bottom when grain or other agricultural products are hung up or sticking to the sides which may fall on them and possibly bury them. Employees should be made aware that the atmosphere in bins,

silos, and tanks can be oxygen deficient or toxic. Employees should be trained in the proper methods of testing the atmosphere, as well as in the appropriate procedures to be taken if the atmosphere is found to be oxygen deficient or toxic. Where fumigation has been recently applied in these areas and entry must be made, aeration fans should be running continuously to better assure a safe atmosphere for those inside. Periodic monitoring of toxic levels should be done by direct reading instruments to measure the levels, and, if there is an increase in these readings, appropriate actions should be promptly taken.

Employees have been buried, and suffocated in grain or other agricultural product because they sank into the material. It is suggested that employees not be permitted to walk or stand on the grain or other agricultural product where the depth is greater than waist high, but that they use a full body harness or bosun's chair with a lifeline. A winch system with mechanical advantage (either powered or manual) would allow better control of the employee than just using a hand held hoist line, and such a system would allow the observer to remove the employee easily without having to enter the space. Employees are not to be asked to clear a bridging condition or similar situation in bins, silos, or tanks from below.

It is important that employees be trained in the proper selection and use of any personal protective equipment which is to be worn. Equally important is the training of employees in the planned emergency rescue procedures. Employers should carefully read § 1910.134(e)(3) and assure that their procedures follow these requirements. The employee acting as observer is to be equipped to provide assistance and is to know procedures for obtaining additional assistance, including cardio-pulmonary resuscitation (CPR).

7. Contractors. These provisions of the standard are intended to ensure that outside contractors are cognizant of the hazards associated with grain handling facilities, particular in relation to the work they are to perform for the employer. Also, in the event of an emergency, contractors should be able to take appropriate action as a part of the overall facility emergency action plan. Contractors should also be aware of the employers permit systems. Contractors should develop specified procedures for performing hot work and for entry into bins, silos, and tanks, and these activities should be coordinated with the employer.

This coordination will help to ensure that employers know what work is being performed at the facility by contractors; where it is being performed; and, that it is being performed in a manner that will not endanger employees.

8. Housekeeping. The housekeeping program is to be designed to keep dust accumulations and emissions under control inside the grain handling facility. The housekeeping program is to specify the method(s) used to control airborne dust emissions as well as the frequency and method(s) used to remove dust accumulations. Ship, barge, and rail loadout

and receiving areas which are located outside the facility need not be addressed in the housekeeping program. Additionally, truck dumps which are open on two or more sides need not be addressed by the housekeeping program. Other truck dumps should be addressed in the housekeeping program to the extent that provision is made for regular cleaning during periods of receiving grain or agricultural products. The housekeeping program should provide coverage for all workspaces in the facility, including walls, beams, etc., especially in relation to the extent that fugitive dust could accumulate.

8A. Dust accumulations. Almost all facilities will require some level of manual housekeeping. Manual housekeeping methods, such as vacuuming or sweeping with soft bristle brooms, should be used which will minimize the possibility of layered dust being suspended in the air when it is being removed.

The housekeeping program should include a contingency plan to respond to situations where dust accumulates rapidly due to a failure of a dust enclosure hood, an unexpected breakdown of the dust control system, a dust-tight connection inadvertently knocked open, etc.

One of the alternatives for dust control is to specify an action level to cleanup and safely dispose of dust or otherwise control the condition. The standard specifies a maximum accumulation of $\frac{1}{8}$ inch of dust, averaged over a 200 square foot area, as the upper limit for the action level. Any accumulation in excess of this amount and area, and where no action has been taken to implement cleaning, would constitute a violation of the standard. Employers should make every effort to minimize dust accumulations on exposed surfaces since dust is the fuel for a fire or explosion, and it is recognized that a $\frac{1}{8}$ inch dust accumulation is more than enough to fuel such occurrences.

The housekeeping program should also specify the manner of handling grain or product spills, and the methods to be used for returning the grain or product back into the stock handling system. Grain and product spills are not considered to be fugitive dust accumulations.

A fully enclosed horizontal belt conveying system where the return belt is inside the enclosure should have inspection doors to permit checking of equipment, checking for dust accumulations and facilitate cleaning if needed.

8B. Dust emissions. Each employer needs to analyze the entire stock handling system to determine the location of dust emissions and effective methods to control or to eliminate them. The employer should make sure the holes in spouting, casings of bucket elevators, pneumatic conveying pipes, screw augers, or drag conveyor casings, are patched or otherwise properly repaired. Minimizing free falls of grain or grain products by using choke feeding techniques, and utilization of dust-tight enclosures at transfer points, can be effective in reducing dust emissions.

Each housekeeping program should specify the schedules and control measures which will be used to control dust emitted from the

stock handling system. The housekeeping program should address the schedules to be used for cleaning dust accumulations from motors, critical bearings and other potential ignition sources in the working areas. Also, the areas around bucket elevator legs, milling machinery and similar equipment should be given priority in the cleaning schedule. The method of disposal of the dust which is swept or vacuumed should also be planned.

Dust may accumulate in somewhat inaccessible areas, such as those areas where ladders or scaffolds might be necessary to reach them. The employer may want to consider the use of compressed air and long lances to blow down these areas frequently. The employer may also want to consider the periodic use of water and hoses to wash down these areas. If these methods are used, they are to be specified in the housekeeping program along with the appropriate safety precautions, including the use of personal protective equipment such as eyewear and dust respirators.

Several methods have been effective in controlling dust emissions. The most widely used method of controlling dust emissions is a pneumatic dust collection system. However, the installation of a poorly designed pneumatic dust collection system has fostered a false sense of security and has often led to an inappropriate reduction in manual housekeeping. Therefore, it is imperative that the system be designed properly and installed by a competent contractor. Those employers who have a pneumatic dust control system that is not working up to expectations should request the engineering design firm, or the manufacturer of the filter and related equipment, to conduct an evaluation of the system to determine the corrections necessary for proper operation of the system. If the design firm or manufacturer of the equipment is not known, employers should contact their trade association for recommendations of those competent designers of pneumatic dust control systems who could provide assistance.

When installing a new or upgraded pneumatic control system, the employer should insist on an acceptance test period of 30 to 45 days of operation to ensure that the system is operating as intended and designed. The employer should also obtain maintenance, testing, and inspection information from the manufacturer to ensure that the system will continue to operate as designed.

If the employer intends to return collected dust to the stock handling system, the dust should be returned at a point downstream from where it was collected. This will avoid rehandling the same dust twice or more. It is also safer not to reintroduce the collected dust until the loadout end of the stock handling system.

Aspiration of the leg, as part of a pneumatic dust collection system, is another effective method of controlling dust emissions. Aspiration of the leg consists of a flow of air across the entire boot, which entrains the liberated dust and carries it up the leg to take-off points. With proper aspiration, dust concentrations in the leg can be lowered below the lower explosive limit.

Where a prototype leg installation has been instrumented and shown to be effective in keeping the dust level below 50% of the lower flammable limit during normal operations for the various products handled, then other legs of similar size capacity and products being handled which have the same design criteria for the air aspiration would be acceptable to OSHA, provided the prototype test report is available on site.

Another method of controlling dust emissions is enclosing the conveying system, pressurizing the general work area, and providing a lower pressure inside the enclosed conveying system. Although this method is effective in controlling dust emissions from the conveying system, adequate access to the inside of the enclosure is necessary to facilitate frequent removal of dust accumulations. This is also necessary for those systems called "self-cleaning."

The use of edible oil sprayed on or into a moving stream of grain is another method which has been used to control dust emissions. Tests performed using this method have shown that the oil treatment can reduce dust emissions. Repeated handling of the grain may necessitate additional oil treatment to prevent liberation of dust. However, before using this method, operators of grain handling facilities should be aware that the Food and Drug Administration must approve the specific oil treatment used on products for food or feed.

9. Grates over receiving pits. Grates are necessary to assist in the removal of foreign objects. Grate openings should be sized for the proper flow of the commodity through the grate that will prevent overflow. Those facilities which are handling ear corn or other non-free flowing commodity may need larger grate openings than the $2\frac{1}{2}$ inch square openings specified in the standard. Larger grate openings are permitted if permanent or electromagnets are used the full width of the incoming commodity stream to remove ferrous objects. The maintenance required on the magnets is to be covered in the preventive maintenance program.

Where grate openings are larger than those needed or desired, the employer may also use an overlay grate, which can be welded or strapped to the existing grate, to achieve the desired size opening.

10. Filter collectors. Proper sizing of filter collectors for the pneumatic dust control system they serve is very important for the overall effectiveness of the system. The air to cloth ratio of the system should be in accordance with the manufacturer's recommendations. If higher ratios are used, it can result in more maintenance on the filter, shorter bag or sock life, increased differential pressure resulting in higher energy costs, and an increase in operational problems.

A photohelic gauge, magnehelic gauge, or manometer, may be used to indicate the pressure rise across the inlet and outlet of the filter. When the pressure exceeds the design value for the filter, the air volume will start to drop, and maintenance will be required. Any one of these three monitoring devices is acceptable as meeting paragraph (k)(1) of the standard.

The employer should establish a level or target reading on his instrument which is consistent with the manufacturer's recommendations that will indicate when the filter should be serviced. This target reading on the instrument and the accompanying procedures should be in the preventive maintenance program. These efforts would minimize the blinding of the filter and the subsequent failure of the pneumatic dust control system.

There are other instruments that the employer may want to consider using to monitor the operation of the filter. One instrument is a zero motion switch for detecting a failure of motion by the rotary discharge valve on the hopper. If the rotary discharge valve stops turning, the dust released by the bag or sock will accumulate in the filter hopper until the filter becomes clogged. Another instrument is a level indicator which is installed in the hopper of the filter to detect the buildup of dust that would otherwise cause the filter hopper to be plugged. The installation of these instruments should be in accordance with the manufacturer's recommendations.

All of these monitoring devices and instruments are to be capable of being read at an accessible location and checked as frequently as specified in the preventive maintenance program.

Those filter collectors on portable vacuum cleaners, and those where fans are not part of the system, are not covered by these requirements.

11. Preventive maintenance. The control of dust and the control of ignition sources are the most effective means for reducing explosion hazards. Preventive maintenance is related to ignition sources in the same manner as housekeeping is related to dust control and should be treated as a major function in a facility. Equipment such as critical bearings, belts, buckets, pulleys, milling machinery are potential ignition sources, and periodic inspection and lubrication of such equipment through a scheduled preventive maintenance program is an effective method for keeping equipment functioning properly and safely. The use of heat sensitive tape or other heat detection methods that can be seen by the inspector or maintenance person will allow for a quick, accurate, and consistent evaluation of bearings and will help in the implementation of the program.

The standard does not require a specific frequency for preventive maintenance. The employer is permitted flexibility in determining the appropriate interval for maintenance. Scheduling of preventive maintenance should be based on manufacturer's recommendations for effective operation, as well as from the employer's previous experience with the equipment. However, the employer's schedule for preventive maintenance will need to be frequent enough both to minimize the possibility of failure or malfunction of the mechanical and safety control equipment associated with bucket elevators, dryers, filter collectors and magnets, and to allow for prompt identification and correction of any problems. A system of identifying the date, maintenance performed and/or results of

equipment inspection will assist employers in continually refining their preventive maintenance schedules and identifying equipment problem areas. Open work orders where repair work or replacement is to be done at a designated future date as scheduled, would be an indication of an effective preventive maintenance program.

It is imperative that the prearranged schedule of maintenance be adhered to regardless of other facility constraints. The employer should give priority to the maintenance or repair work associated with safety control equipment, such as that on dryers, magnets, alarm and shut-down systems on bucket elevators, bearings on bucket elevators, and the filter collectors in the dust control system. Benefits of a strict preventive maintenance program can be a reduction of unplanned downtime, improved equipment performance, planned use of resources, more efficient operations, and, most importantly, safer operations.

The standard also requires the employer to develop and implement procedures consisting of locking out and tagging equipment to prevent the inadvertent application of energy or motion to equipment being repaired, serviced, or adjusted, which could result in employee injury. All employees who have responsibility for repairing or servicing equipment, as well as those who operate the equipment, are to be familiar with the employer's lock and tag procedures. A lock is to be used as the positive means to prevent operation of the disconnected equipment. Tags are to be used to inform employees why equipment is locked out. Tags are to meet the requirements in § 1910.145(f). Locks and tags may only be removed by employees that placed them or by their supervisor, to ensure the safety of the operation.

12 Grain stream processing equipment. The standard requires an effective means of removing ferrous material from grain streams so that such material does not enter equipment such as hammer mills, grinders and pulverizers. Large foreign objects, such as stones, should have been removed at the receiving pit. Introduction of foreign objects and ferrous material into such equipment can produce sparks which can create an explosion hazard. Acceptable means for removal of ferrous materials include the use of permanent or electromagnets. Means used to separate foreign objects and ferrous material should be cleaned regularly and kept in good repair as part of the preventive maintenance program in order to maximize their effectiveness.

13. Emergency escape. The standard specifies the minimum number of means of escape for the major work spaces in the facility and requires that they be separated from each other to the extent feasible. Small work platforms, elevated inspection station platforms, areas under receiving pits or similar small spaces do not have to have two ways out. A single ladder, ramp or stair is acceptable provided it is not obstructed. Means of emergency escape may include any available means of egress (consisting of three components, exit access, exit, and exit discharge as defined in § 1910.35), the use of controlled descent devices or emergency escape ladders from galleries, or the use of

windows from tunnels that are located under bins, silos or tanks. Importantly, the means of emergency escape are to be addressed in the facility emergency action plan. Employees are to know the location of the nearest means of emergency escape and the action they must take during an emergency.

14. Dryers. The paragraph of the standard concerning dryers pertains only to those dryers handling bulk raw grain and which are associated with a grain elevator facility. The paragraph does not apply to those dryers which are a part of the processing and milling segments of a facility.

Liquefied petroleum gas fired dryers should have the vaporizers installed at least ten feet from the dryer. Also the gas piping system should be protected from mechanical damage. The employer should establish procedures for locating and repairing leaks when there is a strong odor of gas or other signs of a leak. An alarm device should sound when the dryer is automatically shut-down to alert employees at the facility.

15. Inside bucket elevators. Hazards associated with inside bucket elevator legs are the source of many grain elevator fires and explosions. Therefore, to mitigate these hazards, the standard requires the implementation of special safety precautions and procedures, as well as the installation of safety control devices. However, the standard also provides for a phase-in period for many of the requirements to provide the employer time for planning the implementation of the requirements.

The standard requires that belts have surface electrical resistance not to exceed 300 megohms. Test methods available regarding electrical resistance of belts are: The American Society for Testing and Materials D257-76, "Standard Test Methods for D-C Resistance or Conductance of Insulating Materials"; and, the International Standards Organization's #284, "Conveyor Belts—Electrical Conductivity-Specification and Method of Test." When an employer has written certification from the manufacturer that a belt has been tested using one of the above test methods, and meets the 300 megohm criteria, the belt is acceptable as meeting this standard. Employers should also consider purchasing new belts that are flame retardant or fire resistive. This test is contained in 30 CFR 18.65.

Appendix B to § 1910.272 Grain Handling Facilities

National Consensus Standards

The following table contains a cross-reference listing of those current national consensus standards which contain information and guidelines that would be considered acceptable in complying with the requirements of the appropriate provisions in § 1910.272.

Subject and National Consensus Standards

Grain elevators and facilities handling bulk raw agricultural commodities—ANSI/NFPA 61B
Feed mills—ANSI/NFPA 61C
Facilities handling agricultural commodities for human consumption—ANSI/NFPA 61D

Pneumatic conveying systems for agricultural commodities—ANSI/NFPA 66
 Guide for explosion venting—ANSI/NFPA 68
 Explosion prevention systems—ANSI/NFPA 69
 Dust removal and exhaust system. ANSI/NFPA 91

Appendix C to § 1910.272 Grain Handling Facilities

References for Further Information

The following references provide information which can be helpful in understanding the requirements contained in various sections of the standard.

