EFFECTIVE DATE: 05/31/13

PROCEDURE INSTRUCTION LETTER NO. MSHA-I13-IV-1

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Mine Safety and Health

SUBJECT: Reissue of MSHA-I09-IV-1 Procedures for Documenting Inspections of Dams on Initial and Subsequent Regular Inspections

Scope
This Procedure Instruction Letter (PIL) applies to all Metal and Nonmetal enforcement personnel conducting inspections of dams at mines and mills during regular (E01) inspections.

Purpose
This PIL provides guidance for Metal and Nonmetal enforcement personnel in documenting inspections of dams at metal and nonmetal mines and mills during regular inspections. This includes dams that impound water, tailings, or sediment. Information on dams meeting the hazard potential or size criteria explained below should be documented using approved MSHA forms "Metal and Nonmetal Tailings and Water Impoundment Inspection" (Form 4000-127) and "Water, Sediment, or Tailings Dam Inspection Checklist" (Form 4000-127a). Information on dams meeting the hazard potential or size criteria is also to be entered into MSHA's Dam Inventory in the MSIS database.

Procedure Instruction
The "Metal and Nonmetal Tailings and Water Impoundment Inspection" form (4000-127 – Attachment 1) and "Water, Sediment, or Tailings Dam Inspection Checklist" form (4000-127a – Attachment 2) are to be completed for all dams which meet any of the following criteria:

Dams classified as having "High Hazard Potential." These are dams, regardless of their condition or size, whose failure will probably cause loss of life;

Dams classified as having "Significant Hazard Potential." These are dams, regardless of their condition or size, whose failure would result in no probable loss of life but would disrupt important utilities or cause significant economic loss or significant environmental damage; or

Any dam classified as having "Low Hazard Potential." This is a dam meeting one of the two criteria below whose failure would not be expected to cause loss of life, disrupt important utilities, or cause significant economic loss or significant environmental damage. The dam must either:

Equal or exceed 25 feet in height and can or does store a volume of more than 15 acre-feet, or Exceed 6 feet in height and can or does store 50 or more acre-feet.

The attached spreadsheet (Attachment 3) can assist in determining whether a dam meets the size criteria established in item number 3 above. Enforcement personnel are reminded that any portion of a retaining structure that is incised, meaning it is excavated below undisturbed natural ground so as to preclude that portion of the impounded material from being released, should not be included in the volume or the dam height used in the size criteria specified in item No. 3 above. A dam at a metal and nonmetal mine or mill meeting any of the three criteria above should also be entered into MSHA's Dam Inventory on MSIS.

The "Metal and Nonmetal Tailings and Water Impoundment Inspection" form (4000-127) is to be completed the first time a dam that meets any of the three criteria is inspected (during or after construction). Information included on the form should reflect the conditions of the dam at the time of the inspection and not planned future conditions. During subsequent MSHA inspections, any changes originally noted, such as a change in dam height, should be updated using the same form.

The "Water, Sediment, or Tailings Dam Inspection Checklist" form (4000-127a) is to be completed every time a dam meeting any of the three criteria above is inspected and no physical modifications have been made or its hazard potential classification has not been altered since the structure was built. This form is intended to inform the Agency of conditions that could have an adverse effect on the safety of the dam.

Regardless of whether a dam meets the three criteria above or not, all dams on mine or mill property are to be inspected during mandated inspections for conditions that could present a safety or health hazard to miners, such as inadequate berms along roads on top of the dam. However, the MSHA forms mentioned above are required to be completed only for dams meeting the specified hazard-potential or size criteria in this PIL.

One of the items of information on both forms is the "hazard potential classification" of the dam. This classification should be determined and assigned by the dam designer, because dams are designed to different safety standards depending on their hazard potential classification. For example, a high hazard potential dam should be designed to accommodate a much larger storm than would a low hazard potential dam.

Enforcement personnel should ask mine operators what hazard-potential classification has been assigned in the design of the dam. If a classification has been assigned, enforcement personnel should examine the dam and its downstream area to determine whether the classification appears to be reasonable. Hazard potential classifications can change over time, such as due to increased development in the downstream area. If the classification appears reasonable, it should be entered on MSHA Form 4000-127. If the classification does not appear to be reasonable, or if no classification has been assigned by the dam designer or mine operator, then enforcement personnel should make a judgment of the hazard potential classification. This classification should be reported on form 4000-127. Where the classification is uncertain, the District Dam Safety Representative should be contacted for assistance in determining the appropriate hazard potential classification and discussing the classification with the mine operator. Assistance can also be requested from MSHA's Directorate of Technical Support's Mine Waste and Geotechnical Engineering Division.

Enforcement personnel should also request a copy of "Emergency Action Plans" that mine operators may have for dams on the property. These plans are required by many state agencies.

Completed Form 4000-127a and an updated (if applicable) Form 4000-127 should be attached to every regular inspection report. A copy of Form 4000-127a (and form 4000-127 if applicable) should be forwarded to the District Dam Safety Representative after each regular inspection is concluded at mines or mills having these structures. District Dam Safety Representatives should also be provided with a copy of the dam's "Emergency Action Plan" if one was obtained from the mine operator.

The District Dam Safety Representatives will enter new or changed information noted on Form 4000-127 into the MSIS Dam Inventory database as soon as practical. District Dam Safety Representatives shall also retain indefinitely the completed 4000-127 forms and, if provided, the mine's latest "Emergency Action Plan" relevant to any dam. Form 4000-127a will be maintained for three years for dams meeting the above criteria at mines or mills in the respective district.

Field office supervisors shall assure that all dams are inspected during every regular inspection. They should also assure that observations made by enforcement personnel during those inspections are noted on the appropriate forms for dams meeting the hazard potential or size criteria. Further, supervisors should assure that completed forms are forwarded to the District Dam Safety Representative as noted above.

Background

This PIL provides guidance to assure that congressionally mandated inspections of dams are performed in accordance with applicable provisions of the Federal Mine Safety and Health Act of 1977 and that these inspections are appropriately documented.

Authority
Federal Mine Safety and Health Act of 1977, as amended by the Mine Improvement and New Emergency Response Act of 2006 (MINER Act)) Section 103(a), 30 USC § 801 et seq. at § 813 (a); 30 Code of Federal Regulations 56/57.20010

Filing Instructions
This instruction letter should be filed behind the tab marked "Procedure Instruction Letters" in the binder for Program Policy Handbooks and Procedure Instruction Letters.

Issuing Office
MNM Division of Safety

Distribution
All Program Policy Manual Holders
Metal and Nonmetal enforcement personnel
Attachment 1 (4000-127)
Attachment 2 (4000-127a)
Attachment 3 (Spreadsheet for Impoundment Size Determination)