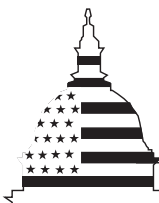


August 2004

WORKPLACE SAFETY AND HEALTH

OSHA's Oversight of Its Civil Penalty Determination and Violation Abatement Processes Has Limitations



G A O

Accountability * Integrity * Reliability

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Abbreviations

FIRM	Field Inspection Reference Manual
IMIS	Integrated Management Information Systems
OEA	Office of Evaluations and Audit Analysis
OSHA	Occupational Safety and Health Administration

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United States Government Accountability Office
Washington, DC 20548

August 13, 2004

The Honorable Elaine L. Chao
Secretary of Labor

Dear Madame Secretary:

This report presents the findings of our study of the Department of Labor's Occupational Safety and Health Administration's (OSHA) determination of civil penalties and abatement of violations. The objective of the study was to assess the extent of OSHA's oversight of the civil penalty determination and the violation abatement processes. In addition, we developed a statistical model, known as a multivariate analysis, to better understand factors that influenced variation in penalty amounts. On July 7, 2004, we briefed Labor officials on the results of our study. This letter report formally conveys the information we presented at that briefing (see app. I).

OSHA penalties are a critical enforcement strategy meant to deter employers from violating safety and health standards. In fiscal year 2003, OSHA proposed civil penalties that totaled over \$114 million and conducted inspections across approximately 40,000 employers. In determining the penalty amount, OSHA inspectors must apply four factors identified in the Occupation Safety and Health Act of 1970:¹ (1) the gravity of the violation, (2) the size of the business, (3) the employer's history of previous violations, and (4) the good faith of the employer.² OSHA's *Field Inspection Reference Manual* (FIRM) contains the criteria inspectors should use in applying each of these four factors. For example, in assessing gravity, the manual instructs that the inspector consider two elements, severity and probability, which are then to be analyzed on a

¹Under the Occupational Safety and Health Act, OSHA is authorized to issue citations for violations of the act and propose penalties. Appeals are heard by the Occupational Safety and Health Review Commission, an independent federal agency, which has the authority to assess penalties. If a penalty is deemed proper, the commission considers a number of factors to determine the amount of the assessment. Citations and proposals that are not appealed become final decisions of the commission. 29 U.S.C. §§ 658, 659 (2000). Because most citations and proposed penalties are not appealed to the Commission, we refer only to OSHA's enforcement activities in this report.

²29 U.S.C. § 666(j).

scale of high to low. Application of the gravity criteria results in an initial base penalty amount. The other factors, as described in the manual, may then be used to reduce the amount if applicable and can result in up to a 95 percent reduction in the base penalty amount.³ Given this approach for establishing penalty amounts, it is essential that inspectors apply the criteria for the four factors accurately and consistently.

OSHA has delegated authority for overseeing its enforcement and program activities to the 10 regional offices. The regional offices oversee operations of 80 area offices. OSHA requires that regional offices conduct annual audits of area offices' adherence to proper procedures for penalty calculation, penalty collection, and abatement of safety and health hazards found at work sites. OSHA allows regional offices to conduct these audits in several ways, including reviewing area offices' statistical reports or inspection case files and by administering questionnaires to the area offices. In addition, every 2 years regional offices are required to conduct on-site audits at all area offices. Each area office is responsible for responding to recommendations for improvements that arise from these regional audits. Moreover, regional offices are responsible for sharing the results of their audits with OSHA's national office.

To assess the extent of OSHA's oversight of the civil penalty determination and violation abatement processes, we (1) reviewed 2002 and 2003 regional audits from the five regions with the most inspections, (2) visited one of these regional offices and one area office within this region to interview officials and review documents and procedures, (3) conducted telephone interviews with the four remaining regional offices and one area office within each of those regions, (4) interviewed OSHA officials to identify relevant policies and procedures, and (5) reviewed relevant policies and procedures. In addition, we explored another possible oversight technique—a quantitative multivariate analysis to better understand factors that influence variation in penalty amounts. We calculated differences in final penalty amounts for serious violations and analyzed what might account for those differences. Using our statistical model, we first estimated how the gravity of the violation and size of the employer, two of the variables used to calculate penalties, affected penalties. We then added other variables to the model, such as industry type and region, to assess if and how other variables not formally used in

³For example, according to the FIRM, good faith of an employer refers, among other things, to the extent to which an employer has implemented a safety and health program.

calculating penalties affected penalty amounts. We based our multivariate analysis on inspection and violation data (fiscal years 1999 to 2002) from OSHA's Integrated Management Information System (IMIS). We assessed the completeness of these data by reviewing OSHA's documentation on how the data were collected and performed electronic tests to look for outliers, missing values, or duplicate records. On the basis of these reviews and tests, we found the data sufficiently reliable for our purposes. We conducted our work between October 2003 and May 2004 in accordance with generally accepted government auditing standards.