1. *Accident Prevention Manual for Industrial Operations*; National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60611.
2. *Practical Guide to Elevator Design*; National Grain and Feed Association, P.O. Box 28328, Washington, D.C. 20005.
3. *Dust Control for Grain Elevators*; National Grain and Feed Association, P.O. Box 28328, Washington, D.C. 20005.
4. *Prevention of Grain Elevator and Mill Explosions*; National Academy of Sciences, Washington, D.C. (Available from National Technical Information Service, Springfield, Virginia 22151.)
5. *Standard for the Prevention of Fires and Explosions in Grain Elevators and Facilities Handling Bulk Raw Agricultural Commodities*, NFPA 61B; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.
6. *Standard for the Prevention of Fire and Dust Explosions in Feed Mills*, NFPA 61C; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.
7. *Standard for the Prevention of Fire and Dust Explosions in the Milling of Agricultural Commodities for Human Consumption*, NFPA 61D, National Fire Protection Association,

Batterymarch Park, Quincy, Massachusetts 02269.

8. *Standard for Pneumatic Conveying Systems for Handling Feed, Flour, Grain and Other Agricultural Dusts*, NFPA 66; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

9. *Guide for Explosion Venting*, NFPA 68; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

10. *Standard on Explosion Prevention Systems*, NFPA 69; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

11. *Safety-Operations Plans*; U.S. Department of Agriculture, Washington, D.C. 20250.

12. *Hazard Alert*; Occupational Safety and Health Administration, U.S. Department of Labor, 2nd and Constitution Avenue, N.W., Washington, D.C. 20210.

13. *Inplant Fire Prevention Control Programs*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

14. *Guidelines for Terminal Elevators*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

15. *Standards for Preventing the Horizontal and Vertical Spread of Fires in Grain Handling Properties*, Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

16. *Belt Conveyors for Bulk Materials*, Part I and Part II, Data Sheet 570, Revision A; National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60611.

17. *Suggestions for Precautions and Safety Practices in Welding and Cutting*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

18. *Food Bins and Tanks*, Data Sheet 524; National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60611.

19. *Pneumatic Dust Control in Grain Elevators*; National Academy of Sciences, Washington, D.C. (Available from National Technical Information Service, Springfield, Virginia 22151.)

20. *Dust Control Analysis and Layout Procedures for Grain Storage and Processing Plants*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

21. *Standard for the Installation of Blower and Exhaust Systems for Dust, Stock and Vapor Removal*, NFPA 91; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

22. *Standards for the Installation of Direct Heat Grain Driers in Grain and Milling Properties*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

23. *Guidelines for Lubrication and Bearing Maintenance*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

24. *Organized Maintenance in Grain and Milling Properties*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

25. *Safe and Efficient Elevator Legs for Grain and Milling Properties*; Mill Mutual Fire Prevention Bureau, 2 North Riverside Plaza, Chicago, Illinois 60606.

26. *Explosion Venting and Suppression of Bucket Elevators*; National Grain and Feed Association, P. O. Box 28328, Washington, D.C. 20005.

27. *Lightning Protection Code*, NFPA 78; National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

(Sec. 6, 8, 84 Stat. 1593, 1599 (29 U.S.C. 655, 657); Sec. 41, 44 stat. 1444 (33 U.S.C. 941); 29 CFR Part 1911, Secretary of Labor's Order No. 9-83 (48 FR 35736))

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Final Uniform Regulations

Friday
January 6, 1984

Part V

Department of the Interior

Office of the Secretary

Department of Agriculture

Office of the Secretary

Tennessee Valley Authority

Department of Defense

Office of the Secretary

43 CFR Part 7

36 CFR Part 296

18 CFR Part 1312

32 CFR Part 229

Archaeological Resources Protection Act
of 1979; Final Uniform Regulations

DEPARTMENT OF THE INTERIOR**Office of the Secretary****43 CFR Part 7****DEPARTMENT OF AGRICULTURE****36 CFR Part 296****TENNESSEE VALLEY AUTHORITY****18 CFR Part 1312****DEPARTMENT OF DEFENSE****32 CFR Part 229****Archaeological Resources Protection Act of 1979; Final Uniform Regulations**

AGENCIES: Departments of the Interior, Agriculture, and Defense and Tennessee Valley Authority.

ACTION: Final rule.

SUMMARY: These final regulations establish uniform procedures for implementing provisions of the Archaeological Resources Protection Act of 1979 in response to direction in section 10(a) of the Act. These uniform regulations will serve as the foundation and basic policy standard for additional regulations which departments and other agencies of the Federal government may promulgate pursuant to section 10(b) of the Act. These regulations enable Federal land managers to protect archaeological resources on public lands and Indian lands, by issuing permits for authorized excavation and/or removal of archaeological resources, by imposing civil penalties for unauthorized excavation, removal, damage, alteration, or defacement of archaeological resources, by providing for the preservation of archaeological resource collections and data, and by ensuring confidentiality of information about archaeological resources when disclosure would threaten the resources.

DATES: These regulations were submitted on October 7, 1983, to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives, and will take effect on February 6, 1984.

FOR FURTHER INFORMATION CONTACT: Bennie C. Keel, National Park Service, Department of the Interior, Washington, D.C., 202-343-4101; Barbara Levin, Office of the Solicitor, Department of the Interior, Washington, D.C., 202-343-7957; John G. Douglas, Bureau of Land Management, Department of the

Interior, Washington, D.C., 202-343-9353; Evan I. DeBlois, U.S. Forest Service, Department of Agriculture, Washington, D.C., 202-382-9425; Garland P. Thompson, Army Corps of Engineers, Department of Defense, Washington, D.C., 202-272-0517; or Maxwell D. Ramsey, Office of Natural Resources, Tennessee Valley Authority, Norris, Tennessee, 615-632-6450.

SUPPLEMENTARY INFORMATION:**Background**

These regulations implement provisions of the Archaeological Resources Protection Act of 1979 ("Act"; Pub. L. 96-95; 93 Stat. 721; 16 U.S.C. 470aa-ll). They were prepared by an interagency rulemaking task force composed of representatives of the Secretaries of the Interior, Agriculture, and Defense, and the Chairman of the Board of the Tennessee Valley Authority, as directed in section 10(a) of the Act.

The Act has two fundamental purposes: (1) To protect irreplaceable archaeological resources on public lands and Indian lands from unauthorized excavation, removal, damage, alteration, or defacement; and (2) to increase communication and exchange of information among governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained prior to enactment of the Act.

Provisions of the Act which address the first purpose, protection, include requirements for a permit, to be issued by the appropriate Federal land manager to any qualified person who would make use of archaeological resources for the purpose of furthering archaeological knowledge in the public interest. For any person who would make unauthorized use of archaeological resources, without a permit, criminal and civil penalty and forfeiture provisions are prescribed in the Act. Basic government-wide standards for the issuance of permits and for the implementation of civil penalty provisions are a principal focus of these regulations. Also, preservation of collections and data, and protection of locational information, when its disclosure might result in harm to archaeological resources, are provided for in the Act and these regulations.

With regard to the second purpose, section 11 of the Act directs that the Secretary of the Interior shall take such action as may be necessary to foster and improve the communication, cooperation, and exchange of

information among private individuals, Federal authorities responsible for the protection of archaeological resources on public lands and Indian lands, and professional archaeologists and archaeological organizations, in order to expand the archaeological data base for the archaeological resources of the United States. Because of the specific assignment, this purpose will be addressed separately.

Section 10(a) of the Act calls for the Secretaries of the Interior, Agriculture, and Defense, and the Chairman of the Board of the Tennessee Valley Authority, after consultation with other Federal land managers, Indian tribes, representatives of concerned State agencies, and after public notice and hearing, to promulgate such uniform rules and regulations as may be appropriate to carry out the purposes of the Act. Consideration of the provisions of the American Indian Religious Freedom Act is specified as a prerequisite to preparing such regulations. Specific reference to uniform regulations in the Act is included also in section 3(1) (definition of "archaeological resource"), section 4(a) (permit application requirements), section 4(b) (standards for permit application evaluation), section 4(d) (permit terms and conditions), and section 10(b) (agency-specific regulations consistent with uniform regulations).

Certain provisions, such as criminal prohibitions and criminal penalties, are outside the scope of this rulemaking. In order to be fully informed about the nature and extent of archaeological resource protection under the Archaeological Resources Protection Act of 1979, it is necessary to consult the Act as well as these regulations.

These regulations are designed to provide Federal land managers the ability to fully exercise their authority under the Act. However, because a variety of land management conditions exists among Federal agencies, supplemental detailed regulations may be promulgated under the authority of section 10(b) of the Act.

Public hearings were held during March and April 1980, in Denver, Colorado; Phoenix, Arizona; Portland, Oregon; and Knoxville, Tennessee, following publication of a notice of public hearings on March 19, 1980 (45 FR 17622). These hearings were held to provide an opportunity for early public input into the rulemaking process and to initiate an early dialogue among various groups interested in the use and/or protection of archaeological resources. Proposed uniform rules were published

on January 19, 1981 (46 FR 5566), as 36 CFR Part 1215. Public comment on the proposed rules was invited for a 60-day period, to end March 20, 1981. Public hearings were held during the comment period, in Chicago, Illinois; Atlanta, Georgia; Albuquerque, New Mexico; San Francisco, California; Anchorage, Alaska; and Denver, Colorado. Because of widespread interest expressed at the public hearings for additional time to submit written comments, the comment period was extended until April 30, 1981 (46 FR 22208), making a total of 101 days available for interested parties to submit comments on the proposed rules.

Comments were received from a broad array of private individuals, local, State, and Federal agencies, amateur and professional scholarly associations, hobbyist groups, Indian tribes, scientific and educational institutions, various industries, and others with interests in the use of public lands and resources. A total of 137 persons presented testimony during the six public hearings. Two hundred nineteen written responses were received before the end of the comment period, expressing a total of 418 comments. Three of the written responses were in the form of petitions. Comments were addressed to all but two of the 23 sections of the proposed rules, ranging from as few as two to as many as 66 comments on a given section. Sections 1215.3, 1215.6, 1215.4, and 1215.7 drew the greatest volume of comments, in that order, each receiving 45 or more. No other section drew more than 15 comments. There were 62 comments which did not pertain directly to specific sections, but rather addressed the Act or the regulations in more general terms.

Many of the public comments raised valid concerns with, or forced greater attention to, the substance of certain provisions of the proposed regulations, and the construction, concepts, and wording of affected sections were altered accordingly. Many other comments represented misunderstanding of basic issues, and these comments were also helpful in identifying needs for explanatory as well as procedural language. Some comments were critical of wording or provisions drawn directly from the Act, in most cases appearing to show a lack of awareness of the statutory basis for the proposed regulations. In the discussions which follow, reference is frequently made to the section of the Act involved in order to clarify the statutory-regulatory relationship.

Finally, given the volume of comments, it is impractical to respond in detail here to every question raised or

suggestion offered. However, all comments were considered, and most contributed to the rulemaking process.

In the discussions which follow, section numbers given in the central headings refer to the proposed 36 CFR Part 1215, while numbers in the italicized paragraph headings refer to the final part.

Changes in Response to Public Comments

§ 1215.1 Purpose (Renumbered § —.1).

This section was expanded and reworded to make clearer the extent to which these regulations apply. Based on a number of general comments which show misunderstanding of the scope and effect of the proposed regulations, paragraph (a) was expanded to state explicitly that these regulations enable Federal land managers to protect archaeological resources through four mechanisms: permits, civil penalties, preservation of collections and data, and confidentiality of archaeological resource information. Also, specific reference to the American Indian Religious Freedom Act was incorporated in keeping with section 10(a) of the Act.

Several comments suggested greater specificity in paragraph (b). Wording was changed slightly to state more directly that no new restrictions on authorized uses of the public lands are created by these regulations. Comments from representatives of industries which have ongoing interests in the use of public lands and resources expressed concern that land-use applicants would be required to apply for permits under these regulations in addition to applications for use entitlements under other legal authorities. These comments were acknowledged by adding a paragraph (b)(1) to § —.5, "Permit requirements and exceptions," rather than by further expansion of the purpose statement. Permits may be required for archaeological consultants to land-use applicants, but not for the land-use applicants themselves. This does not represent any change from similar requirements applicable under other laws and regulations, primarily the American Antiquities Act of 1906 and 43 CFR Part 3.

§ 1215.2 Authorities (Renumbered § —.2).

Several comments offered additional legal authorities to be added to this section. One comment pointed out that related authorities are listed at the head of the regulations and need not be listed again. Since the authority for promulgating these regulations is confined to the Archaeological

Resources Protection Act of 1979, the section was shortened to follow this last comment. The two remaining paragraphs were reworded slightly to clarify the relationship of these and subsequent regulations to the provisions of section 10 of the Act; paragraph (b) is retained for informational purposes, so that the public may be informed that authorized agency regulations may add specificity to the general provisions of these uniform regulations.

§ 1215.3 Definition (Renumbered § —.3).

This section drew a heavier body of comment than any other section in the proposed regulations, with the majority of comments addressing the definition of "archaeological resource" (proposed § 1215.3(a)). This definition is central not only to the remainder of these regulations, but also to the enforcement of criminal provisions of the Act. Section —.3(a) retains the fundamental features of the definition of "archaeological resource" from the proposed regulations, but it has been restructured in important ways, making it a more precise tool for delimiting judgments about whether or not an item in question is an archaeological resource, and making it more clear that certain items excluded by the Act fall outside the scope of the definition.

The key conditioning provisions for determining what is an archaeological resource, taken from the statutory definition in section 3(1) of the Act, are stated in the base definition in § —.3(a) of the regulations: In order to be considered archaeological resources under these regulations, items must be material remains of human life or activities, at least 100 years of age, and of archaeological interest. Subdefinitions, defining "of archaeological interest" and "material remains," provide the standards for applying the base definition. Where classes of material remains and illustrative examples were included as part of the definition of "material remains" in the proposed rules, they are now assigned to a separate paragraph and are specified to be of archaeological interest, and therefore archaeological resources, unless conditions of ensuing paragraph (a)(4) or (a)(5) apply. This definite status responds to comments about residual uncertainties in the proposed definition. Several illustrative examples were added to material remains classes in response to comments.

What is not an "archaeological resource" is included in a separate paragraph (a)(4), drawing on sections

3(1) and 12(b) of the Act and responding to comments that certain excluded items had been listed, apparently counter to direction in the Act. Because of the way the definition was structured in the proposed rules, inclusion was appropriate since those items might be "archaeological resources" under certain circumstances. In the revised structure, paleontological remains, coins, bullets, and unworked rocks and minerals are definitely stated not to be "archaeological resources" themselves, unless they are located in immediate association with archaeological resources.

Many commentors expressed concern that the proposed definition would not allow dislocated material remains, which had lost archaeological interest by reason of their dislocation, to be collected by hobbyists. This concern was directed primarily to items eroded from archaeological sites along the shores of artificial lakes and redeposited sufficiently out of context as to remove their information potential. Lakes specifically mentioned were those resulting from projects of the Army Corps of Engineers and the Tennessee Valley Authority. Commentors pointed out that collection of these remains may contribute more to their preservation than allowing them to be further dislocated due to human-caused or natural disturbance. In recognition of the fact that material remains can, in certain circumstances, lose their archaeological interest and that their collection by the public under these circumstances might not be adverse to the purposes of the Act, a new paragraph (a)(5) was added to the definition of "archaeological resource." This new provision is based on the premise that if the circumstances clearly warrant a determination that certain material remains in certain areas have lost archaeological interest because of dislocation or other causes, the protected status of the remains should be removed and the public so informed. In the absence of such a determination, the presumption of archaeological interest would be retained in order to protect the remains. The final regulations provide that Federal land managers may determine that certain material remains, in specified areas under their jurisdiction, and under specified circumstances, are not of archaeological interest. Any such determination would have to be documented and made public.

