

SUPPORTING STATEMENT

Refuse Piles and Impoundment Structures, Recordkeeping and Reporting Requirements (pertains to surface coal mines and surface work areas of underground coal mines), 30 CFR 77.215(j), 77.215-2, 77.215-3, 77.215-4, 77.216-2, 77.216-3, 77.216-4, and 77.216-5

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Sections 101(a) and 508 of the Federal Mine Safety and Health Act of 1977 (P.L. 95-164) (the Act), 30 U.S.C. §§ 811 and 957, authorize the Secretary to develop, promulgate, and revise improved health or safety standards for the protection of life and the prevention of injuries in coal or other mines, and to issue such regulations as deemed necessary to carry out the provisions of the Act.

30 CFR Part 77, Subpart C, sets forth standards for surface installations. More specifically, the sections cited in the title of this supporting statement addresses refuse piles (30 CFR 77.215), and impoundments (30 CFR 77.216). Impoundments are structures that can impound water, sediment, or slurry or any combination of materials; and refuse piles are deposits of coal mine waste (other than overburden or spoil) that are removed during mining operations or separated from mined coal and deposited on the surface. The failure of these structures can have a devastating affect on a community. To avoid or minimize such disasters, standards have been promulgated for the design, construction, and maintenance of these structures; for annual certifications; for certification for hazardous refuse piles; for the frequency of inspections; and the methods of abandonment for impoundments and impounding structures.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

MSHA reviews impoundment and refuse pile plans for safety concerns and, based on the evaluation of geotechnical, hydrologic, hydraulic, and other engineering data, approves plans that are determined to be adequate. The mine operators use the approved plans and approved revisions to plans for constructing and improving impoundment structures and refuse piles.

In addition, MSHA reviews fire extinguishing plans and abandonment plans for impoundments and refuse piles to ensure that they conform with prudent engineering and safety practices and, when implemented, that they will prevent or eliminate hazardous conditions.

MSHA reviews the annual status report in order to determine that the structure is being constructed, operated, and maintained according to the approved engineering plan. The annually required certification by a registered professional engineer affirms that the dam is being built, operated, and maintained according to the approved plan. Annual reporting requirements also indicate any changes that have affected the stability or operation of the impounding structure during the reporting period.

The weekly physical examination and instrument monitoring are required in order to determine whether any signs of instability have developed and whether safety features, such as spillways, are in proper operating condition. Hazardous conditions or inoperable design features can be detrimental to the safety of the structure and subsequently dangerous to any miners or inhabitants downstream. Weekly instrument records show fluctuations of such important factors as the dam's internal saturation level, which has a direct affect on the stability of the structure. To minimize the information collection, with respect to impoundments, the most recent regulation changes allow operators to apply for longer inspection intervals for sites with low-hazard potential that have an established record of safe performance.

With respect to refuse piles, reports contain, among other things, a topographic map showing the present and proposed maximum extent of the refuse pile and an area 500 feet around the perimeter; a statement of whether or not the refuse pile is burning; a description of measures taken to prevent water from being impounded by the refuse pile or contained within; a cross section of the length and width of the refuse pile at intervals to show the approximate original ground surface and any other information pertaining to the stability of the pile.

With respect to impoundments, reports contain, among other things, changes in the geometry of the impounding structure for the reporting period; data showing the minimum, maximum and present depth of the impoundment; the storage capacity of the impounding structure; and the volume of the impounded water, sediment, or slurry for the reporting period.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

No improved information technology has been identified that would reduce the burden. However, in order to comply with the Government Paperwork Elimination Act, mine

operators may retain the records using whatever method they choose, which may include utilizing computer technology. Because the drawings are large, mine operators send in hard copies.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

MSHA has reviewed its regulatory position with the Office of Surface Mining (OSM), U.S. Department of the Interior, and the Environmental Protection Agency. As a result of this review, it was determined that there was no duplication in the reporting and recordkeeping burden imposed by these agencies. MSHA met with representatives of OSM prior to promulgation of its standards to assure that there was no conflict.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

