

United States General Accounting Office Washington, D.C. 20548

Resources, Community, and Economic Development Division

B-246562

June 29, 1992



The Honorable T. Cass Ballenger House of Representatives

Dear Mr. Ballenger:

Along with other requesters, you asked us to examine the Caldwell Systems, Inc., (CSI) facility--a hazardous waste treatment, storage, and incineration facility in Caldwell County, North Carolina -- because of concerns that it operated unsafely for years while being regulated by the state of North Carolina, the Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA). On October 16, 1991, we provided you with a report that focused on the major differences between regulations governing hazardous waste incinerators that have received permits under the Resource Conservation and Recovery Act (RCRA), as amended, and those like CSI that are classified as being under interim status and are allowed to operate for some limited period of time without permits as long as they follow certain minimal requirements. The report also described air emission standards in effect for incinerators during and after the years that CSI was in operation.1

On April 10, 1992, in accordance with GAO's policy, we provided you with a copy of our draft report relating to your concerns about CSI's operations, at the time the report was in the final review and processing stages within GAO. On April 30, 1992, you sent us a letter listing concerns you had about our evaluation of CSI's operations.

Your letter raised a number of issues about the information in our report on the operation of CSI, its regulation, and the potential environmental and health effects resulting from its operation. Although we believe that our report

GAO/RCED-92-216R, Response to Incinerator Report

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<sup>&</sup>lt;sup>1</sup>Hazardous Waste: Incinerator Operating Regulations and Related Air Emission Standards (GAO/RCED-92-21, Oct. 16, 1991).

adequately addresses how the federal and state agencies fulfilled their roles in regulating the facility, we have made some changes to ensure that the information in the report will not be misinterpreted. We also believe that the report lays out the various efforts under way in studies aimed at addressing the health and environmental risks and that our work during the review was consistent with our agreement with you and your staff on the review's objectives.

In this regard, in a June 12, 1991, meeting with you and your staff, we explained that it would not be productive for us to repeat the many investigations and studies that were in progress or had previously been completed concerning local citizens' and CSI workers' allegations about CSI's operations. Also, GAO has historically not reviewed issues that are the subject of ongoing lawsuits; in this case, former CSI workers had brought suit. At the time of our meeting, you and your staff indicated that the issues we planned to address and the audit approach we would use were acceptable. We agreed to focus our work on (1) federal and state environmental and worker safety oversight of CSI's operations and how these were affected by CSI's operating under interim status regulations and by issues of coordination between EPA and OSHA and (2) EPA's and the U.S. Navy's policies and procedures for sending Superfund waste and OTTO fuel, respectively, to the CSI incinerator.

As our report explicitly states, there were problems with the regulatory system at the time CSI was in operation. is clear that EPA and the state of North Carolina could have better carried out their regulatory responsibilities. Also, as we stated in our October 1991 report to you, RCRA allowed hazardous waste facilities that were in existence in November 1980 to operate under interim status. interim status facility, CSI was subject to less comprehensive RCRA regulations than those that governed incinerators with permits. It was also subject to less comprehensive air emission standards than would apply today. Even under the more comprehensive regulations, however, regulatory agencies share responsibility with owner/operators and workers for ensuring that facilities such as CSI operate in a safe and environmentally clean manner.

We believe that the report fully addresses the issues stated above. As noted earlier, during the final review and processing of our report, we made changes to update and clarify information where appropriate. These changes are also consistent with some of the comments you made in your letter. More detailed responses to your comments are enclosed.

We appreciate the opportunity to have worked with you and your staff on this assignment. We hope that our responses address your concerns. If you have any questions, please call me on (202) 275-6111 or Jerry Killian on (202) 512-6501.

Sincerely yours,

Richard L. Hembra

Director, Environmental Protection

Issues

Enclosures

# GAO'S RESPONSE TO GENERAL COMMENTS ON DRAFT REPORT ON CSI

The concerns and questions you expressed in your letter on information provided in our draft report are listed below, followed by our responses.