In summary, we found that OSHA's oversight for ensuring that penalties are correctly determined and violations are properly abated has limitations. While the national office receives copies of the regions' annual audits, it does not review them or use them to monitor the extent to which penalties are calculated correctly and violations are properly abated. The national office's underutilization of audit results may be problematic because audit results identified significant problems. For example, audits found that some area offices miscalculated penalties and failed to conduct required follow-up inspections to ensure the proper abatement of violations. Even if OSHA were to use the results of annual audits for oversight purposes, the information these audits provide may not always be complete. In fact, four of the five regional offices we reviewed did not conduct audits in full accordance with OSHA procedures during fiscal years 2002 and 2003. For example, one region did not routinely conduct any on-site audits, while two regions failed to include all of their area offices in their audit reviews.

OSHA has recently taken a significant step to improve its oversight efforts by establishing an Office of Evaluations and Audit Analysis (OEA) to focus on ways to better use data from regional audits. The OEA is in the initial planning stages. As the formation of OEA continues, officials may want to consider incorporating the use of multivariate analysis into efforts to better understand the factors that influence variation in civil penalty amounts. Such a statistical model would allow OSHA officials to determine how much of the variation in penalty amounts is due to established factors and how much is due to factors that are not used in penalty calculations. To explore the viability of such an analysis, we calculated how gravity of violation and employer size affected penalty amounts and found that these two factors explained 48 percent of the variation that existed among proposed penalty amounts for serious

violations. Using final penalty amounts, we found that the model explained 36 percent of the variation.⁴ When we expanded this model to include factors beyond those explicitly used in the penalty assessment process, we found that these factors explained some, but far less, of the variation in final penalties than the two factors above. For example, even after we controlled for differences in gravity and employer size, some industries were assessed penalties that averaged \$257 more than others. Overall, this model explained 39 percent of the variation for final penalties. We recognize this model captures only some of the factors that influence penalty amounts and understand that area directors are given discretion in determining final penalties in response to employers' efforts to ensure abatement and improve the safety of their workplaces. Nevertheless, we think that with additional data on factors like employer history and good faith, models like this could provide OSHA with insight into the extent to which penalties are being assessed correctly (including the degree that unexpected variables are affecting penalty amounts).

In a recently published GAO report, we recommended that OSHA create a system to ensure that regions complete audits and that OSHA use audit results to improve the consistency of the complaint process.⁵ Consistent with those recommendations and on the basis of the findings presented here, we are recommending that the Secretary of Labor direct the Assistant Secretary for Occupational Safety and Health to

- ensure that regions complete audits in accordance with OSHA's required audit procedures and
- monitor audit results in their overseeing of the civil penalty determination and violation abatement processes.

In addition, we are recommending that the Secretary of Labor direct the Assistant Secretary for Occupational Safety and Health to

- evaluate the feasibility of using statistical modeling to help OSHA determine if penalties are being assessed correctly and identify if unanticipated factors are influencing penalty amounts.

⁴For our research, final penalty is defined as an assessed penalty in a case that has been closed.

⁵See U.S. General Accounting Office, *OSHA Complaint Response Policies: OSHA Credits Its Complaint System with Conserving Agency Resources, but the System Still Warrants Improvement*, [GAO-04-658](#) (Washington, D.C.: June 18, 2004).

OSHA provided written comments on a draft of the briefing slides (see app. II). We incorporated the agency's comments, including oral comments we received during the briefing, into the briefing slides and this letter as appropriate. In general officials agreed with our first two recommendations regarding the better use of audit results, although they questioned how we arrived at these recommendations. In particular they were uncertain about which regions we reviewed and the magnitude of the problems we identified. As documented in both the slides and this letter, we based our findings on the key results of OSHA regional audits conducted in the five regions with the most inspections during fiscal years 2002 and 2003. We reported on problems that appeared across regions and years but did not report on the magnitude of the problems because the audits did not always identify error rates or the total number of case files reviewed. We commend OSHA for recognizing that more useful information can be gathered from the audit reports.