Under sections 6 and 7 of the Act, criminal and civil penalties are not to be applicable to removal of arrowheads located on the surface of the ground.

"Arrowhead" was defined in a technical manner in § 1215.3(b) of the proposed regulations, generating many comments. Many professional archaeologists commented that distinctions between arrowheads and other tools and weapon projectiles of similar form would prove difficult if not impossible, regardless of how a technical definition might be written. One commentor provided a substantial body of documentation from the published literature which demonstrates the difficulty of relying on shape and size criteria for differentiating "arrowheads" from dart points, spear points, hafted knives, drills, and other tools. Several commentors recommended that a lay definition be used. In light of the fact that the Congress had used the lay term "arrowhead" rather than alternative technical terms that might have been used, and that a stated congressional intent of the non-penalty provisions is to protect unwary recreationists from the heavy fines and other punishment that might be levied under the Act, it was determined that a lay definition for a lay term is appropriate. Such a definition was included as § —.3(b).

Neither the Act nor these regulations exclude arrowheads from the definition of archaeological resources. Arrowheads over 100 years of age and of archaeological interest are archaeological resources under section 3(1) of the Act and § —.3(a)(3)(iii) of these regulations. Their removal from public lands of Indian lands without a permit is prohibited, but is not punishable under the Act or these regulations. However, regulations under other authority which penalize their removal remain effective. Contrary to opinions frequently expressed in the comments and elsewhere, the Act does not legalize the collection of arrowheads from public lands or Indian lands.

Several commentors suggested that the definition of "Federal land manager," paragraph (c) in both proposed and final regulations, should show that a secretary of a department or other agency head may delegate management authority to other persons. A clause to this effect was added to the definition.

The "public lands" definition, paragraph (d) in both versions, received several comments with regard to the effect of "fee title" specification. Some commentors questioned whether the language would exclude certain lands in the public domain administered by the Bureau of Land Management in the Department of the Interior. All Bureau of Land Management lands, including those for which no title document as

such exists, are covered in the fee-title concept as used in the Act. In response to comments, the definition was clarified by addition of the words "except Indian lands" at the end, since the fee-title provisions could be interpreted in a technical way to include certain Indian lands.

The definition of "Indian tribe," paragraph (f) in both versions, was expanded to include Alaska Native villages or tribes recognized as eligible for services provided by the Bureau of Indian Affairs. Related discussion touching on the definition of "Indian tribe" is found in the discussion of changes to § 1215.6 (new § —.7).

Several comments questioned the lack of mention of several trust territories and the Trust Territory of the Pacific Islands in the definition of "State" in paragraph (h) of both versions. The statutory language was retained unchanged since the requested changes are beyond the reach of rulemaking.

A number of comments asked that definitions be provided for certain terms, such as "bullet," "harm," "destruction," and others. The decision was to allow undefined terms to rest on common meaning and dictionary definitions. The extent of the meaning of "excavate" in these regulations was clarified in § —.5(b)(1) in response to one such comment.

§ 1215.4. Excavation or removal of Archaeological Resources (Renumbered § —.5; Retitled "Permit Requirements and Exceptions").

In response to one comment on clarity of purpose, the title of this section was changed. The reason for its movement in the order of sections is explained below, under discussion of proposed rule § 1215.14 (new § —.4).

This section also drew a substantial body of comment, most of it aimed at clarifying relationships between this section and other sections of the regulations.

Paragraph (a) in the proposed rules stated the permit requirement in passive construction, inadvertently departing from clear representation of statutory provisions that any person may apply for a permit, and that the Federal land manager may issue a permit if certain conditions are met. Rewording of the paragraph and reference to conditions guiding the Federal land manager's decision corrected this departure. One commentor noted that the word "wishing" was inappropriate, and the word "proposing" was substituted. Linkage to prohibitions, now in § —.4, was incorporated by adding a restraint

against beginning the proposed work before a permit has been issued.

The exceptions to the permit requirement were the subject of many comments. A new paragraph (b)(1) was added in response to concerns, on the part of representatives of mining, forestry product, and other land-use interests, that the statement in the Purpose section, §1215.1(b) (new §—.1(b)), did not fully exempt persons holding authorizations to use public lands or resources from having also to apply for and receive a permit under these regulations. The new paragraph (b)(1) states that land use authorized under permits, leases, licenses, or entitlements does not also require a permit under these regulations. To answer concerns expressed in several comments, it states that authorized earth-moving excavation does not constitute "excavation and/or removal" as used in these regulations. It concludes by pointing out that this exception does not exempt the Federal land manager from responsibilities under other authorities, and that excavation and/or removal pursuant to those authorities are subject to permit requirements of these regulations.

The relationship of the Act and these regulations, other archaeological preservation authorities, and uses of public lands and resources, requires some explanation. As part of the decisionmaking process prior to authorizing the use of public lands or resources, Federal land managers are to take into account the potential effects of the authorization on significant archaeological and historic properties, under provisions of section 106 of the National Historic Preservation Act. Other statutes, such as the National Environmental Policy Act, similarly may require pre-authorization review of potential environmental effects. In some cases, the Federal land manager may request a land-use applicant to retain the professional services of a qualified consulting archaeologist, historian, or other specialist in order to gather resource inventory data pertaining to the area where the proposed land use would occur. Depending on findings, the Federal land manager may also request that the land-use applicant implement measures to mitigate effects of the proposed land use. This might include the recovery of data through the scientific excavation of archaeological resources.

Consultants employed by the land-use applicant (or authorized land user) to perform inventory or mitigation tasks are required to possess a permit to do this work. This requirement is not new.

Until the passage of the Act, such permits were issued under the authority of the American Antiquities Act of 1906 and uniform regulations at 43 CFR Part 3. Permit issuance is now being shifted to the Archaeological Resources Protection Act of 1979 and these regulations as provided in section 4(h) of the Act. As before, qualified persons conducting archaeological work on public lands and Indian lands are required to possess a permit.

Upon satisfaction of environmental review and other pertinent requirements, the Federal land manager may authorize the proposed land use, incorporating any necessary restrictions and stipulations in the authorization instrument. At that point, archaeological resource consideration will normally have been completed, and any further provisions, such as what action to take in the event of discovery of a buried archaeological resource, will be stipulated. At no time is the land-use applicant (or authorized land user), whose purpose is other than the excavation or removal of archaeological resources, required to hold a permit issued under these regulations.

The original paragraph (b)(1), pertaining to an Indian tribe or member thereof excavating or removing any archaeological resource on Indian lands, was moved to become §—.5(b)(3). One change was made in this paragraph. For the proposed rule, the statutory phrase "Indian lands of such Indian tribe" was interpreted to include both tribal lands and allotted lands of tribal members. Therefore, the words "or members of such tribe" were added. However, due to the complexity of this issue, it was decided that any clarification of the applicability of the regulations to allotted lands of tribal members should be addressed in Department of the Interior implementing regulations pursuant to section 10(b) of the Act. Accordingly, the final version adheres to the language of section 4(g)(1) of the Act.

Paragraph (b)(2), excluding from permit requirements the private collection of any rock, coin, bullet, or mineral which is not an archaeological resource, was reworded slightly for clarity. Determinations of whether or not a rock, coin, bullet, or mineral is an archaeological resource depends on §—.3(a)(4) and other provisions of the definition of "archaeological resource."

Paragraphs (b)(3) and (b)(5) of the proposed rules are now paragraphs (b)(4) and (b)(5); they are slightly reworded, but are unchanged in substance.

Several comments were received on paragraph (b)(4) of the proposed rules, regarding the permit status of employees and agents of the Federal government. The provision in the proposed rules had two intents. The first was to prevent putting Federal land managers in the inappropriate position of being required to issue permits to their own employees, hired under the selection constraints of applicable personnel regulations, before allowing them to perform official duties connected with the Federal land manager's archaeological resource management responsibilities. The second intent was to avoid requiring the Federal land manager to duplicate the assessment of qualifications and the definition of work requirements for persons carrying out the Federal land manager's archaeological resource management responsibilities under a contract or similar instrument. The comments did not negate the desirability of these features, but they did point out that the Act provides no exception for employees and agents to the permit requirement and notification provisions. This is acknowledged to be the case. Persons carrying out official agency duties under the Federal land manager's direction cannot be exempted from the permit requirement. Rather, they are not required to apply for a permit, because their status represents an alternative kind of permit, subject to the same standards as permits issued under this part. This is made more explicit in the revised regulations. The former paragraph under exceptions has been elevated to a separate paragraph (c). Because use of the phrase "employees and agents" might inadvertently restrict the classes of persons who could be called on to perform the Federal land manager's duties, the phrase has been changed to "persons." "Official duties" was tightened to "official agency duties under the Federal land manager's direction." And a proviso was added that prior to authorizing a person to perform official agency duties, the Federal land manager shall document compliance with provisions of those sections of the regulations pertaining to professional qualifications appropriate to the work to be conducted, terms and conditions under which authorized work is to be performed, and notification of Indian tribes when official duties might affect an Indian cultural or religious site, as determined by the Federal land manager.

Paragraph (d), in both the proposed and final regulations, provides for the issuance of a permit in response to a request from the Governor of any State. One commentator asked if it is intended

that a Governor may request a permit, which the Federal land manager would be obligated to issue, for persons who would be found not qualified under normal application procedures. This question addresses the fact that qualifications are left to the Governor's determination under provision of section 4(j) of the Act. This possible outcome was clearly not the intent of the Congress, in light of other provisions within section 4(j) and in the broader context of a statute designed to protect archaeological resources. This provision is interpreted to apply to qualified persons acting on behalf of the State, such as a State Archaeologist, a member of the State Historic Preservation Officer's staff, or staff of a State educational institution such as a university or museum. Several other comments questioned whether permits requested by a Governor could be issued for Indian lands, and whether notification procedures with regard to Indian cultural or religious sites would apply. Permits for Indian lands may be issued in response to a Governor's request. However, such requests are subject to the consent provisions of section 4(g)(2) of the Act. Notification provisions of section 4(c) of the Act also apply. These provisions are incorporated in the regulations in §§ —.8(a)(5) and —.7 respectively.

The proposed rules included information in § 1215.4(c) that permits other than those required in these regulations might be needed. The several comments addressing this paragraph indicated that more confusion than information was imparted. The proposed paragraph (c) was included to insure public awareness that there are other general and specific authorities answered to by various Federal land managers which might have prohibitions or permit requirements for certain activities or in regard to material items which do not meet the tests for "archaeological resource" under the Act or these regulations. The confusion was compounded by mention that special use permits might be required for non-collecting or non-disturbing activities, which was intended as an example, but which was interpreted in a number of different ways by commentators. The new § —.5(e) is a more straightforward expression of caution to the public to consider consulting with the Federal land manager before assuming that no permit is needed. The terminology which contributed to this confusion has been dropped.

§ 1215.5 Application for Permits (Renumbered § —.6; Retitled "Application for Permits and Information Collection).

This section received relatively little comment, and stands as proposed with only minor rewording. Several of the comments suggested adding specific provisions which are adequately covered in other sections of the regulations. Some recommended useful policy provisions which were considered more appropriate to agency-specific regulations under section 10(b) of the Act than to these uniform regulations. A few comments ran counter to provisions of the Act and were rejected. One comment recommended that "copies of" be inserted ahead of "records, data, photographs, and other documents," and this was done.

§ 1215.6 Consideration of Indian Tribal Religious and Cultural Concerns (Renumbered § —.7; Retitled "Notification to Indian Tribes of Possible Harm to, or Destruction of, Sites on Public Lands Having Religious or Cultural Importance).

This section received the second largest number of comments, and involved more of the task force's review and discussion time than any other section. Several of the proposed provisions proved very controversial, and while commentators' opinions were usually clearly divided, evaluation was made more difficult by the frequent recognition that both sides in polar arguments had equal strength and validity. Upon review it was concluded that the proposed section had suffered from overspecification, and that the most satisfactory resolution of the consequent problems is to return to language more nearly tracking the Act, leaving the closer specification to agency regulations under section 10(b) of the Act.

Some general discussion of the Act's provisions is necessary before explaining the changes that were made in the final regulations. Section 4(c) of the Act provides that:

If a permit issued under this section may result in harm to, or destruction of, any religious or cultural site, as determined by the Federal land manager, before issuing such permit, the Federal land manager shall notify any Indian tribe which may consider the site as having religious or cultural importance. Such notice shall not be deemed a disclosure to the public for purposes of section 9.

Section 10(a) of the Act, the statutory basis for these regulations, also specifies that "Such rules and regulations may be promulgated only

after consideration of the provisions of the American Indian Religious Freedom Act (92 Stat. 469; 42 U.S.C. 1996)," a charge acknowledged in § —.1(a) of these regulations.

The American Indian Religious Freedom Act (AIRFA) established a Federal policy to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians, their right of freedom to believe, express, and exercise their traditional religions. There are fundamental differences between traditional tribal religions and the more common religions of the larger American society. These differences are described in the report submitted by the President to the Congress pursuant to section 2 of AIRFA. One of the most important characteristics of traditional tribal religions is reverence for the natural world, upon which traditional tribal cultures depend. Specific places may have special religious significance for reasons such as the presence of shrines, cemeteries, vision quest sites, or plants and animals that have religious significance. In enacting AIRFA, the Congress recognized that infringements of religious freedom for traditional Native Americans have resulted in part from lack of knowledge and from the insensitive and inflexible enforcement of Federal policies and regulations. Section 4(c) of the Act and the reference to AIRFA are interpreted to seek to preclude lack of knowledge and insensitive policies and regulations with respect to issuance of permits under the Act.

Section —.7 of these regulations establishes a substantially revised process by which Federal land managers will provide the required notification and consider tribal religious and cultural concerns which may be affected by the issuance of permits under these regulations. In carrying out this process Federal land managers may meet with tribal representatives to discuss tribal interests. Opportunities for tribal representatives to present their views orally will generally result in better communication between tribes and Federal land managers than will exclusive reliance on written communication. Any mitigation or avoidance measures which are adopted as a result of such consultation will be incorporated into terms and conditions of permits.

A number of comments addressed the provisions in the proposed paragraph (a)(1) for providing notice to Indian tribes having a reservation within 200 miles of the proposed permit area, suggesting alternatively that the distance was too great, not great

enough, or irrelevant. The intent of the 200-mile radius was to improve the probability that affected tribes would receive notice. However, as comments pointed out, the provision would have been burdensome for Federal land managers to administer, and in some parts of the country it would have resulted in tribes routinely receiving notice for areas in which they have no particular interest, creating a burden also for them. As one commentator noted, in light of the removal of many Indian tribes to areas distant from their aboriginal territories, it might also have led inadvertently to failure to notify those tribes which have interests but presently reside more than 200 miles away, notwithstanding proposed paragraph (a)(2), which would have caused other Indian tribes known or believed to have interests to be notified.

The final regulations do not retain the 200-mile provision. Instead, paragraph (b)(1) requires the Federal land manager to identify those tribes which have aboriginal or historic ties to particular units of Federal land and to initiate communication with those tribes to determine the location and nature of sites of religious or cultural importance on those lands. Once such information is compiled, if an application for a permit is received for an area which a tribe has identified as important, and the Federal land manager determines that activities proposed in the application might affect religious or cultural sites, that tribe would receive notice of the application.