# Comment

I am quite concerned about the tone and content of this report in that it is little more than a compendium of actions taken by regulatory officials. It does not at all take into account the external forces that prompted regulatory action; one would assume from the report that all regulatory actions resulted from the natural progression of the regulatory system, but nothing could be further from the truth. Because of a number of errors of omission, an impartial observer would not be able to get a true picture of the sequence of events.

### GAO's Response

We believe that the tone and content of our report accurately reflect the events surrounding the operation and closure of the CSI facility. Although EPA and the state of North Carolina followed regulations for inspections, they clearly did not effectively enforce continuous compliance by the facility. Also, as we concluded in our October 1991 report, it is clear that incinerators that are following the permit regulations are in a much better position to prevent and correct undesirable environmental impacts than incinerators subject to interim status regulations.

We believe that our report comprehensively covers the external forces that prompted regulatory action. For example, we obtained information through interviews and documents from responsible federal and state regulatory officials, Caldwell County officials, local citizens, former CSI workers, and a local physician who is treating former CSI workers, among others. The report contains a number of references to state officials reacting to external forces in taking action at the facility. For example, our report points out that air quality inspections were made 10 times more frequently than the standard, largely because of external pressures, including persistent reports of problems from local citizens. We also indicated that the state regulatory agency conducted at least 33 surveillances and investigations during CSI's operation because of local citizens' complaints of excessive smoke and/or odors

emanating from the CSI facility. Furthermore, OSHA's inspection program for industries like CSI is triggered only when the agency receives worker complaints.

## Comment

I fear that these errors of omission occurred because GAO investigators relied solely on information from the regulators themselves and, as best as I can determine, made only brief and perfunctory contact with sources who would offer conflicting information. Furthermore, my staff has spoken with federal officials that have been intimately involved in the Caldwell Systems Inc. case who say that neither they nor their agency were ever contacted during the preparation of this report. These officials indicated that the section addressing their agency's involvement is incomplete and, when viewed in context, misleading.

# GAO's Response

We acknowledge that much of the information we obtained during our review came from federal and state regulatory agencies, because regulatory agencies are generally required to maintain substantial documentation on their activities. We talked to many officials and citizens during our review. Because these contacts were not clearly indicated in our draft report, we have modified the report's "Objectives, Scope, and Methodology" section to reflect these interviews. For example, we interviewed and obtained documents from county officials, citizens, a local physician, and former CSI employees. We also obtained studies and spoke with officials at several health and investigation agencies on issues pertinent to the CSI facility.

After further discussion on this point with your staff, we were only able to obtain the names of two federal officials from the Agency for Toxic Substances and Disease Registry (ATSDR) who were not contacted during our initial review. While we did not contact the specific officials identified by your staff, we did contact an ATSDR official to learn the status of current work and to obtain a copy of the agency's 1990 health study on CSI employees. However, since the 1990 report focused on employees' and local citizens' allegations about health-related problems, we considered it to be outside the scope of our review. As you know, we did include a summary of the ATSDR health study in our report, and we believe that our report accurately summarizes the study. We have confirmed this with ATSDR officials. We have also updated our

report to show that ATSDR has completed field work on another study, but as of May 1992, the final results were not available to us.

### Comment

Additionally, the report fails to quantify the effectiveness of regulations cited as being used to regulate Caldwell Systems, Inc. In my earliest discussions with your staff, I expressed strongly that the other requesters and I wanted the final report to be a document that would identify the deficiencies in the regulatory process, both in law and application, that led to the CSI tragedy.

## GAO's Response

Our current report and our October 1991 report discuss in significant detail that environmental and worker safety protection was limited at CSI because CSI was operating under (1) interim status hazardous waste regulations that were less stringent than those for permitted incinerators and (2) less comprehensive coverage of airborne pollutants than exists today. Our current report also concludes that EPA's and North Carolina's enforcement practices were not effective in keeping CSI in compliance with regulations. For example, we discuss in some detail that EPA and North Carolina assessed lower penalties than allowed by the regulations, thereby apparently doing little to discourage CSI's frequent noncompliance with environmental and worker safety In addition, we point out that the limitations of regulations. traditional inspection practices can allow violations to go undetected unless physical evidence of the violation is visible. Finally, we identify and discuss significant changes that have occurred nationally since CSI closed that should better protect human health and the environment and improve worker safety at facilities like CSI.