This information does not have a significant impact on small businesses or other small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

If MSHA eliminated or reduced its collection, review, and certification of construction or abandonment plans, or reduced its requirements for inspections and monitoring of instruments, unsafe conditions could go undetected. This could quickly result in detrimental conditions for the dam or refuse pile and subsequently threaten the safety of miners on mine property, as well as members of the public living near or downstream of the structures.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- * requiring respondents to report information to the agency more often than quarterly;**
- * requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- * requiring respondents to submit more than an original and two copies of any document;**
- * requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
- * in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- * requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**

*** that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
*** requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

In the event of a mine emergency, the mine operator may have to provide MSHA with reporting information more frequently than quarterly. This collection of information is otherwise consistent with the guidelines in 5 CFR 1320.5.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years - even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

In accordance with 5 CFR 1320.8(d), MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons 60 days to submit comments.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA does not provide payments or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

There is no assurance of confidentiality provided to respondents.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

*** Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**

*** If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**

*** Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 13.**

MSHA's records show that in FY 2010, there were approximately 609 impounding structures and 33 high hazard potential refuse piles, for a total of 642 sites at surface coal mines or surface areas of underground.

The majority of new plans and plan revisions are prepared by contract engineering firms. MSHA experience is that 95 percent of the engineering studies, testing, and designs are provided through contractors. Those costs are provided in Item 13.

Approximately 5 percent of plans or revisions are developed by a mining company engineer, who earns an average of \$77.35/hour (based on data from U.S. Coal Mine Salaries, Wages, & Benefits - 2009 Survey Results-Composite Coal Surface and Underground Supervisory rate). The burden hours and cost estimates for the 5 percent of all annual impoundment and refuse pile plan requirements completed by the coal mining industry were computed as follows:

Impoundment Plans, Refuse Pile Plans, and Revisions:

(1) MSHA estimates that 74 new impoundment plans are submitted per year and it takes 1,300 hours to prepare a new impoundment plan. There are four new plans submitted per year ($74 \times 5\% = 4$) that are not prepared by contractors. ($4 \text{ new impoundment plans/yr} \times 1,300 \text{ hr/plan} = 5,200 \text{ hours}$)

(2) MSHA estimates that there are 20 new refuse pile plans submitted per year and it takes 16 hours to prepare a new refuse pile plan. There is one new plan submitted per year ($20 \times 5\% = 1$) that is not prepared by contractors. ($1 \text{ new refuse pile plan/yr} \times 16 \text{ hr/plan} = 16 \text{ hours}$)

(3) MSHA estimates that 115 impoundment plans are revised per year and it takes 40 hours to prepare a revision to an existing impoundment plan. There are six revisions submitted per year ($115 \times 5\% = 6$) that are not prepared by contractors. ($6 \text{ revised impoundment plans/yr} \times 40 \text{ hr/revision} = 240 \text{ hours}$)

$(5,200 + 16 + 240 = 5,456 \text{ hours}) \times \$77.35/\text{hr} = \$422,022$

Total Responses = $(4 + 1 + 6) = 11$
Total Burden Hours = 5,456 hours
Total Burden Hour Cost = \$422,022

Fire Extinguishing Plans:

This is not a significant category. There has only been one reported event at a refuse facility or impoundment in several years. Controlled compaction and exclusion of combustible materials from the fills have all but totally eliminated the spontaneous ignition of fires. The few remaining events have been trespassers or vandals starting fires in old un-reclaimed mined areas. For the purposes of estimating the burden of such an event, MSHA estimates that a fire in a constructed refuse pile or an impoundment bank constructed from refuse occurs once every 4 years. The engineering consists primarily of preparing a plan for submittal to an MSHA District Manager. An engineer or supervisor should be able to complete an acceptable document in approximately 20 hours.