Concerning the third recommendation, OSHA officials stated during the briefing that the multivariate model could be useful but raised some concerns in their oral and written comments. First, OSHA officials questioned the validity of the model, given the fact that two of the factors used in calculating penalty amounts could not be included. Specifically, OSHA believed that these two missing factors would explain additional variation among penalties and would decrease the amount of variation we found attributable to nonstatutory variables. Though we recognized that IMIS could not provide us with data on all four factors, we pursued developing the model to test its potential value as an oversight tool for OSHA. Based on the test, we believe that with additional data, such as the two missing factors of history and good faith, this type of modeling could provide OSHA with insight into the extent to which penalties are being assessed correctly and the degree to which unexpected variables are affecting penalty amounts.

OSHA was also concerned that the results of our model on final penalty amounts did not appropriately capture the adjustments made by area directors to proposed penalty amounts when employers abate their violations and improve the safety of their workplaces. Currently, OSHA's database does not capture area directors' negotiations of final penalties. If OSHA chooses to explore the feasibility of using statistical modeling, it may wish to consider the value of developing such a variable. On a related issue, OSHA suggested that in this letter we provide the results of the model for proposed penalty amounts, in addition to final penalty amounts, to get a better sense of how consistently inspectors applied the penalty factors. We added these results, which also showed a sizeable amount of

unexplained variation in initial penalty amounts. Finally, OSHA was concerned about the resources required to collect additional information to make the model more robust. However, it is unclear at this time how large the additional cost of this task would be, since the good faith and history data are currently collected by the area offices and stored in the same local data system from which other IMIS data are retrieved. As requested by OSHA, we will be sharing our statistical model and accompanying database with the agency so that it may further explore the model's oversight potential.

We are sending copies of this report to the respective congressional committees and to other interested parties and will make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you have any questions about this report, please contact me on (202) 512-9889 or Brett Fallavollita on (202) 512-8507. Mikki Holmes and Linda Stokes, as well as Catherine Hurley, Julian Klazkin, Luanne Moy, and Douglas Sloane, made significant contributions to this report.

Sincerely yours,



Robert E. Robertson
Director, Education, Workforce,
and Income Security Issues

Appendix I: Briefing Presented on July 7, 2004



WORKPLACE SAFETY AND HEALTH

OSHA's Oversight of Its Civil Penalty
Determination and Violation Abatement Processes
Has Limitations

Briefing of Officials at the
Occupational Safety and Health Administration,
U.S. Department of Labor, July 7, 2004

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 - Introduction
 - Scope and methodology
 - Finding: OSHA's oversight has limitations
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Objective

To assess the extent of OSHA's oversight of the civil penalty determination and violation abatement processes



Introduction

OSHA penalties are a critical enforcement strategy meant to deter employers from violating safety and health standards.

- The average proposed penalty for serious violations (which represent the majority of violations cited) for 1999 through 2002 was **\$1,438** and the average final penalty for serious violations was **\$863**.
- In fiscal year 2003, OSHA proposed civil penalties totaling over \$114 million.



Introduction

OSHA's *Field Inspection Reference Manual* operationalizes the four considerations specified in the law that inspectors should use in determining penalty amounts:

- gravity of the violation—based on severity (rated high, medium, or low) and probability (rated high or low).
- employer size,
- past violation history of the employer, and
- good faith of the employer—based on the extent to which an employer has implemented a health and safety plan.



Introduction

OSHA has delegated authority for overseeing its enforcement and program activities to the 10 regional offices and 80 area offices.

Area office directors responsibilities' include:

- conducting weekly reviews of inspection files,
- reviewing statistical reports on enforcement activities, and
- providing training to inspectors.



Introduction

OSHA requires that regional offices conduct annual audits to ensure that area offices adhere to procedures for penalty determination and violation abatement.

- Annual audits can include:
 - statistical report reviews,
 - inspection file reviews, and
 - questionnaires.