Several commentators, including some Indian tribes, expressed support for the development of a national inventory of tribal religious and cultural sites on public lands. Paragraph (a)(5) of the proposed rules provided that any such central listing, which may be established by the Secretary of the Interior under the Act or under other authority, would be consulted for notification purposes. However, it was concluded that these uniform regulations are not the appropriate place to stimulate policy options on the part of any single agency. Moreover, reference to an as yet undeveloped program proved confusing. The provision was therefore dropped from the final regulation.

Several commentators pointed out that there are some cases of conflicts between archaeological interests and Indian tribal religious or cultural interests which are irreconcilable. Particular concern was expressed regarding the treatment of Native American graves, grave offerings, cemeteries, and cremation sites, since practices surrounding disposal of the

dead are an integral part of Native American religion. A number of commentators recommended that conflicts between the conduct of archaeology and Native American religious concerns could be reduced by removing graves, human skeletal remains, and related items from the definition of "archaeological resource." This recommendation was rejected for two reasons. First, the Congress explicitly included graves and human skeletal remains in the statutory definition of "archaeological resource," in section 3(1) of the Act. Second, listing items in the definition of "archaeological resource" in these regulations is not done for the purpose of limiting what archaeologists may find to be of interest or the discipline of archaeology may choose as its subject matter. Rather, the definition supplies the basis for enforcing the penalty provisions of the Act. If graves and human skeletal remains were excluded from coverage under the Act, there would be no penalties under the act for their unpermitted disturbance. Because of the notification requirement of § —.7 and its relationship to terms and conditions under § —.9(c) of these regulations, tribal religious and cultural concerns relative to graves and human remains can have an important role in limiting permitted work to that which is not in conflict with religious beliefs or cultural practices.

Several commentators suggested that the Federal land manager should be required to exclude any site of tribal religious or cultural importance from the area embraced by a permit, on the basis of guarantees of religious freedom in the First Amendment and the American Religious Freedom Act. This recommendation is not adopted, since Federal land managers are bound by constitutional standards regardless of the wording of these regulations, and since the application of constitutional standards to specific cases depends on specific fact situations. These regulations set forth a mechanism for Federal land managers to make contact with Indian tribes, notifying them of possible conflicts arising from permit applications and responding to requests for consultation, and to incorporate in terms and conditions of the permit any mitigation or avoidance measures adopted as a result of consultation.

Several comments reflected concern about the confidentiality of information regarding the location of tribal religious and cultural sites. Desecration of sites has occurred in the past, and many Indians view disclosing the location of a site as inviting desecration. In some

instances, disclosing the location of a site is prohibited by tribal religious teachings. Under provisions of the Act and these regulations, Indian tribes may find themselves in the uncomfortable position of having to act counter to their preferences or beliefs by confiding locational information to the Federal land manager, aware that the Federal land manager's legal authority to withhold information from the public may be limited, or to remain silent in the expectation of harm or destruction from activity authorized under a permit. The Federal land manager is bound by the Freedom of Information Act to disclose agency records formally requested, unless the information is subject to an exemption. Two exemptions may apply to some Indian religious or cultural sites. If such sites are also archaeological resources, or coincide in location with archaeological resources, the Federal land manager may hold their location and nature confidential under section 9 of the Act (and § —.18 of these regulations). If they are included in or eligible for inclusion in the National Register of Historic Places, the Federal land manager may withhold information under section 304 of the National Historic Preservation Act. But if neither of these exemptions applies, the Federal land manager may be required to disclose such information in response to a Freedom of Information Act request if it is part of the agency's records. Indian tribes must decide for themselves whether and how to participate in Federal land managers' attempts to determine whether lands under their jurisdiction contain sites of religious or cultural concern to Indian tribes.

Notification of Indian tribes depends to some degree on the definition of "Indian tribe" in the Act and the regulations. Several commentators disagreed with the proposed definition, which used Federal recognition as a determining criterion, because the Act did not refer to Federal recognition. The Act defines "Indian tribe," in part, as "any Indian tribe, band, nation, or other organized group or community." This definition leaves uncertainty as to which social groups of American Indian heritage a Federal land manager might determine to constitute an Indian tribe for purposes of notification. In general, "Indian tribe" as used by the Federal government is a term of art which implies a government-to-government relationship. For groups of Indians which have maintained tribal or other identity, but which are not federally recognized as Indian tribes, a process has been established by the Bureau of Indian Affairs by which they may attain

acknowledgment of tribal status. The definition of "Indian tribe" was expanded slightly, to include also Native Alaska villages or tribes eligible to receive services of the Bureau of Indian Affairs, but was otherwise not changed. The response to concerns that are recognized groups would not be included in notifications was to require the Federal land manager to identify and communicate with federally recognized tribes which have aboriginal or historic ties to involved Federal lands, and also to encourage the Federal land manager to identify and communicate with other groups with similar ties, even though they do not have recognition status. Further, unrecognized groups may identify themselves to and initiate communication with the Federal land manager.

Several commentors addressed a related issue, whether tribal governments are always capable of representing the interests of tribal members who practice traditional tribal religions. Factional divisions may exist among some Indian tribes, and some practitioners of traditional religions either may not recognize the legitimacy of tribal governments or may not view their tribal governments as being concerned for traditional religious interests. Notwithstanding these possibilities, the regulations must reflect the requirement of section 4(c) of the Act for the Federal land manager to provide notice to affected tribes. The most practical way for initial contact of this kind is through the government-to-government relationship discussed above, and it is appropriate that notice should be provided to the chief executive officer of the tribal governing body. The issue of adequate representation of religious views is a matter best addressed within the tribes themselves. The final regulations include language in § —.7(a)(1) encouraging Indian tribes to designate a tribal official who will be the focal point for any notification and discussion, and this may be a person well versed in the traditional tribal religion.

A number of comments addressed various parts of the Act and the proposed regulations which might be applied differently on Indian lands than they would be on public lands. For example, one commentor suggested that Indian tribes might be delegated the permitting role of the Federal land manager for archaeological work on Indian reservations. Another questioned the implications and applicability of the savings provisions in section 12 of the Act to Indian lands, and another noted

that the Indian landowner consent provisions might be difficult to implement where a permit application involves allotted lands in which numerous persons hold fractional interests. Since these and similar Indian-related issues in need of clarification fall within the implementation responsibilities of the Secretary of the Interior, rather than applying to all Federal land managers, they would best be treated in the regulations to be prepared by the Secretary of the Interior under sections 5 and 10(b) of the Act.

Finally, several commentors suggested that the proposed 45-day period which tribes were to be allowed for responding to notices is too long and would unnecessarily delay issuance of permits. One tribe commented that 45 days is too short a period. In the final regulations the time period is revised to 30 days, which is considered to be a reasonable time period that will not cause unnecessary delay, and will give Indian tribes adequate opportunity to respond that they do have concerns. The specified time period does not require that the Federal land manager issue a permit 30 days after giving notice to an Indian tribe, whether or not concerns are raised, but rather requires that the Federal land manager allow 30 days for Indian tribes to respond. Any further consultation and consideration may occupy additional time without regard to the 30-day response period.

§ 1215.7 Issuance of Permits (Renumbered §—8).

This section also drew a substantial volume of comments, many of them from archaeologists and others with professional interests in permit issuance under the Act. The section establishes the standards under which Federal land managers will exercise their discretion in determining whether or not to issue permits. It includes provisions for determining applicants' qualifications and the appropriateness of work proposed, and for insuring that collections and records will be cared for properly. It also provides that review of permit applications which overlap jurisdictional boundaries will be coordinated among the Federal land managers involved.

Paragraph (a) was expanded to include reference to the duration of permits. This change is addressed under discussion of proposed § 1215.8.

Paragraph (a)(1) was reworded slightly in response to one comment, changing "theoretical and methodological design" to "archaeological theory and methods," because the intent of the original phrasing was not clear. The revised

wording is intended to incorporate all pertinent aspects of the art and science of archaeology. One commentor recommended that a paragraph be added, among minimum qualifications, to specify managerial capabilities not necessarily demonstrated through the proposed provisions. This suggestion was incorporated essentially as submitted, as paragraph (a)(1)(ii).

Several commentors addressed paragraph (a)(1)(i) of the proposed rules, which requires, alternatively, a graduate degree in anthropology or archaeology, or equivalent training and experience. A number of commentors took the viewpoint that historians should be specified as eligible to receive permits to conduct historical archaeological work. It is recognized that not all qualified persons practicing archaeology in the United States possess graduate degrees in anthropology or archaeology, and the provision was intentionally left open for persons who have attained qualifications through training and experience not leading to a graduate degree in anthropology or archaeology. Persons in this category may be historians, or they may represent any of a number of other educational backgrounds. The original provision was left unchanged. It should be noted that not all persons holding graduate degrees in anthropology or archaeology would meet the minimum qualifications for a permit under these regulations.

One comment suggested that a single authority in each State, such as the State Archaeologist, be established as the official who determines that individuals meet qualification requirements. Under section 4 of the Act, the Federal land manager has the responsibility for determining an applicant's qualifications, pursuant to uniform regulations. It would be an inappropriate delegation of authority for any Federal land manager to rely fully on an outside source for such judgments, but it is possible that such consultation could aid the Federal land manager in reaching decisions. The way that the Federal land manager carries out the responsibility to determine qualifications is open in the Act, and it is left open in these regulations.

Paragraph (a)(2), addressing the public interest purpose of proposed work, has been expanded to clarify that the public interest may be met under either of two general categories, scientific or scholarly research such as might be conducted under a research grant, or preservation or archaeological data such as might be required to mitigate the effects of a competing land use. Several comments expressed concern about the

limits of the "management plan" in paragraph (a)(3). One commentor pointed out that while "management plan" is apparently intended in a general sense, the phrase has different specific meanings among different federal agencies. The provision was expanded to make it clear that the phrase is not intended to apply in any narrow sense that would hamper the Federal land manager from following existing management commitments. A new paragraph (a)(4) provides that compliance with historic preservation law satisfies the requirements of paragraphs (a)(2) and (a)(3).

It should be noted that the language in paragraph (a)(5) differs somewhat from the language of the Act in section 4(g)(2), regarding Indian landowner consent. The wording used was suggested by the Bureau of Indian Affairs and the Office of the Solicitor, Department of the Interior, and appeared in the proposed rule. The reason for changing the statutory language is that allotted Indian land is, in most instances, subject to the regulatory authority of an Indian tribal government. In order to protect the interests of both Indian landowners and tribal governments, these regulations provide clear guidance that the consent of both the Indian landowner(s) and the tribal government having jurisdiction over such allotted lands will be required. In many cases in which there is not tribal government jurisdiction over specific allotted lands, only the consent of the Indian landowner(s) will be required. Further clarification of this issue will be provided in regulations issued by the Secretary of the Interior pursuant to section 10(b) of the Act.

A few comments were received on proposed paragraph (a)(6), which required certification that materials and records would be turned over to the repository not later than the date of submission of the final report to the Federal land manager. Several commentors suggested that a period of 90 days be allowed, which was done in the new paragraph (a)(7). One recommended that the regulations recognize that not all specialized samples should be kept at the same repository, and that some samples are destroyed or altered during analysis (such as pollen, dendrochronology, radiocarbon, and thermoluminescence samples). The validity of this recommendation is acknowledged, and the new paragraph (a)(6) has been changed slightly to allow that more than one repository might be proposed, substituting "any" for "the." This ties indirectly with a new provision in §—13(d), mentioned below under

discussion of proposed § 1215.13. Records accompanying the samples and other materials can satisfactorily account for destroyed or altered samples. Also, there is nothing in these regulations to bar Federal land managers and permittees from reaching agreement on special exceptions to the general provisions regarding preservation of materials and data.

Several commentors pointed out inappropriate differences between proposed paragraphs (a)(6)(i) and (ii). The differences were due to a proofreading oversight and have been corrected in the new paragraphs (a)(7)(i) and (ii).

Paragraph (b) was not clear to several commentors. The intent of the provision is to ensure that when permits would be required from more than one Federal land manager, the resulting permits would not be unnecessarily dissimilar. As a hypothetical example, an archaeologist might propose to carry out settlement and subsistence research by conducting survey and test excavations throughout the watershed area of a small tributary to a major river in the western United States, wherein the lower elevations are managed by one agency, and the higher ground is managed by another. The applicant would submit applications for two permits, making each agency aware of the other's involvement. In accordance with the reworded provision of paragraph (b), the Federal land managers involved would be required to coordinate the review and evaluation of the applications and the issuance of the permits. Because of the coordination, the terms and conditions of the permits should be similar or identical. While it is not provided for in these regulations, it might be within the discretionary latitude of the Federal land managers to agree to combine two (or more) permits which might be issued under such circumstances into a single permit issued jointly.

Several commentors suggested that the time between receipt of an application and a decision should be governed by a 30- or 60-day decision requirement placed on the Federal land manager. No time limits were imposed in these uniform regulations, because of the need to accommodate internal management requirements which vary from agency to agency. In addition, it is necessary to allow adequate time for Federal land managers to consider Indian tribal concerns pursuant to §—7, when applicable. However, timeliness of action in response to permit applications is highly important, and Federal land managers should ensure that review and

evaluation time are held to the minimum needed.

§ 1215.8 Time Limits of Permits—Deleted.

This section proposed that permits could be issued for up to a 3-year period, could be extended for up to 4 months, could be renewed, and would be reviewed annually if issued for a period greater than 1 year. Because specific time limits are most appropriately determined on a case by case basis, the maximum limit was changed to "a specified period of time appropriate to the work to be conducted" and inserted in §—8(a). An extension provision was included as §—9(f), and an annual review provision as §—9(g). There is no limit on the number of times a permit can be extended, and thus there is no provision for renewal.

§ 1215.9 Terms and Conditions of Permits (Renumbered §—9).

This section was the subject of relatively few comments, of which nearly half pertained to accounting for Indian concerns. Paragraph (c) dealt with terms and conditions requested by Indian tribes or Indian landowners for work on Indian lands. In response to comments, the paragraph was expanded to apply also to public lands, tying in with the consultation process under §—7.

One comment recommended insertion of "and required" in paragraph (a)(1), which was done. One suggested that the type of security referenced in paragraph (d) should be specified. The permissive wording of paragraph (d), which would have allowed the Federal land manager to require security, was not drawn from provisions of the Act. Also, circumstances which might necessitate the posting of bond or other security would be rare. Although the provision was deleted from the final regulations, its deletion does not prevent Federal land managers from requiring security.

One commentor suggested new language to specify that individuals named in a permit would not be released from responsibility under a permit in the event of reassignment or separation until all outstanding obligations had been satisfied. A new paragraph (e) was inserted in response to the suggestion, with one important change. In some instances the individuals named in a permit, who are responsible for conducting the work and/or carrying out the permit's terms and conditions, are working on behalf of an institutional or corporate permittee. In such a case, it is the permittee, not named individuals, that is responsible to

the Federal land manager for meeting permit requirements. Accordingly, paragraph (e) requires that the permittee, rather than named individuals, not be released from terms and conditions until obligations have been satisfied, whether or not the permit remains in force. Roles of individuals named in a permit are integral parts of the terms and conditions of a permit, and any change in their involvement in the work authorized, without the Federal land manager's prior approval, might warrant suspension or revocation of the permit.

§ 1215.10 Suspension, Revocation and Termination of Permits (Renumbered §—10; retitled "Suspension and revocation of permits").

Few comments were offered on this section. The section was restructured to clarify the "program purposes" provision in the original version, and to adhere more closely to the statutory language in section 4(f) of the Act.

§ 1215.11 Compliance With Regulations of the Advisory Council on Historic Preservation (36 CFR Part 800) (Renumbered §—12; Retitled "Relationship to Section 106 of the National Historic Preservation Act").

The order of this section and the section on appeals was reversed, to move the latter into a logically more appropriate proximity to the sections addressed. This section was retitled, since it is not within the scope of these regulations to require compliance with any statute other than the Act or with regulations other than pertaining to the Act.