$1 \text{ plan/fire} \times 1 \text{ fire/4 yr} \times 20 \text{ hr/plan} = 5 \text{ hours}$
 $5 \text{ hr} \times \$77.35/\text{hr} = \387

Total Responses = 1
Total Burden Hours = 5 hours
Total Burden Hour Cost = \$387

Abandonment Plans:

MSHA estimates that an average of 25 abandonment plans are developed each year, and that it takes 8 hours to prepare such a plan by a company engineer.

25 abandonment plans x 8 hr/plan = 200 hours
200 hr x \$77.35/hr = \$15,470

Total Responses = 25
Total Burden Hours = 200 hours
Total Burden Hour Cost = \$15,470

Annual Status Report and Certification:

MSHA estimates that there are 609 active impoundments and 33 active refuse piles which require annual reporting or annual certification. MSHA standards allow contractors with registered engineers to submit the annual reports on behalf of their clients. As previously discussed, 95 percent of these large scale earth structures are designed by contract engineering firms. The execution of those designs is usually monitored by the design engineers who then complete the annual report. Therefore, mine operators address only about 32 (642 x 5%) annual reporting or certifications for impoundments and refuse piles. Such revisions would take a company engineer approximately 2 hours per report.

32 annual reports or certifications x 2 hr/report or certification = 64 hours
64 hr x \$77.35/hr = \$4,950

Total Responses = 32
Total Burden Hours = 64 hours
Total Burden Hour Cost = \$4,950

Recordkeeping Associated With Weekly Inspections and Instrumentation Monitoring:

MSHA's regulations require that coal mine operators have a "qualified person" inspect their impoundments for signs of instability every 7 days, unless a longer inspection interval is approved by the District Manager. Longer inspection intervals are normally only approved for low-hazard potential impoundments with a record of safe performance. Considering the total population of regulated impoundments, it is estimated that, on average, inspections are required to be performed every 3 weeks or 17 times per year.

MSHA estimates that a qualified person who inspects an impoundment earns approximately \$33.57/hour (based on data from U.S. Coal Mine Salaries, Wages, & Benefits - 2009 Survey Results for a combination of surface and underground miners). MSHA estimates that the inspections where mine operators have installed monitoring instruments will take an average of 3 hours. Sites without monitoring instruments will take an average of 2 hours. Approximately 40 percent of the total 609, or 244 sites, have monitoring instruments installed.

244 impoundments with monitoring instruments x 17 insp/yr. x 3 hr/insp = 12,444 hr
365 impoundments without monitoring instruments x 17 insp/yr x 2 hr/insp = 12,410 hr

$(12,444 + 12,410 = 24,854)\text{hr} \times \$33.57/\text{hr} = \$417,745 + \$416,604 =$

Total Responses = 609

Total Burden Hours = 24,854 hours

Total Burden Hour Cost = \$834,349

SUMMARY OF ANNUAL BURDEN HOURS AND BURDEN HOUR COST

Provision	Responses	Burden Hours	Burden Hour Cost
Refuse pile and impoundment plans and revisions	11	5,456	\$422,022
Fire Extinguisher Plans	1	5	\$387
Abandonment Plans	25	200	\$15,470
Annual Certifications	32	64	\$4,950
Inspection of impoundments	10,353	24,854	\$834,349
TOTALS	10,422	30,579	\$1,277,178

13. Provide an estimate for the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).

*** The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**

*** If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collections services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**

*** Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

The work involved in the testing, design engineering, construction monitoring and annual reporting for new impoundments, hazardous refuse piles and major addition and revision to existing projects is generally beyond the on-site resources of a mine operator and is, as a consequence, contracted to specialty contract engineering firms. MSHA anticipates that 95 percent of all work in preparing plans submitted for MSHA District Manager approval is done by contract engineering firms. MSHA estimates that an average hourly cost for contract engineering ranges from \$110 per hour for the principal engineers to \$50 per hour for engineering technicians. MSHA estimates \$80 per hour to be a representative average fee.