#### Comment

My latest information from federal officials is that 31 former employees of CSI have documented neurological problems that can be traced directly to their employment at the facility. Despite this and other clear documentation that regulation did not achieve its desired results, the draft report concludes, in part, "State and federal officials generally adhered to federal laws and regulations in their inspections of CSI."

# GAO's Response

As we point out in our report, some of the health studies on CSI report results that are inconsistent and therefore subject to debate. For example, while one federal study concluded that CSI operations posed a significant health threat to former employees and a potential health threat to area residents, another federal study found that the majority of symptoms and signs noted in former CSI employees' medical histories and neurologic examinations were either nonspecific or probably related to identifiable syndromes or known causes other than work-related toxic exposures.

As stated earlier and in our report, while inspections were generally adequate, enforcement may not have been as effective as it should have been. As noted above, we also believe that environmental and worker safety protection at CSI may have been limited because CSI was operating under less stringent interim status and air pollution regulations in effect at the time.

### Comment

That so many workers were severely injured indicates severe shortcomings in the regulatory process, but this report does little to define what they are. Instead, it merely cites existing regulations to justify the inspection schedule used throughout CSI's years of operation by both environmental and worker safety regulators. As a result, the report's usefulness as a tool to evaluate current environmental regulations—in hopes of strengthening existing law to prevent a CSI situation from occurring again—is minimal, at best.

# GAO's Response

We do not agree that our report does little to define the shortcomings in the regulatory process. Our report discusses the limitations of the interim status and air pollution regulations (also discussed in our October 1991 report), the potential impact of weak penalties, the effect of OSHA's designation of incinerators as low-hazard facilities, and the limitations of traditional inspections. Furthermore, our report states that significant changes have occurred nationally that should better protect human health and the environment and improve worker safety at facilities like CSI. These changes include (1) the termination of interim status for all but four hazardous waste incinerators that have been in existence since November 1980; (2) the Clean Air Act Amendments

of 1990, which provide for comprehensive coverage of airborne pollutants at incinerators; (3) OSHA's more stringent penalty schedule for violations; and (4) the Memorandum of Understanding entered into by EPA and OSHA to better coordinate inspection efforts.

## Comment

To that end, the value of this report could be greatly enhanced if it drew more specific conclusions, incorporating the input of sources other than the regulators themselves, and directly answered several questions, among them:

Did EPA perform its oversight responsibilities adequately and with due diligence?

# GAO's Response

As we have already noted, our report points out that EPA generally provided adequate inspections but that penalties could have been used more effectively to help ensure sustained compliance with environmental laws. The issue of the length of time EPA takes to approve RCRA permits represents a question of judgment. Although EPA could have exercised its prerogative to terminate CSI's interim status—as it could have done for many other incinerators around the country that were on interim status for long periods of time—EPA chose to balance meeting the need for waste disposal capacity with maintaining an aggressive posture towards regulatory compliance. In the case of CSI, the state permitting agency said the facility was making reasonable progress towards a permit.

## Comment

Did these documented worker injuries occur because a) federal and/or state worker safety regulations were inadequate; b) North Carolina's OSHA program did not properly monitor workplace conditions; or c) oversight of North Carolina's OSHA program by the U.S. Department of Labor was inadequate?

## GAO's Response

Although this question goes beyond the scope and objectives of our review, our report describes the limitations of the inspection programs in place at CSI. Specifically, with respect to OSHA, we point out that the North Carolina OSHA office's practice of not

routinely inspecting facilities like CSI allowed CSI to operate for over 10 years without being inspected for worker hazards. In this regard, any program in which inspections are triggered only by complaints has its limitations.