Section 4(i) of the Act provides: "Issuance of a permit in accordance with this section and applicable regulations shall not require compliance with section 106 of the Act of October 15, 1966." This simple statement has occasioned wide misunderstanding and overextension. Some commentators believed that issuance of a permit under this part would eliminate the requirement for section 106 compliance with respect to all land uses associated with the permit. Others felt that eliminating section 106 compliance in any way would be inappropriate. Some explanation is in order.

Permits under this part will be issued under essentially two sets of circumstances. The first is where the applicant proposes to conduct archaeological investigations for purely academic or research purposes. Under section 4(i) of the Act, issuance of a permit for this purpose will not require section 106 compliance. Since there is nothing in the Act or its legislative

history which indicates a different intent, it is beyond the scope of this rulemaking to change the plain meaning of section 4(i).

The second set of circumstances under which permits may be issued pursuant to this part relates to archaeological work required by the Federal land manager under other resource protection statutes (see related discussion under proposed § 1215.14, below). On occasion, archaeological investigations may be required as part of the section 106 compliance process carried out by the Federal land manager prior to authorizing a land-use request. Such investigations will require a permit under this part. Issuance of the permit itself does not and should not require duplication of section 106 compliance procedures. However, the mere fact that a permit will be required as part of the process does not affect the applicability of section 106 to the Federal land manager's proposed authorization of the land use.

As a hypothetical example, utility company might apply for the grant of a right-of-way across public lands to construct an electrical power distribution line. Lacking availability of archaeological staff to respond in a timely manner, the Federal land manager might request the company to provide information about the presence or absence and significance of archaeological resources within the area of the proposed construction project. The company would then retain an archaeological consultant, who would apply to the Federal land manager for a permit, under the Act and these regulations, to conduct archaeological survey and test excavations in the project area. If the consultant met qualification requirements, the Federal land manager would issue a permit without considering this action, in and of itself, to be subject to section 106 compliance procedures. The consultant would conduct the permitted work and submit a report to the company, which would then submit the report to the Federal land manager as requested. If the report were to show that archaeological resources are present in the proposed project area, the Federal land manager would consider the applicability of section 106 before reaching a decision to authorize the right-of-way. The issuance of a permit under the Act and these regulations would be an action substantially independent from the larger requirement of section 106 compliance with regard to Federal authorization of the proposed right-of-way.

Alternatively, had the Federal land manager already possessed sufficient

information, so that no request to the company would have been necessary, and had that information shown that an archaeological property, eligible for the National Register of Historic Places, would be intersected by the proposed right-of-way, there would be no question about the need to comply with section 106. Whether or not a permit is issued under the Act and these regulations, the Federal land manager's responsibility to determine the effects of a proposed undertaking on eligible or listed National Register properties remains unchanged.

§ 1215.12 Appeals Relating to Permits (Renumbered §—11).

Very few comments addressed this section. It was revised slightly for clarity. Since many agencies already have appeal procedures, no attempt was made to establish standard appeal procedures in these uniform regulations.

§ 1215.13 Custody of Archaeological Resources (Renumbered §—13).

Among the relatively few comments on this section several pertained to tightening or loosening the ownership provisions. Paragraphs (a) and (b) have an information function; ownership is not subject to regulation under the Act.

A new paragraph (d) was added to give Federal land managers the latitude to provide for exchange of materials among appropriate repositories until such time as the Secretary of the Interior may promulgate the regulations provided for in section 5 of the Act. This ties in with provisions mentioned above, under discussion of proposed § 1215.7, for allowing materials to be housed in more than one repository.

One commentator, representing a State museum, saw a need to protect reputable repositories from committing a technical violation of section 6 of the Act, through "receiving" archaeological resources which might have been removed illegally from public lands or Indian lands. Under the Act, receiving archaeological resources, removed from public lands or Indian lands in violation of the permit requirement in the Act or these regulations, is itself a violation. However, a university, museum, or other institution should be free to receive such resources, in the same sense of taking temporary custody on behalf of a Federal land manager or Indian tribe, so long as the appropriate Federal land manager or Indian tribe is given prompt notification. Such notification would be evidence of a lack of intent to violate the Act, thereby eliminating an essential element of a criminal violation. And although intent need not be established

for imposing civil penalties, Federal land managers would not be expected to seek civil penalties under such circumstances. Nevertheless, no provision has been added to extend the requested protection to museums. First, the regulations do not apply to criminal prosecutions; and second, with respect to civil penalties, it was deemed unwise to waive civil penalties by regulation for all persons who might return archaeological resources illegally removed or excavated from public lands or Indian lands, and unfair to waive penalties for certain institutions only. Such matters are best left to discretion, to be handled on a case-by-case basis.

§ 1215.14 Prohibited Acts (Renumbered §—4).

In the proposed rules, this section included all prohibitions from section 6 of the Act. The final regulations include only those prohibitions relating to permit requirements or for which civil penalties are provided in these regulations. The application of civil penalties to persons engaged in trafficking in archaeological resources in interstate or foreign commerce in violation of State or local law is not practical or appropriate due to the manner in which civil penalties must be assessed. Consequently, the prohibition against such trafficking, proposed paragraph (c), was deleted. The section was moved to occupy a new place ahead of the permit sections, since its prohibitions are the basis for the permit sections.

§ 1215.15 Criminal Penalties—Deleted.

Because criminal prosecution will be pursued independently from these regulations, the criminal penalties section was dropped. The Act should be consulted for information on criminal penalties which the courts may impose.

§ 1215.16 Determination of Archaeological or Commercial Value and Cost of Restoration and Repair (Renumbered §—14).

Under both the criminal penalty and civil penalty sections of the Act, sections 6 and 7, penalty amounts are to be established in reference to two factors, the archaeological and commercial value of the archaeological resources involved in the violation and costs of restoration and repair. Several commentators were critical of the idea of using commercial value, since the importance of fair market value in the assessment of penalty amounts tends to lend a false legitimacy to the marketing of archaeological resources, and might promote illicit trade. However, through the use of commercial value to set

penalty amounts, persons who traffic in archaeological resources will find that their own price schedules are being used against them. In the long run, high prices translated into fines may be instrumental in discouraging illegal excavation, removal, and commerce. It is also important to have more than one measure for setting penalty amounts. Archaeological resources with very high dollar value might be removed under some circumstances without doing a great deal of damage to archaeological value, while conversely, extreme amounts of damage might be done to archaeological value for the sake of removing items which have very little market value. Archaeological value and commercial value as used in the Act and these regulations are enforcement tools; they are independent from concepts about the intrinsic worth of archaeological resources, whether those be based on scientific detachment, awe, aesthetics, or profit motive.

One commentator suggested application of cost-benefit analysis to costs of restoration and repair. This suggestion is inappropriate to determining a penalty amount. Such analysis might be used for management purposes, to help reach a decision about whether or not to proceed with restoration and repair, but to apply it to penalties could result in the least fine for the most destructive violation.

One comment proposed including the costs of reinterment of human remains according to tribal customs as part of the cost of restoration and repair. This proposal was incorporated in paragraph (c)(7).

§ 1215.17 Assessment of Civil Penalties (Renumbered §—15).

Several changes were made to this section in response to comments and for purposes of clarification and simplification.

The proposed regulations provided for three notices, a "notice of violation" (§ 1215.17(b)), a "notice of assessment" (§ 1215.17(c)), and a "notice of penalty" (§ 1215.17(g)). The first two, the notice of violation and notice of assessment, were to have been served either separately or concurrently. The purpose for proposing these two distinct notices was twofold. First, the notice of violation was viewed as an educational tool. The proposed regulations called for its issuance in "minor" offenses where the Federal land manager had already determined not to assess a civil penalty. Comments focusing on the "minor" offenses led to the recognition that issuance of a notice of violation under the civil penalty provisions, with no intention to follow through with civil penalty proceedings,

was inappropriate. If it is appropriate to use the civil penalty provisions in a non-punitive way, the proper procedure is to remit (i.e., cancel) or mitigate (i.e., lessen) the penalty assessed, as provided in the Act. References to remitting the penalty have therefore been inserted along with references to mitigation, and notices of violation in these final regulations are to be used only to initiate civil penalty proceedings.

The second purpose to be served by the two notices was to provide the Federal land manager a vehicle for serving a notice of violation before determination of the damages associated with the violation. However, the option of serving a notice of violation can be preserved by providing for a delayed notice of the proposed penalty amount, if necessary, without reference to a separate type of notice. Accordingly, the former notice of violation and notice of assessment have been combined into one notice, a "notice of violation," with an optional provision for a deferred notice of a proposed penalty amount. The former notice of penalty has been redesignated as the "notice of assessment."

The regulations were also restructured to de-emphasize the importance of the maximum penalty amount allowable. Using this amount to establish the initial proposed penalty amount in every violation was viewed as too inflexible and potentially too onerous on persons served with a notice of violation. The Federal land manager is therefore no longer required to determine the maximum penalty amount allowable for each violation, although care must be taken that no penalty assessed exceeds the statutory maximum.

§ 1215.18 Civil Penalty Amounts (Renumbered §—16).

In keeping with the decision to place less emphasis on the maximum penalty amount, the requirement to determine the amount was removed from this section. The maximum penalty amount is simply stated in paragraph (a), and paragraph (b) was relabeled "Determination of penalty amount, mitigation, and remission."

Among the several comments addressed to this section, a few suggested that there be no mitigation or remission of penalty amounts without the consent of the affected Indian tribe, where the violation occurred on Indian lands or affected a tribal religious or cultural site on public lands. This suggestion was not accepted because the Act charges the Federal land manager with determining civil penalty amounts. However, the final regulations

include new paragraphs (b)(2) and (b)(3) which provide for consultation with affected Indian tribes before making a decision to mitigate or remit a penalty, in order to enable the Federal land manager to achieve a more just result.

One comment recommended that tribal religious or cultural values which can be quantified by the affected Indian tribe should be considered in setting penalty amounts. This recommendation was not incorporated in the regulations, since it is but one potential example of "other factors" the Federal land manager is directed to take into account under Section 7(a)(2) of the Act. It should be noted that there may be opportunity for an Indian tribe to make damages known through provisions in (§ —.16(b) (2) and (3) of these regulations.

One commentor suggested that a uniform fixed schedule of fines should be established to apply to most civil violations, not just minor offenses. Fines and applicability criteria would be based on broad and easily determined categories of damage. This would simplify the task of the Federal land manager, and would place the burden on the violator to demonstrate that the statutory limits of "fair market value of resources destroyed or not recovered" and "costs of restoration and repair" are less than the proposed penalty. While this suggestion has merit, establishment of fixed penalty amounts in accordance with the statutory criteria could be best accomplished by agency regulations issued pursuant to section 10(b) of the Act or by other administrative action, after some experience in assessing civil penalties under the Act has been acquired.

A new criterion, § —.16(b)(1)(vi), was added to allow reducing a proposed penalty determined to be excessive under the circumstances.

§ 1215.19 Forfeiture and Rewards
(Renumbered § —.17; Retitled "Other Penalties and Rewards").

There were several comments offering suggestions for clarifying forfeiture provisions. These are statutory provisions, and were included for information only. In order to allow the public to be aware that other penalties besides those detailed in these regulations might apply, the revised section includes reference to the sections of the Act pertaining to criminal prohibitions, criminal penalties, and forfeiture provisions. Forfeiture regulations may be issued by individual agencies pursuant to section 10(b) of the Act.

The rewards provisions remain essentially the same, with the addition

of a provision that persons who provide information in connection with having a civil penalty amount mitigated under (§ —.17(b)(3)(iii)) shall not be eligible to receive a reward.

§ 1215.20 Confidentiality of Archaeological Resource Information
(Renumbered § —.18).

This section closely follows the wording of section 9 of the Act. Several comments suggested changes which would have departed from statutory provisions. One commentor recommended that the wording be restated in a positive form, so as to encourage dissemination of knowledge, increase public appreciation, and promote a public conservation ethic. This is a very worthwhile suggestion, but it pertains more to the charge of the Secretary of the Interior under section 11 of the Act than to the protection of sensitive information. With some minor corrections, the section remains essentially as proposed.

§ 1215.21 (Reserved)—Deleted.

§ 1215.22 Report (Renumbered § —.19).

This section was left exactly as proposed. There were no comments.

§ 1215.23 Interpretive Rulings—Deleted.

The proposed section stated: "Each Federal land manager may publish from time to time, as an appendix to this part, statements of policy and legal opinions relating to the interpretation, enforcement, and implementation of the Act and this part." The section was deleted, since individual agency statements of policy or legal interpretation would not be binding on other agencies, and therefore should not be codified with these uniform regulations (see 44 U.S.C. 1510).

The Issue of Metal Detector Use

At the public hearings in March and April 1980 and during the commenting period, concern was expressed that the use of metal detectors and associated collector-hobbyist activities on public lands and Indian lands could be a major enforcement target of the Act and the regulations. Nothing in the Act or in these regulations addresses the use of metal detectors on public lands or Indian lands. In considering the legislation, Senator Dale Bumpers stated in the Congressional Record, "This legislation does not affect the use of metal detectors on public lands. If it is legal to use metal detectors currently, this act does not diminish that use. If it is illegal to use metal detectors, as in national parks, this act does not allow such use" (125 CR S14722, October 17,

1979). The same is true of these regulations. However, while the use of metal detectors is neither authorized nor prohibited by the Act and these regulations, unauthorized excavation of archaeological resources discovered while using metal detectors is prohibited on public lands and Indian lands. Also, it is important for users of metal detectors and others to be aware that there are other land management regulations and land use restrictions which govern activities on public lands and Indian lands.

Hobby collecting in various forms is engaged in by a large number of responsible persons, and such hobbyists are encouraged to work together with Federal land managers to deter resource destruction. To protect themselves from unintentionally violating any law or regulations, persons wanting to use public lands and Indian lands should obtain information regarding permissible activities from the Federal land manager's local representative. To the small percentage of collectors, treasure hunters, and metal detector users who destroy archaeological resources in violation of prohibitions, the Act and these regulations prescribe heavy criminal and civil penalties.

Authorship

These uniform rules were prepared by an interagency rulemaking task force composed of representatives of the Department of the Interior (Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service, National Park Service, Office of the Solicitor); Department of Agriculture (Forest Service, Office of the Secretary); Department of Defense (Departments of Army, Navy, Air Force); and the Tennessee Valley Authority.

Compliance With Other Authorities

Environmental Effects

The Secretary of the Interior has prepared an Environmental Assessment on this rulemaking and has made a Finding of No Significant Impact pursuant to regulations of the Council on Environmental Quality implementing the National Environmental Policy Act (42 U.S.C. 4332). Copies of the Environmental Assessment and Finding of No Significant Impact are available for public review in the National Park Service's Washington Office.

Economic Impact

The Secretary of the Interior has determined that this rulemaking is not a "major rule" within the meaning of Executive Order 12291 (46 FR 13193,

February 17, 1981), and would not have a "significant economic impact on a substantial number of small entities" within the meaning of the Regulatory Flexibility Act (5 W.S.C. 601 *et seq.*). These determinations are based on findings that the rulemaking is primarily directed toward the management of Federal resources, with negligible or no impact on the general public, and with cumulative economic impact of less than \$100,000,000 per year.

Information Collection

The Office of Management and Budget has given approval for the information collection requirements in section—.6 of these regulations (Application for permits and information collection") pursuant to the Paperwork Reduction Act (44 U.S.C. 3507). The clearance number is 1024-0037.

Regulations Promulgation

The Departments of the Interior, Agriculture, and Defense and the Tennessee Valley Authority are promulgating identical regulations on protection of archaeological resources and are codifying these regulations in their respective titles of the Code of Federal Regulations. Since the regulations are identical, the text of the regulations is set out only once at the end of this document. The part heading, table of contents, and authority citation for the regulations as they will appear in each CFR title precede the text of the regulations.