Estimated Contractor Engineering Costs:

74 new impoundment plans x 95% x 1300 hr x \$80/hr = \$7,311,200
20 new refuse pile plans x 95% x 16 hr x \$80/hr = \$24,320
115 revisions to plans x 95% x 40 hours x \$80 / hour = \$349,600
642 annual reports or certifications x 95% x 2 hr x \$80/hour = \$97,600

Total Cost = \$7,782,240

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

The average hourly wage for an MSHA specialist (GS-12/5) is \$32.73/hour (based on Office of Personnel Management, 2010 General Schedule). MSHA estimates that it takes a specialist approximately 2 hours to perform an administrative review of an average report for an impoundment or a hazardous refuse pile. In addition, the plans are carefully evaluated by the MSHA's Technical Support Branch.

Technical Support Review of Impoundment Plans, Refuse Pile Plans, and Revisions:

(1) MSHA estimates that it takes 1 month (160 hours) to review and approve an average impoundment plan, and 74 new impoundment plans are received per year. 74 plans x (2 hr admin review + 160 hr tech support review) = 11,988 hours; 11,988 hours x \$32.73/hr = \$392,367

(2) It takes approximately 30 hours to review a revision to an existing impoundment plan and 115 revisions are submitted per year. 115 revisions x (2 hours admin review + 30 hours tech support review) = 3,680 hours; 3,680 hours x \$32.73/hr = \$120,446

(3) A review of refuse pile plans is estimated to take approximately 2 hours, and 20 new plans are received per year. 20 new refuse piles x 2 hours x \$32.73/hr = \$1,309

Abandonment Plans:

MSHA receives an average of 25 abandonment plans per year. Safety specialists estimate that it takes approximately 1 hour to review and prepare a response for one of these plans. 25 reports x 1 hour x \$32.73/hr= \$818

Annual Status Report and Certification:

609 existing impoundments and 33 existing refuse piles will undergo changes that are required to be reported. The review will take approximately 1 hour per report.

642 reports x 1 hour x \$32.73/hr = \$21,013

TOTAL FEDERAL BURDEN HOURS = 16,375 hours

TOTAL FEDERAL BURDEN COST = \$535,953

15. Explain the reasons for any program changes or adjustments reporting in Items or 14 of the OMB Form 83-I.

MSHA records show a slight decrease in the number of new plans submitted for approval and a decrease in the number of revisions to impoundment plans. The number of active impoundments declined by 50 (from 692 to 642) impoundments primarily due to an industry effort to keeping existing facilities in operation longer by increasing the elevation and capacity for refuse disposal at impoundments rather than developing new sites because of the relative scarcity of suitable locations. Another aspect contributing to the declining number of active impoundments is the improvements in MSHA computer based inventory. The MSHA Impoundments and Refuse Pile Inventory (IRPI) has identified and eliminated duplicate reporting. The inventory numbers are now much more reliable with the districts providing data in a consistent format. The number of responses also decreased by 632 (from 11,054 to 10,422). Consequently, burden hours decreased by 1,502 (from 32,081 to 30,579) due to a slight reduction in the number of new impoundment plans or major revisions to existing impoundments. This burden estimate also continues to recognizing that 95 percent of the engineering work associated with impoundments and refuse pile is done by contract engineering firms. Consequently, this resulted in MSHA assessing an increase of \$965,780 (from \$6,816,460 to \$7,782,240) burden cost.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

MSHA does not intend to publish the results of this information collection.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

MSHA is not seeking approval to not display the expiration date for OMB approval of this information collection.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.

MSHA is not requesting an exception to the certification statement.

B. Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When Item 17 on the Form OMB 83-I is checked, "Yes," the following documentation should be included in the Supporting Statement to the extent that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection methods to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

2. Describe the procedures for the collection of information including:

- * Statistical methodology for stratification and sample selection,**
- * Estimation procedure,**
- * Degree of accuracy needed for the purpose described in the justification,**
- * Unusual problems requiring specialized sampling procedures, and**
- * Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or

set of test may be submitted for approval separately or in combination with the main collection of information.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

This collection of information does not employ statistical methods and statistical analysis is not required by the regulation, therefore, questions 1 through 5 do not apply.