 - On-site audits of all area offices are required every 2 years.
-



Scope and Methodology

To assess the extent of OSHA's oversight of the civil penalty determination and violation abatement processes, we

- (1) reviewed the 2002 and 2003 regional audits in the five regions that conducted the largest number of inspections,
- (2) visited one of those regional offices and one area office within that region,
- (3) conducted telephone interviews with the remaining four regional offices and one area office within each of those regions,
- (4) interviewed officials at the national office, and
- (5) reviewed relevant policies and procedures.

We conducted our work between October 2003 and May 2004 in accordance with generally accepted government auditing standards.



Scope and Methodology

In addition, we developed a statistical model to explore other oversight techniques for identifying factors that influence variation in penalty amounts. The factors used in the model included:

Penalty factors*:

- Gravity of violation (i.e., severity and probability of injury or illness)
- Employer size

*Two factors—employer history and good faith—were excluded from our analysis because OSHA headquarters does not track them.

Other factors:

- Region
- Industry type (e.g., service versus construction)
- Inspection type
- Union or nonunion employer
- Type of resolution (whether violations were informally settled or contested)
- Fiscal year



Finding

OSHA's oversight of the penalty determination and violation abatement processes has limitations.



National office is not using available audit results.

The national office:

- does not currently monitor the results of regional audits.
- may not be aware of problems revealed by some audits.



Audits revealed various problems.

Problems included:

- **Inaccurate classification of gravity in four of five regions in 2002, which recurred in two regions in 2003.** For example, one audit reported that in several cases the gravity did not coincide with the types of injuries or illnesses listed as a result of the violation.
 - **Improper application of penalty reductions in four of five regions in 2002, which recurred in three regions in 2003.** In two cases, while a zero percent good faith was applied to high-gravity serious violations, a 15 percent reduction was applied to all the remaining violations with a penalty amount—something not allowed under OSHA policy.
-

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Other problems audits identified included:

- Improper follow-up inspections of serious, willful, repeat, or imminent danger situations in three of five regions in 2002, which recurred in two regions in 2003. For example, 20 of 42 randomly selected inspection files in one region were found not to be ready for closure although they were closed.
 - Improper documentation and management review of penalty determinations and penalty reductions in each of the five regions for 2002, which recurred in four of the five regions in 2003. For example, some files did not contain adequate notes regarding the substance of informal conferences or information to justify the amount of penalty reduction or changes to the classification.
-



Other problems audits identified included:

- Improper management review of violation abatements in all five regions for 2002, which recurred in four of the five regions in 2003. For example, deficiencies were found in obtaining adequate abatement information and in contacting the employer in a timely manner to obtain verification of abatement, as required by OSHA policy.



Not all regions follow OSHA's required audit procedures.

Even if OSHA were to fully incorporate findings from regional audits into its oversight, the information would still not be complete. Of the five regional offices we reviewed, we found:

- One does not routinely conduct on-site audits or annual audits, but relies on monthly statistical data.
- Two do not conduct annual audits in all of their area offices.
- Three failed to conduct audits on some of the required program areas.



OSHA has taken some steps to improve its oversight efforts.

- OSHA recently established an Office of Evaluations and Audit Analysis (OEA) to focus on ways to better use data from regional audits.
- Although OEA is just in the initial planning stages, OSHA may want to consider using multivariate analysis to assess the consistency of civil penalty determinations.



With a statistical model, OSHA officials would be able to identify factors that affected penalty amounts.

Officials would be able to identify how much variation is due to:

- established factors, such as gravity of violation and employer size, and

- other factors not used in penalty calculations.



Our model, using only gravity and employer size, explained 36 percent of variation in final penalty amounts.*

The average penalty for the:

- highest-gravity violation was \$1,395 more than the average penalty for the lowest-gravity violation.
- largest employer group was \$1,090 more than the average penalty for the smallest employer group.

* When we ran the model for proposed penalties, the model explained 48 percent of variation in proposed penalty amounts.



The model that included additional factors explained 39 percent of the variation for final penalties.

Even after we controlled for gravity level and employer size, penalty variation existed.

Largest variation by factor*:

- \$257 depending on industry type
- \$158 depending on region
- \$123 depending on whether programmed or unprogrammed inspection
- \$79 depending on whether union or nonunion employer
- \$31 depending on fiscal year.

Violations that had an informal settlement, and were not contested, had the lowest penalties.

* These variations could be different if history and good faith were included in the model.



OSHA could improve its oversight by applying this type of model.