Approval

These regulations have been approved by the Secretary of Agriculture, the Secretary of Defense, the Secretary of Interior, and the Chairman of the Board of the Tennessee Valley Authority.

Department of the Interior (43 CFR Part 7)

List of Subjects in 43 CFR Part 7

Historic preservation, Monuments and memorials, Antiquities, Archaeology.

Title 43 of the Code of Federal Regulations is amended by adding Part 7 to read as follows:

PART 7—PROTECTION OF ARCHAEOLOGICAL RESOURCES: UNIFORM REGULATIONS

Sec.

- 7.1 Purpose.
- 7.2 Authority.
- 7.3 Definitions.
- 7.4 Prohibited acts.
- 7.5 Permit requirements and exceptions.
- 7.6 Application for permits, and Information Collection.
- 7.7 Notification to Indian tribes of possible harm to, or destruction of, sites on public

lands having religious or cultural importance.

- 7.8 Issuance of permits.
- 7.9 Terms and conditions of permits.
- 7.10 Suspension and revocation of permits.
- 7.11 Appeals relating to permits.
- 7.12 Relationship to section 106 of the National Historic Preservation Act.
- 7.13 Custody of archaeological resources.
- 7.14 Determination of archaeological or commercial value and cost of restoration and repair.
- 7.15 Assessment of civil penalties.
- 7.16 Civil penalty amounts.
- 7.17 Other penalties and rewards.
- 7.18 Confidentiality of archaeological resource information.
- 7.19 Report.

Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11) (Sec. 10(a)). Related authority: Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996). (OMB Control No.: 1024-0037)

J. Craig Potter,

Acting Assistant Secretary, Fish and Wildlife and Parks.

Department of Agriculture, Forest Service (36 CFR Part 296)

List of Subjects in 36 CFR Part 296

Historic preservation, Monuments and memorials, Antiquities, Archaeology.

Title 36 of the Code of Federal Regulations is amended by adding Part 296 to read as follows:

PART 296—PROTECTION OF ARCHAEOLOGICAL RESOURCES: UNIFORM REGULATIONS

Sec.

- 296.1 Purpose.
- 296.2 Authority.
- 296.3 Definitions.
- 296.4 Prohibited acts.
- 296.5 Permit requirements and exceptions.
- 296.6 Application for permits and Information Collection.
- 296.7 Notification to Indian tribes of possible harm to, or destruction of, sites on public lands having religious or cultural importance.
- 296.8 Issuance of permits.
- 296.9 Terms and conditions of permits.
- 296.10 Suspension and revocation of permits.
- 296.11 Appeals relating to permits.
- 296.12 Relationship to section 106 of the National Historic Preservation Act.
- 296.13 Custody of archaeological resources.
- 296.14 Determination of archaeological or commercial value and cost of restoration and repair.
- 296.15 Assessment of civil penalties.
- 296.16 Civil penalty amounts.
- 296.17 Other penalties and rewards.
- 296.18 Confidentiality of archaeological resource information.

296.19 Report.

Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11) (Sec. 10(a)). Related Authority: Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996). (OMB Control No.: 1024-0037)

Dated: October 24, 1983.

Douglas W. MacCleery,

Deputy Assistant Secretary for Natural Resources and Environment.

Department of Defense (32 CFR Part 229)

List of Subjects in 32 CFR Part 229

Historic preservation, Monuments and memorials, Antiquities, Archaeology.

Title 32 of the Code of Federal Regulations is amended by adding Part 229 to read as follows:

PART 229—PROTECTION OF ARCHAEOLOGICAL RESOURCES: UNIFORM REGULATIONS

Sec.

- 229.1 Purpose.
- 229.2 Authority.
- 229.3 Definitions.
- 229.4 Prohibited acts.
- 229.5 Permit requirements and exceptions.
- 229.6 Application for permits, and Information Collection.
- 229.7 Notification to Indian tribes of possible harm to, or destruction of, sites on public lands having religious or cultural importance.
- 229.8 Issuance of permits.
- 229.9 Terms and conditions of permits.
- 229.10 Suspension and revocation of permits.
- 229.11 Appeals relating to permits.
- 229.12 Relationship to section 106 of the National Historic Preservation Act.
- 229.13 Custody of archaeological resources.
- 229.14 Determination of archaeological or commercial value and cost of restoration and repair.
- 229.15 Assessment of civil penalties.
- 229.16 Civil penalty amounts.
- 229.17 Other penalties and rewards.
- 229.18 Confidentiality of archaeological resource information.
- 229.19 Report.

Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11). (Sec. 10(a)). Related authority: Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996).

(OMB Control No.: 1024-0037)

M. S. Healy,
OSD Federal Register Liaison Officer,
Department of Defense.

Tennessee Valley Authority (18 CFR Part 1312)

List of Subjects in 18 CFR Part 1312

Historic preservation, Monuments and memorials, Antiquities, Archaeology.

Title 18 of the Code of Federal Regulations is amended by adding Part 1312 to read as follows:

PART 1312—PROTECTION OF ARCHAEOLOGICAL RESOURCES: UNIFORM REGULATIONS

Sec.

- 1312.1 Purpose.
- 1312.2 Authority.
- 1312.3 Definitions.
- 1312.4 Prohibited acts.
- 1312.5 Permit requirements and exceptions.
- 1312.6 Application for permits, and Information Collection.
- 1312.7 Notification of Indian tribes of possible harm to, or destruction of, sites on public lands having religious or cultural importance.
- 1312.8 Issuance of permits.
- 1312.9 Terms and conditions of permits.
- 1312.10 Suspension and revocation of permits.
- 1312.11 Appeals relating to permits.
- 1312.12 Relationship to section 106 of the National Historic Preservation Act.
- 1312.13 Custody of archaeological resources.
- 1312.14 Determination of archaeological or commercial value and cost of restoration and repair.
- 1312.15 Assessment of civil penalties.
- 1312.16 Civil penalty amounts.
- 1312.17 Other penalties and rewards.
- 1312.18 Confidentiality of archaeological resource information.
- 1312.19 Report.

Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11) (Sec. 10(a)). Related authority Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996).

(OMB Control No.: 1024-0037)

Dated: December 15, 1983.

C. H. Dean, Jr.
Chairman.

§—1 Purpose.

(a) The regulations in this part implement provisions of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11) by establishing the uniform definitions, standards, and procedures to be followed by all Federal land managers in providing protection for

archaeological resources, located on public lands and Indian lands of the United States. These regulations enable Federal land managers to protect archaeological resources, taking into consideration provisions of the American Indian Religious Freedom Act (92 Stat. 469; 42 U.S.C. 1996), through permits authorizing excavation and/or removal of archaeological resources, through civil penalties for unauthorized excavation and/or removal, through provisions for the preservation of archaeological resource collections and data, and through provisions for ensuring confidentiality of information about archaeological resources when disclosure would threaten the archaeological resources.

(b) The regulations in this part do not impose any new restrictions on activities permitted under other laws, authorities, and regulations relating to mining, mineral leasing, reclamation, and other multiple uses of the public lands.

§—2 Authority.

(a) The regulations in this part are promulgated pursuant to section 10(a) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470ii), which requires that the Secretaries of the Interior, Agriculture and Defense and the Chairman of the Board of the Tennessee Valley Authority jointly develop uniform rules and regulations for carrying out the purposes of the Act.

(b) In addition to the regulations in this part, section 10(b) of the Act (16 U.S.C. 470ii) provides that each Federal land manager shall promulgate such rules and regulations, consistent with the uniform rules and regulations in this part, as may be necessary for carrying out the purposes of the Act.

§—3 Definitions.

As used for purposes of this part:

(a) "Archaeological resource" means any material remains of human life or activities which are at least 100 years of age, and which are of archaeological interest.

(1) "Of archaeological interest" means capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis, interpretation and explanation.

(2) "Material remains" means physical evidence of human habitation, occupation, use, or activity, including the site, location, or context in which such evidence is situated.

(3) The following classes of material remains (and illustrative examples), if they are at least 100 years of age, are of archaeological interest and shall be considered archaeological resources unless determined otherwise pursuant to paragraph (a)(4) or (a)(5) of this section:

(i) Surface or subsurface structures, shelters, facilities, or features (including, but not limited to, domestic structures, storage structures, cooking structures, ceremonial structures, artificial mounds, earthworks, fortifications, canals, reservoirs, horticultural/agricultural gardens or fields, bedrock mortars or grinding surfaces, rock alignments, cairns, trails, borrow pits, cooking pits, refuse pits, burial pits or graves, hearths, kilns, post molds, wall trenches, middens);

(ii) Surface or subsurface artifact concentrations or scatters;

(iii) Whole or fragmentary tools, implements, containers, weapons and weapon projectiles, clothing, and ornaments (including, but not limited to, pottery and other ceramics, cordage, basketry and other weaving, bottles and other glassware, bone, ivory, shell, metal, wood, hide, feathers, pigments, and flaked, ground, or pecked stone);

(iv) By-products, waste products, or debris resulting from manufacture or use of human-made or natural materials;

(v) Organic waste (including, but not limited to, vegetal and animal remains, coprolites);

(vi) Human remains (including, but not limited to, bone, teeth, mummified flesh, burials, cremations);

(vii) Rock carvings, rock paintings, intaglios and other works of artistic or symbolic representation;

(viii) Rockshelters and caves or portions thereof containing any of the above material remains;

(ix) All portions of shipwrecks (including, but not limited to, armaments, apparel, tackle, cargo);

(x) Any portion or piece of any of the foregoing.

(4) The following material remains shall not be considered of archaeological interest, and shall not be considered to be archaeological resources for purposes of the Act and this part, unless found in a direct physical relationship with archaeological resources as defined in this section:

(i) Paleontological remains;

(ii) Coins, bullets, and unworked minerals and rocks.

(5) The Federal land manager may determine that certain material remains, in specified areas under the Federal land manager's jurisdiction, and under specified circumstances, are not or are

no longer of archaeological interest and are not to be considered archaeological resources under this part. Any determination made pursuant to this subparagraph shall be documented. Such determination shall in no way affect the Federal land manager's obligations under other applicable laws or regulations.

(b) "Arrowhead" means any projectile point which appears to have been designed for use with an arrow.

(c) "Federal land manager" means:

(1) With respect to any public lands, the secretary of the department, or the head of any other agency or instrumentality of the United States, having primary management authority over such lands, including persons to whom such management authority has been officially delegated;

(2) In the case of Indian lands, or any public lands with respects to which no department, agency or instrumentality has primary management authority, such term means the Secretary of the Interior;

(3) The Secretary of the Interior, when the head of any other agency or instrumentality has, pursuant to section 3(2) of the Act and with the consent of the Secretary of the Interior, delegated to the Secretary of the Interior the responsibilities (in whole or in part) in this part.

(d) "Public lands" means:

(1) Lands which are owned and administered by the United States as part of the national park system, the national wildlife refuge system, or the national forest system; and

(2) All other lands the fee title to which is held by the United States, except lands on the Outer Continental Shelf, lands under the jurisdiction of the Smithsonian Institution, and Indian lands.

(e) "Indian lands" means lands of Indian tribes, or Indian individuals, which are either held in trust by the United States or subject to a restriction against alienation imposed by the United States, except for subsurface interests not owned or controlled by an Indian tribe or Indian individual.

(f) "Indian tribe" as defined in the Act means any Indian tribe, band, nation, or other organized group or community, including any Alaska village or regional or village corporation as defined in, or established pursuant to, the Alaska Native Claims Settlement Act (85 Stat. 688). In order to clarify this statutory definition for purposes of this part, "Indian tribe" means:

(1) Any tribal entity which is included in the annual list of recognized tribes published in the Federal Register by the

Secretary of the Interior pursuant to 25 CFR Part 54;

(2) Any other tribal entity acknowledged by the Secretary of the Interior pursuant to 25 CFR Part 54 since the most recent publication of the annual list; and

(3) Any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688), and any Alaska Native village or tribe which is recognized by the Secretary of the Interior as eligible for services provided by the Bureau of Indian Affairs.

(g) "Person" means an individual, corporation, partnership, trust, institution, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the United States, or of any Indian tribe, or of any State or political subdivision thereof.

(h) "State" means any of the fifty states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(i) "Act" means the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11.).

§ —.4 Prohibited acts.

(a) No person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit issued under § —.8 or exempted by § —.5(b) of this part.

(b) No person may sell, purchase, exchange, transport, or receive any archaeological resource, if such resource was excavated or removed in violation of:

(1) The prohibitions contained in paragraph (a) of this section; or

(2) Any provision, rule, regulation, ordinance, or permit in effect under any other provision of Federal law.

§ —.5 Permit requirements and exceptions.

(a) Any person proposing to excavate and/or remove archaeological resources from public lands or Indian lands, and to carry out activities associated with such excavation and/or removal, shall apply to the Federal land manager for a permit for the proposed work, and shall not begin the proposed work until a permit has been issued. The Federal land manager may issue a permit to any qualified person, subject to appropriate terms and conditions, provided that the person applying for a permit meets conditions in § —.8(a) of this part.

(b) Exceptions:

(1) No permit shall be required under this part for any person conducting

activities on the public lands under other permits, leases, licenses, or entitlements for use, when those activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources. General earth-moving excavation conducted under a permit or other authorization shall not be construed to mean excavation and/or removal as used in this part. This exception does not, however, affect the Federal land manager's responsibility to comply with other authorities which protect archaeological resources prior to approving permits, leases, licenses, or entitlements for use; any excavation and/or removal of archaeological resources required for compliance with those authorities shall be conducted in accordance with the permit requirements of this part.

(2) No permit shall be required under this part for any person collecting for private purposes any rock, coin, bullet, or mineral which is not an archaeological resource as defined in this part, provided that such collecting does not result in disturbance of any archaeological resource.

(3) No permit shall be required under this part or under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), for the excavation or removal by any Indian tribe or member thereof of any archaeological resource located on Indian lands of such Indian tribe, except that in the absence of tribal law regulating the excavation or removal of archaeological resources on Indian lands, an individual tribal member shall be required to obtain a permit under this part;

(4) No permit shall be required under this part for any person to carry out any archaeological activity authorized by a permit issued under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), before the enactment of the Archaeological Resources Protection Act of 1979. Such permit shall remain in effect according to its terms and conditions until expiration.

(5) No permit shall be required under section 3 of the Act of June 8, 1906 (16 U.S.C. 432) for any archaeological work for which a permit is issued under this part.

(c) Persons carrying out official agency duties under the Federal land manager's direction, associated with the management of archaeological resources, need not follow the permit application procedures of § —.6. However, the Federal land manager shall insure that provisions of § —.8 and

(OMB Control No.: 1024-0037)

M. S. Healy,
OSD Federal Register Liaison Officer,
Department of Defense.

Tennessee Valley Authority (18 CFR Part 1312)

List of Subjects in 18 CFR Part 1312

Historic preservation, Monuments and memorials, Antiquities, Archaeology.

Title 18 of the Code of Federal Regulations is amended by adding Part 1312 to read as follows:

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Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11) (Sec. 10(a)). Related authority Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996).

(OMB Control No.: 1024-0037)

Dated: December 15, 1983.

C. H. Dean, Jr.,
Chairman.

§—1 Purpose.

(a) The regulations in this part implement provisions of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11) by establishing the uniform definitions, standards, and procedures to be followed by all Federal land managers in providing protection for

archaeological resources, located on public lands and Indian lands of the United States. These regulations enable Federal land managers to protect archaeological resources, taking into consideration provisions of the American Indian Religious Freedom Act (92 Stat. 469; 42 U.S.C. 1996), through permits authorizing excavation and/or removal of archaeological resources, through civil penalties for unauthorized excavation and/or removal, through provisions for the preservation of archaeological resource collections and data, and through provisions for ensuring confidentiality of information about archaeological resources when disclosure would threaten the archaeological resources.

(b) The regulations in this part do not impose any new restrictions on activities permitted under other laws, authorities, and regulations relating to mining, mineral leasing, reclamation, and other multiple uses of the public lands.

§—2 Authority.

(a) The regulations in this part are promulgated pursuant to section 10(a) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470ii), which requires that the Secretaries of the Interior, Agriculture and Defense and the Chairman of the Board of the Tennessee Valley Authority jointly develop uniform rules and regulations for carrying out the purposes of the Act.

(b) In addition to the regulations in this part, section 10(b) of the Act (16 U.S.C. 470ii) provides that each Federal land manager shall promulgate such rules and regulations, consistent with the uniform rules and regulations in this part, as may be necessary for carrying out the purposes of the Act.

§—3 Definitions.

As used for purposes of this part:

(a) "Archaeological resource" means any material remains of human life or activities which are at least 100 years of age, and which are of archaeological interest.

(1) "Of archaeological interest" means capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis, interpretation and explanation.

(2) "Material remains" means physical evidence of human habitation, occupation, use, or activity, including the site, location, or context in which such evidence is situated.

(3) The following classes of material remains (and illustrative examples), if they are at least 100 years of age, are of archaeological interest and shall be considered archaeological resources unless determined otherwise pursuant to paragraph (a)(4) or (a)(5) of this section:

(i) Surface or subsurface structures, shelters, facilities, or features (including, but not limited to, domestic structures, storage structures, cooking structures, ceremonial structures, artificial mounds, earthworks, fortifications, canals, reservoirs, horticultural/agricultural gardens or fields, bedrock mortars or grinding surfaces, rock alignments, cairns, trails, borrow pits, cooking pits, refuse pits, burial pits or graves, hearths, kilns, post molds, wall trenches, middens);

(ii) Surface or subsurface artifact concentrations or scatters;

(iii) Whole or fragmentary tools, implements, containers, weapons and weapon projectiles, clothing, and ornaments (including, but not limited to, pottery and other ceramics, cordage, basketry and other weaving, bottles and other glassware, bone, ivory, shell, metal, wood, hide, feathers, pigments, and flaked, ground, or pecked stone);

(iv) By-products, waste products, or debris resulting from manufacture or use of human-made or natural materials;

(v) Organic waste (including, but not limited to, vegetal and animal remains, coprolites);

(vi) Human remains (including, but not limited to, bone, teeth, mummified flesh, burials, cremations);

(vii) Rock carvings, rock paintings, intaglios and other works of artistic or symbolic representation;

(viii) Rockshelters and caves or portions thereof containing any of the above material remains;

(ix) All portions of shipwrecks (including, but not limited to, armaments, apparel, tackle, cargo);

(x) Any portion or piece of any of the foregoing.

(4) The following material remains shall not be considered of archaeological interest, and shall not be considered to be archaeological resources for purposes of the Act and this part, unless found in a direct physical relationship with archaeological resources as defined in this section:

(i) Paleontological remains;

(ii) Coins, bullets, and unworked minerals and rocks.

(5) The Federal land manager may determine that certain material remains, in specified areas under the Federal land manager's jurisdiction, and under specified circumstances, are not or are

no longer of archaeological interest and are not to be considered archaeological resources under this part. Any determination made pursuant to this subparagraph shall be documented. Such determination shall in no way affect the Federal land manager's obligations under other applicable laws or regulations.

(b) "Arrowhead" means any projectile point which appears to have been designed for use with an arrow.

(c) "Federal land manager" means:

(1) With respect to any public lands, the secretary of the department, or the head of any other agency or instrumentality of the United States, having primary management authority over such lands, including persons to whom such management authority has been officially delegated;

(2) In the case of Indian lands, or any public lands with respects to which no department, agency or instrumentality has primary management authority, such term means the Secretary of the Interior;

(3) The Secretary of the Interior, when the head of any other agency or instrumentality has, pursuant to section 3(2) of the Act and with the consent of the Secretary of the Interior, delegated to the Secretary of the Interior the responsibilities (in whole or in part) in this part.

(d) "Public lands" means:

(1) Lands which are owned and administered by the United States as part of the national park system, the national wildlife refuge system, or the national forest system; and

(2) All other lands the fee title to which is held by the United States, except lands on the Outer Continental Shelf, lands under the jurisdiction of the Smithsonian Institution, and Indian lands.

(e) "Indian lands" means lands of Indian tribes, or Indian individuals, which are either held in trust by the United States or subject to a restriction against alienation imposed by the United States, except for subsurface interests not owned or controlled by an Indian tribe or Indian individual.

(f) "Indian tribe" as defined in the Act means any Indian tribe, band, nation, or other organized group or community, including any Alaska village or regional or village corporation as defined in, or established pursuant to, the Alaska Native Claims Settlement Act (85 Stat. 688). In order to clarify this statutory definition for purposes of this part, "Indian tribe" means:

(1) Any tribal entity which is included in the annual list of recognized tribes published in the Federal Register by the

Secretary of the Interior pursuant to 25 CFR Part 54;

(2) Any other tribal entity acknowledged by the Secretary of the Interior pursuant to 25 CFR Part 54 since the most recent publication of the annual list; and

(3) Any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688), and any Alaska Native village or tribe which is recognized by the Secretary of the Interior as eligible for services provided by the Bureau of Indian Affairs.

(g) "Person" means an individual, corporation, partnership, trust, institution, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the United States, or of any Indian tribe, or of any State or political subdivision thereof.

(h) "State" means any of the fifty states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(i) "Act" means the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11.).

§ —.4 Prohibited acts.

(a) No person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit issued under § —.8 or exempted by § —.5(b) of this part.

(b) No person may sell, purchase, exchange, transport, or receive any archaeological resource, if such resource was excavated or removed in violation of:

(1) The prohibitions contained in paragraph (a) of this section; or

(2) Any provision, rule, regulation, ordinance, or permit in effect under any other provision of Federal law.

§ —.5 Permit requirements and exceptions.

(a) Any person proposing to excavate and/or remove archaeological resources from public lands or Indian lands, and to carry out activities associated with such excavation and/or removal, shall apply to the Federal land manager for a permit for the proposed work, and shall not begin the proposed work until a permit has been issued. The Federal land manager may issue a permit to any qualified person, subject to appropriate terms and conditions, provided that the person applying for a permit meets conditions in § —.8(a) of this part.

(b) Exceptions:

(1) No permit shall be required under this part for any person conducting

activities on the public lands under other permits, leases, licenses, or entitlements for use, when those activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources. General earth-moving excavation conducted under a permit or other authorization shall not be construed to mean excavation and/or removal as used in this part. This exception does not, however, affect the Federal land manager's responsibility to comply with other authorities which protect archaeological resources prior to approving permits, leases, licenses, or entitlements for use; any excavation and/or removal of archaeological resources required for compliance with those authorities shall be conducted in accordance with the permit requirements of this part.

(2) No permit shall be required under this part for any person collecting for private purposes any rock, coin, bullet, or mineral which is not an archaeological resource as defined in this part, provided that such collecting does not result in disturbance of any archaeological resource.

(3) No permit shall be required under this part or under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), for the excavation or removal by any Indian tribe or member thereof of any archaeological resource located on Indian lands of such Indian tribe, except that in the absence of tribal law regulating the excavation or removal of archaeological resources on Indian lands, an individual tribal member shall be required to obtain a permit under this part;

(4) No permit shall be required under this part for any person to carry out any archaeological activity authorized by a permit issued under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), before the enactment of the Archaeological Resources Protection Act of 1979. Such permit shall remain in effect according to its terms and conditions until expiration.

(5) No permit shall be required under section 3 of the Act of June 8, 1906 (16 U.S.C. 432) for any archaeological work for which a permit is issued under this part.

(c) Persons carrying out official agency duties under the Federal land manager's direction, associated with the management of archaeological resources, need not follow the permit application procedures of § —.6. However, the Federal land manager shall insure that provisions of § —.8 and

§—9 have been met by other documented means, and that any official duties which might result in harm to or destruction of any Indian tribal religious or cultural site, as determined by the Federal land manager, have been the subject of consideration under §—7.

(d) Upon the written request of the Governor of any State, on behalf of the State or its educational institutions, the Federal land manager shall issue a permit, subject to the provisions of §—5(b)(5), §—7, §—8(a)(3), (4), (5), (6), and (7), §—9, §—10, §—12, and §—13(a) to such Governor or to such designee as the Governor deems qualified to carry out the intent of the Act, for purposes of conducting archaeological research, excavating and/or removing archaeological resources, and safeguarding and preserving any materials and data collected in a university, museum, or other scientific or educational institution approved by the Federal land manager.

(e) Under other statutory, regulatory, or administrative authorities governing the use of public lands and Indian lands, authorizations may be required for activities which do not require a permit under this part. Any person wishing to conduct on public lands or Indian lands any activities related to but believed to fall outside the scope of this part should consult with the Federal land manager, for the purpose of determining whether any authorization is required, prior to beginning such activities.

§—6 Application for permits and information collection.

(a) Any person may apply to the appropriate Federal land manager for a permit to excavate and/or remove archaeological resources from public lands or Indian lands and to carry out activities associated with such excavation and/or removal.

(b) Each application for a permit shall include:

(1) The nature and extent of the work proposed, including how and why it is proposed to be conducted, proposed time of performance, locational maps, and proposed outlet for public written dissemination of the results.

(2) The name and address of the individual(s) proposed to be responsible for conducting the work, institutional affiliation, if any, and evidence of education, training, and experience in accord with the minimal qualifications listed in §—8(a).

(3) The name and address of the individual(s), if different from the individual(s) named in paragraph (b)(2) of this section, proposed to be responsible for carrying out the terms and conditions of the permit.

(4) Evidence of the applicant's ability to initiate, conduct, and complete the proposed work, including evidence of logistical support and laboratory facilities.

(5) Where the application is for the excavation and/or removal of archaeological resources on public lands, the names of the university, museum, or other scientific or educational institution in which the applicant proposes to store all collections, and copies of records, data, photographs, and other documents derived from the proposed work. Applicants shall submit written certification, signed by an authorized official of the institution, of willingness to assume curatorial responsibility for the collections, records, data, photographs and other documents and to safeguard and preserve these materials as property of the United States.

(6) Where the application is for the excavation and/or removal of archaeological resources on Indian lands, the name of the university, museum, or other scientific or educational institution in which the applicant proposes to store copies of records, data, photographs, and other documents derived from the proposed work, and all collections in the event the Indian owners do not wish to take custody or otherwise dispose of the archaeological resources. Applicants shall submit written certification, signed by an authorized official of the institution, or willingness to assume curatorial responsibility for the collections, if applicable, and/or the records, data, photographs, and other documents derived from the proposed work.

(c) The Federal land manager may require additional information, pertinent to land management responsibilities, to be included in the application for permit and shall so inform the applicant.

(d) *Paperwork Reduction Act.* The information collection requirement contained in §—6 of these regulations has been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1024-0037. The purpose of the information collection is to meet statutory and administrative requirements in the public interest. The information will be used to assist Federal land managers in determining that applicants for permits are qualified, that the work proposed would further archaeological knowledge, that archaeological resources and associated records and data will be properly preserved, and that the permitted activity would not conflict with the

management of the public lands involved. Response to the information requirement is necessary in order for an applicant to obtain a benefit.

§—7 Notification to Indian tribes of possible harm to, or destruction of, sites on public lands having religious or cultural importance.

(a) If the issuance of a permit under this part may result in harm to, or destruction of, any Indian tribal religious or cultural site on public lands, as determined by the Federal land manager, at least 30 days before issuing such a permit the Federal land manager shall notify any Indian tribe which may consider the site as having religious or cultural importance. Such notice shall not be deemed a disclosure to the public for purposes of section 9 of the Act.

(1) Notice by the Federal land manager to any Indian tribe shall be sent to the chief executive officer or other designated official of the tribe. Indian tribes are encouraged to designate a tribal official to be the focal point for any notification and discussion between the tribe and the Federal land manager.

(2) The Federal land manager may provide notice to any other Native American group that is known by the Federal land manager to consider sites potentially affected as being of religious or cultural importance.

(3) Upon request during the 30-day period, the Federal land manager may meet with official representatives of any Indian tribe or group to discuss their interests, including ways to avoid or mitigate potential harm or destruction such as excluding sites from the permit area. Any mitigation measures which are adopted shall be incorporated into the terms and conditions of the permit under §—9.

(4) When the Federal land manager determines that a permit applied for under this part must be issued immediately because of an imminent threat of loss or destruction of an archaeological resource, the Federal land manager shall so notify the appropriate tribe.

(b)(1) In order to identify sites of religious or cultural importance, the Federal land manager shall seek to identify all Indian tribes having aboriginal or historic ties to the lands under the Federal land manager's jurisdiction and seek to determine, from the chief executive officer or other designated official of any such tribe, the location and nature of specific sites of religious or cultural importance so that such information may be on file for land management purposes. Information on

sites eligible for or included in the National Register of Historic Places may be withheld from public disclosure pursuant to section 304 of the Act of October 15, 1966, as amended (16 U.S.C. 470w-3).

(2) If the Federal land manager becomes aware of a Native American group that is not an Indian tribe as defined in this part but has aboriginal or historic ties to public lands under the Federal land manager's jurisdiction, the Federal land manager may seek to communicate with official representatives of that group to obtain information on sites they may consider to be of religious or cultural importance.

(3) The Federal land manager may enter into agreement with any Indian tribe or other Native American group for determining locations for which such tribe or group wishes to receive notice under this section.

§ 8. Issuance of permits.

(a) The Federal land manager may issue a permit, for a specified period of time appropriate to the work to be conducted, upon determining that:

(1) The applicant is appropriately qualified, as evidenced by training, education, and/or experience, and possesses demonstrable competence in archaeological theory and methods, and in collecting, handling, analyzing, evaluating, and reporting archaeological data, relative to the type and scope of the work proposed, and also meets the following minimum qualifications:

(i) A graduate degree in anthropology or archaeology, or equivalent training and experience;

(ii) The demonstrated ability to plan, equip, staff, organize, and supervise activity of the type and scope proposed;

(iii) The demonstrated ability to carry research to completion, as evidenced by timely completion of theses, research reports, or similar documents;

(iv) Completion of at least 16 months of professional experience and/or specialized training in archaeological field, laboratory, or library research, administration, or management, including at least 4 months experience and/or specialized training in the kind of activity the individual proposes to conduct under authority of a permit; and

(v) Applicants proposing to engage in historical archaeology should have had at least one year of experience in research concerning archaeological resources of the historic period. Applicants proposing to engage in prehistoric archaeology should have had at least one year of experience in research concerning archaeological resources of the prehistoric period.

(2) The proposed work is to be undertaken for the purpose of furthering archaeological knowledge in the public interest, which may include but need not be limited to, scientific or scholarly research, and preservation of archaeological data;

(3) The proposed work, including time, scope, location, and purpose, is not inconsistent with any management plan or established policy, objectives, or requirements applicable to the management of the public lands concerned;

(4) Where the proposed work consists of archaeological survey and/or data recovery undertaken in accordance with other approved uses of the public lands or Indian lands, and the proposed work has been agreed to in writing by the Federal land manager pursuant to section 106 of the National Historic Preservation Act (16 U.S.C. 470f), paragraphs (a)(2) and (a)(3) shall be deemed satisfied by the prior approval.

(5) Written consent has been obtained, for work proposed on Indian lands, from the Indian landowner and the Indian tribe having jurisdiction over such lands;

(6) Evidence is submitted to the Federal land manager that any university, museum, or other scientific or educational institution proposed in the application as the repository possesses adequate curatorial capability for safeguarding and preserving the archaeological resources and all associated records; and

(7) The applicant has certified that, not later than 90 days after the date the final report is submitted to the Federal land manager, the following will be delivered to the appropriate official of the approved university, museum, or other scientific or educational institution, which shall be named in the permit:

(i) All artifacts, samples, collections, and copies of records, data, photographs, and other documents resulting from work conducted under the requested permit where the permit is for the excavation and/or removal of archaeological resources from public lands.