With additional data on factors like history and good faith, models like this could provide OSHA with insight into

- the extent to which penalties are being assessed correctly.
- the degree to which unexpected variables are affecting penalty amounts.



Recommendations

Consistent with recommendations from a recent GAO report (GAO-04-658) and on the basis of findings presented here, we are recommending that the Secretary of Labor direct the Assistant Secretary for Occupational Safety and Health to:

- ensure that regions complete audits in accordance with OSHA's required audit procedures, and
- monitor audit results in their overseeing of the civil penalty determination and violation abatement processes.

In addition, we are recommending that the Secretary of Labor direct the Assistant Secretary for Occupational Safety and Health to:

- evaluate the feasibility of using statistical modeling to better understand the variation in civil penalty amounts.
-

Appendix II: Comments from the Department of Labor

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210



JUL 28 2004

Mr. Robert E. Robertson
Director, Education, Workforce and
Income Security Issues
United States Government Accountability Office
441 G Street NW, Room 5930
Washington, DC 20548

Dear Mr. Robertson:

The Occupational Safety and Health Administration (OSHA) has received your summary of the oral comments in response to the briefing provided by Government Accountability Office (GAO) officials on July 7, 2004. I thank you for the opportunity to respond on behalf of the Agency.

The Agency recognizes the extensive work conducted by GAO on this study and the utility of some of the information presented to OSHA. However, the Agency would like to point out some of the shortcomings of your methodology and findings.

As you note in your presentation, the Agency does see the merits of the regions completing audits in accordance with Agency audit procedures, and the need to monitor audit results in the regional offices. However, OSHA is unclear about how GAO arrived at these recommendations. For instance, there is some discussion of visiting five regional offices to review case files, but it is unclear to the Agency which regions were visited; further, the magnitude of problems discovered in each of the regional offices is difficult to assess without knowing the error rate or the total number of case files reviewed. Given that OSHA examines the penalty determination and violation abatement processes both locally and regionally, GAO's finding that OSHA provides limited oversight of these processes is perhaps far too generalized a statement. Nevertheless, the Agency recognizes that more useful information could be gathered from the audit reports and OSHA has started to look at how best to do that.

OSHA's main policy goal has always been to reduce injuries and illnesses through the elimination of workplace hazards, not to assess or collect penalties. To meet the demands of the possible application of over 3,000 standards to more than seven million workplaces covered by the Occupational Safety and Health Act, the Agency must employ its enforcement resources with maximum efficiency. While OSHA has delegated its authority for overseeing its enforcement and program activities—including penalty assessment—to the regional offices, this is not a complete delegation of authority.

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The Agency needs some flexibility in assessing final penalties to reward the willingness of some employers to abate a hazard quickly and produce a safer workplace. Using a statistical model to measure the variance in final penalties does not adequately recognize the policy reasons for the variance. Moreover, OSHA would point out that GAO's statistical model, even with the addition of data on history and good faith, would not determine whether penalties are being assessed correctly, as suggested in the study summary; instead, the model simply identifies factors associated with variance in penalty amounts.

As you have noted, the Agency applies four factors to the determination of appropriate penalty amounts before penalties are assessed. The absence of two of those four factors from your multivariate regression model raises strong concerns about the validity of the results produced by your model, and, therefore—due to the prominence of your statistical model in the study—the validity of your study. The Agency questions whether you would find the same variations in penalty amounts if your statistical model contained good faith and history, which lead to a prescriptive variance in penalties due to the Agency's policy goal of producing a safer workplace. (Furthermore, focusing the statistical model on measuring the variance in final penalties instead of initial proposed penalties resulted in less explained variance.) Because GAO did not control for all of the penalty-calculation factors along with the other non-statutory factors identified for its statistical model, OSHA is unsure how GAO can conclude that non-statutory factors had "significant effects" on final penalty amounts. Moreover, it is difficult to assess how significant the variations are without the benefit of reviewing the entire distribution of proposed penalty amounts and final penalty amounts; however, GAO seems to recognize that OSHA cannot eliminate all variations due to what can be termed non-statutory factors.

For the reasons stated above, OSHA has requested a copy of the database used for this study for further examination. The Agency would appreciate a mention of this request in the report to accompany the presentation slides and requests that this letter be printed in full in GAO's final report.

Thank you for the opportunity to comment on your study. If you have any further questions, feel free to contact me at 693-2400.

Sincerely,



John L. Henshaw

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