(ii) All artifacts, samples and collections resulting from work under the requested permit for which the custody or disposition is not undertaken by the Indian owners, and copies of records, data, photographs, and other documents resulting from work conducted under the requested permit, where the permit is for the excavation and/or removal of archaeological resources from Indian lands.

(b) When the area of the proposed work would cross jurisdictional

boundaries, so that permit applications must be submitted to more than one Federal land manager, the Federal land manager shall coordinate the review and evaluation of applications and the issuance of permits.

§ 9. Terms and conditions of permits.

(a) In all permits issued, the Federal land manager shall specify:

(1) The nature and extent of work allowed and required under the permit, including the time, duration, scope, location, and purpose of the work;

(2) The name of the individual(s) responsible for conducting the work and, if different, the name of the individual(s) responsible for carrying out the terms and conditions of the permit;

(3) The name of any university, museum, or other scientific or educational institutions in which any collected materials and data shall be deposited; and

(4) Reporting requirements.

(b) The Federal land manager may specify such terms and conditions as deemed necessary, consistent with this part, to protect public safety and other values and/or resources, to secure work areas, to safeguard other legitimate land uses, and to limit activities incidental to work authorized under a permit.

(c) The Federal land manager shall include in permits issued for archaeological work on Indian lands such terms and conditions as may be requested by the Indian landowner and the Indian tribe having jurisdiction over the lands, and for archaeological work on public lands shall include such terms and conditions as may have been developed pursuant to § 7.

(d) Initiation of work or other activities under the authority of a permit signifies the permittee's acceptance of the terms and conditions of the permit.

(e) The permittee shall not be released from requirements of a permit until all outstanding obligations have been satisfied, whether or not the term of the permit has expired.

(f) The permittee may request that the Federal land manager extend or modify a permit.

(g) The permittee's performance under any permit issued for a period greater than 1 year shall be subject to review by the Federal land manager, at least annually.

§ 10. Suspension and revocation of permits.

(a) *Suspension or revocation for cause.* (1) The Federal land manager may suspend a permit issued pursuant to this part upon determining that the

permittee has failed to meet any of the terms and conditions of the permit or has violated any prohibition of the Act or §—4. The Federal land manager shall provide written notice to the permittee of the suspension, the cause thereof, and the requirements which must be met before the suspension will be removed.

(2) The Federal land manager may revoke a permit upon assessment of a civil penalty under §—15 upon the permittee's conviction under section 6 of the Act, or upon determining that the permittee has failed after notice under this section to correct the situation which led to suspension of the permit.

(b) *Suspension or revocation for management purposes.* The Federal land manager may suspend or revoke a permit, without liability to the United States, its agents, or employees, when continuation of work under the permit would be in conflict with management requirements in effect when the permit was issued. The Federal land manager shall provide written notice to the permittee stating the nature of and basis for the suspension or revocation.

§—11 Appeals relating to permits.

Any affected person may appeal permit issuance, denial of permit issuance, suspension, revocation, and terms and conditions of a permit through existing administrative appeal procedures, or through procedures which may be established by the Federal land manager pursuant to section 10(b) of the Act and this part.

§—12 Relationship to Section 106 of the National Historic Preservation Act.

Issuance of a permit in accordance with the Act and this part does not constitute an undertaking requiring compliance with section 106 of the Act of October 15, 1966 (16 U.S.C. 470f). However, the mere issuance of such a permit does not excuse the Federal land manager from compliance with section 106 where otherwise required.

§—13 Custody of archaeological resources.

(a) Archaeological resources excavated or removed from the public lands remain the property of the United States.

(b) Archaeological resources excavated or removed from Indian lands remain the property of the Indian or Indian tribe having rights of ownership over such resources.

(c) The Secretary of the Interior may promulgate regulations providing for the exchange of archaeological resources among suitable universities, museums, or other scientific or educational institutions, for the ultimate disposition

of archaeological resources, and for standards by which archaeological resources shall be preserved and maintained, when such resources have been excavated or removed from public lands and Indian lands.

(d) In the absence of regulations referenced in paragraph (c) of this section, the Federal land manager may provide for the exchange of archaeological resources among suitable universities, museums, or other scientific or educational institutions, when such resources have been excavated or removed from public lands under the authority of a permit issued by the Federal land manager.

§—14 Determination of archaeological or commercial value and cost of restoration and repair.

(a) *Archaeological value.* For purposes of this part, the archaeological value of any archaeological resource involved in a violation of the prohibitions in §—4 of this part or conditions of a permit issued pursuant to this part shall be the value of the information associated with the archaeological resource. This value shall be appraised in terms of the costs of the retrieval of the scientific information which would have been obtainable prior to the violation. These costs may include, but need not be limited to, the cost of preparing a research design, conducting field work, carrying out laboratory analysis, and preparing reports as would be necessary to realize the information potential.

(b) *Commercial value.* For purposes of this part, the commercial value of any archaeological resource involved in a violation of the prohibitions in §—4 of this part or conditions of a permit issued pursuant to this part shall be its fair market value. Where the violation has resulted in damage to the archaeological resource, the fair market value should be determined using the condition of the archaeological resource prior to the violation, to the extent that its prior condition can be ascertained.

(c) *Cost of restoration and repair.* For purposes of this part, the cost of restoration and repair of archaeological resources damaged as a result of a violation of prohibitions or conditions pursuant to this part, shall be the sum of the costs already incurred for emergency restoration or repair work, plus those costs projected to be necessary to complete restoration and repair, which may include, but need not be limited to, the costs of the following:

- (1) Reconstruction of the archaeological resource;
- (2) Stabilization of the archaeological resource;

(3) Ground contour reconstruction and surface stabilization;

(4) Research necessary to carry out reconstruction or stabilization;

(5) Physical barriers or other protective devices, necessitated by the disturbance of the archaeological resource, to protect it from further disturbance;

(6) Examination and analysis of the archaeological resource including recording remaining archaeological information, where necessitated by disturbance, in order to salvage remaining values which cannot be otherwise conserved;

(7) Reinterment of human remains in accordance with religious custom and State, local, or tribal law, where appropriate, as determined by the Federal land manager.

(8) Preparation of reports relating to any of the above activities.

§—15 Assessment of civil penalties.

(a) The Federal land manager may assess a civil penalty against any person who has violated any prohibition contained in §—4 or who has violated any term or condition included in a permit issued in accordance with the Act and this part.

(b) *Notice of violation.* The Federal land manager shall serve a notice of violation upon any person believed to be subject to a civil penalty, either in person or by registered or certified mail (return receipt requested). The Federal land manager shall include in the notice:

(1) A concise statement of the facts believed to show a violation;

(2) A specific reference to the provision(s) of this part or to a permit issued pursuant to this part allegedly violated;

(3) The amount of penalty proposed to be assessed, including any initial proposal to mitigate or remit where appropriate, or a statement that notice of a proposed penalty amount will be served after the damages associated with the alleged violation have been ascertained;

(4) Notification of the right to file a petition for relief pursuant to paragraph (d) of this section, or to await the Federal land manager's notice of assessment, and to request a hearing in accordance with paragraph (g) of this section. The notice shall also inform the person of the right to seek judicial review of any final administrative decision assessing a civil penalty.

(c) The person served with a notice of violation shall have 45 calendar days from the date of its service (or the date of service of a proposed penalty amount,

if later) in which to respond. During this time the person may:

(1) Seek informal discussions with the Federal land manager;

(2) File a petition for relief in accordance with paragraph (d) of this section;

(3) Take no action and await the Federal land manager's notice of assessment;

(4) Accept in writing or by payment the proposed penalty, or any mitigation or remission offered in the notice. Acceptance of the proposed penalty or mitigation or remission shall be deemed a waiver of the notice of assessment and of the right to request a hearing under paragraph (g) of this section.

(d) *Petition for relief.* The person served with a notice of violation may request that no penalty be assessed or that the amount be reduced, by filing a petition for relief with the Federal land manager within 45 calendar days of the date of service of the notice of violation (or of a proposed penalty amount, if later). The petition shall be in writing and signed by the person served with the notice of violation. If the person is a corporation, the petition must be signed by an officer authorized to sign such documents. The petition shall set forth in full the legal or factual basis for the requested relief.

(e) *Assessment of penalty.* (1) The Federal land manager shall assess a civil penalty upon expiration of the period for filing a petition for relief, upon completion of review of any petition filed, or upon completion of informal discussions, whichever is later.

(2) The Federal land manager shall take into consideration all available information, including information provided pursuant to paragraphs (c) and (d) of this section or furnished upon further request by the Federal land manager.

(3) If the facts warrant a conclusion that no violation has occurred, the Federal land manager shall so notify the person served with a notice of violation, and no penalty shall be assessed.

(4) Where the facts warrant a conclusion that a violation has occurred, the Federal land manager shall determine a penalty amount in accordance with §—16.

(f) *Notice of assessment.* The Federal land manager shall notify the person served with a notice of violation of the penalty amount assessed by serving a written notice of assessment, either in person or by registered or certified mail (return receipt requested). The Federal land manager shall include in the notice of assessment:

(1) The facts and conclusions from which it was determined that a violation did occur;

(2) The basis in §—16 for determining the penalty amount assessed and/or any offer to mitigate or remit the penalty; and

(3) Notification of the right to request a hearing, including the procedures to be followed, and to seek judicial review of any final administrative decision assessing a civil penalty.

(g) *Hearings.* (1) Except where the right to request a hearing is deemed to have been waived as provided in paragraph (c)(4) of this section, the person served with a notice of assessment may file a written request for a hearing with the adjudicatory body specified in the notice. The person shall enclose with the request for hearing a copy of the notice of assessment, and shall deliver the request as specified in the notice of assessment, personally or by registered or certified mail (return receipt requested).

(2) Failure to deliver a written request for a hearing within 45 days of the date of service of the notice of assessment shall be deemed a waiver of the right to a hearing.

(3) Any hearing conducted pursuant to this section shall be held in accordance with 5 U.S.C. § 554. In any such hearing, the amount of civil penalty assessed shall be determined in accordance with this part, and shall not be limited by the amount assessed by the Federal land manager under paragraph (f) of this section or any offer of mitigation or remission made by the Federal land manager.

(h) *Final administrative decision.* (1) Where the person served with a notice of violation has accepted the penalty pursuant to paragraph (c)(4) of this section, the notice of violation shall constitute the final administrative decision;

(2) Where the person served with a notice of assessment has not filed a timely request for a hearing pursuant to paragraph (g)(1) of this section, the notice of assessment shall constitute the final administrative decision;

(3) Where the person served with a notice of assessment has filed a timely request for a hearing pursuant to paragraph (g)(1) of this section, the decision resulting from the hearing or any applicable administrative appeal therefrom shall constitute the final administrative decision.

(i) *Payment of penalty.* (1) The person assessed a civil penalty shall have 45 calendar days from the date of issuance of the final administrative decision in which to make full payment of the penalty assessed, unless a timely

request for appeal has been filed with a United States District Court as provided in section 7(b)(1) of the Act.

(2) Upon failure to pay the penalty, the Federal land manager may request the Attorney General to institute a civil action to collect the penalty in a United States District Court for any district in which the person assessed a civil penalty is found, resides, or transacts business. Where the Federal land manager is not represented by the Attorney General, a civil action may be initiated directly by the Federal land manager.

(j) *Other remedies not waived.* Assessment of a penalty under this section shall not be deemed a waiver of the right to pursue other available legal or administrative remedies.

§—16 Civil penalty amounts.

(a) *Maximum amount of penalty.* (1) Where the person being assessed a civil penalty has not committed any previous violation of any prohibition in §—4 or of any term or condition included in a permit issued pursuant to this part, the maximum amount of the penalty shall be the full cost of restoration and repair of archaeological resources damaged plus the commercial value of archaeological resources destroyed or not recovered.

(2) Where the person being assessed a civil penalty has committed any previous violation of any prohibition in §—4 or of any term or condition included in a permit issued pursuant to this part, the maximum amount of the penalty shall be double the cost of restoration and repair plus double the commercial value of archaeological resources destroyed or not recovered.

(3) Violations limited to the removal of arrowheads located on the surface of the ground shall not be subject to the penalties prescribed in this section.

(b) *Determination of penalty amount, mitigation, and remission.* The Federal land manager may assess a penalty amount less than the maximum amount of penalty and may offer to mitigate or remit the penalty.

(1) Determination of the penalty amount and/or a proposal to mitigate or remit the penalty may be based upon any of the following factors:

(i) Agreement by the person being assessed a civil penalty to return to the Federal land manager archaeological resources removed from public lands or Indian lands;

(ii) Agreement by the person being assessed a civil penalty to assist the Federal land manager in activity to preserve, restore, or otherwise contribute to the protection and study of

archaeological resources on public lands or Indian lands;

(iii) Agreement by the person being assessed a civil penalty to provide information which will assist in the detection, prevention, or prosecution of violations of the Act or this part;

(iv) Demonstration of hardship or inability to pay, provided that this factor shall only be considered when the person being assessed a civil penalty has not been found to have previously violated the regulations in this part;

(v) Determination that the person being assessed a civil penalty did not willfully commit the violation;

(vi) Determination that the proposed penalty would constitute excessive punishment under the circumstances;

(vii) Determination of other mitigating circumstances appropriate to consideration in reaching a fair and expeditious assessment.

(2) When the penalty is for a violation on Indian lands, the Federal land manager shall consult with and consider the interests of the Indian landowner and the Indian tribe having jurisdiction over the Indian lands prior to proposing to mitigate or remit the penalty.

(3) When the penalty is for a violation which may have had an effect on a known Indian tribal religious or cultural site on public lands, the Federal land manager should consult with and consider the interests of the affected

tribe(s) prior to proposing to mitigate or remit the penalty.

§ —.17 Other penalties and rewards.

(a) Section 6 of the Act contains criminal prohibitions and provisions for criminal penalties. Section 8(b) of the Act provides that archaeological resources, vehicles, or equipment involved in a violation may be subject to forfeiture.

(b) Section 8(a) of the Act provides for rewards to be made to persons who furnish information which leads to conviction for a criminal violation or to assessment of a civil penalty. The Federal land manager may certify to the Secretary of the Treasury that a person is eligible to receive payment. Officers and employees of Federal, State, or local government who furnish information or render service in the performance of their official duties, and persons who have provided information under — .16(b)(1)(iii) shall not be certified eligible to receive payment of rewards.

(c) In cases involving Indian lands, all civil penalty monies and any item forfeited under the provisions of this section shall be transferred to the appropriate Indian or Indian tribe.

§ —.18 Confidentiality or archaeological resource information.

(a) The Federal land manager shall not make available to the public, under subchapter II of chapter 5 of title 5 of the United States Code or any other

provision of law, information concerning the nature and location of any archaeological resource, with the following exceptions:

(1) The Federal land manager may make information available, provided that the disclosure will further the purposes of the Act and this part, or the Act of June 27, 1960, as amended (16 U.S.C. 469-469c), without risking harm to the archaeological resource or to the site in which it is located.

(2) The Federal land manager shall make information available, when the Governor of any State has submitted to the Federal land manager a written request for information, concerning the archaeological resources within the requesting Governor's State, provided that the request includes:

(i) The specific archaeological resource or area about which information is sought;

(ii) The purpose for which the information is sought; and

(iii) The Governor's written commitment to adequately protect the confidentiality of the information.

§ —.19 Report.

Each Federal land manager, when requested by the Secretary of the Interior, shall submit such information as is necessary to enable the Secretary to comply with section 13 of the Act.

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