#### Comment

Even though environmental regulators say they regularly and diligently monitored Caldwell Systems Inc., severe contamination of the site has been documented by the EPA. Further, federal officials have documented respiratory problems among residents near the facility caused by emissions resulting from improper or incomplete incineration. Could the regulatory agencies involved have prevented this occurrence by approaching regulation of this facility differently, or were the regulations themselves inadequate?

# GAO's Response

As noted earlier, it was not within the scope of our work to answer the question of whether the regulatory agencies could have prevented respiratory problems among residents. However, our report clearly shows that a range of studies addressed the health problems; some of these studies' results are inconclusive and inconsistent and are therefore subject to debate. Furthermore, as of May 1992, the results of the most recent ATSDR study were not available to us.

On the question of whether the regulations were inadequate, our report discusses in some detail the limitations of RCRA, air pollution, and OSHA regulations in effect during CSI's operation. Because CSI was under interim status regulations, the regulators were limited in what they could require from CSI. For example, permitted incinerators are required to install continuous emissions monitors in smoke stacks to measure smoke and other pollutants, as well as equipment that automatically cuts off waste to the incinerator when operating conditions do not comply with the requirements of the incinerator's permit. Facilities under interim status such as CSI were not required to install such equipment. Without this equipment, when operating conditions do not comply with regulations, undesirable releases of air pollutants may either not be prevented or may not be quickly minimized. Finally, under OSHA's regulations, a state regulatory agency was not required to and did not inspect CSI for OSHA compliance until an official complaint was filed with the agency, 10 years after CSI began operations.

## Comment

How did the EPA come to misjudge the seriousness of the releases from CSI to be "not environmentally significant," since severe contamination has now been found on the site and it is being evaluated for Superfund cleanup, as recommended by the Agency for Toxic Substances and Disease Registry (ATSDR)?

## GAO's Response

As discussed in our report, "environmentally significant" as used by EPA Region IV is a relative term and was used in late 1986 to determine whether a facility was acceptable to receive Superfund waste. Although EPA's policy did not define "environmentally significant" releases of hazardous waste, EPA Region IV determined that CSI's releases were not environmentally significant compared with releases at other facilities in the region that received wastes from Superfund sites.

While you correctly state that contamination was found at CSI, an important issue is whether and when this contamination posed an environmental and health risk. While our review indicates that contamination was found at and around the CSI facility as early as September 1987, additional sampling investigations were required to determine the severity of the problem. Our report states that between September 1987 and July 1990, EPA conducted four environmental sampling investigations at and around the CSI These investigations revealed hazardous contaminants facility. both on the CSI property and off-site in soil, surface water, and Additionally, samples EPA took from September 1990 to groundwater. April 1991 indicated that soil at the CSI facility was contaminated to 6 feet deep in some areas and that groundwater around the facility and the adjacent landfill contained contamination that exceeded drinking water standards. EPA's August 1991 study concluded, however, that well water was not contaminated above safe drinking water levels and that the site did not pose a current risk to area residents.

In April 1990, EPA ordered CSI and Caldwell County to take corrective action to address the contamination caused by CSI's releases. As of May 1992, EPA had not included the CSI facility on the National Priority List for Superfund cleanup. However, EPA continues to pursue cleanup of the facility through the RCRA corrective action program.

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# Comment

The RCRA permitting process for CSI drug on for more than seven years, and CSI failed a number of trial burns. The report merely comments that this is within reason, considering the regulations that were in effect at the time. However, was public protection compromised by such a lengthy process, and should policymakers have taken action to develop a more workable solution?

# GAO's Response

Our report points out that environmental and worker safety protection was limited at CSI because the facility was operated under less stringent interim status regulations and less restrictive air pollution regulations. As part of the permitting process associated with interim status, lengthy negotiations between CSI and the regulatory agency were allowed.

As stated earlier, although EPA could have exercised its prerogative to terminate CSI's and other incinerators' interim status, EPA chose to balance meeting the need for waste disposal capacity with maintaining an aggressive posture toward regulatory compliance.

# GAO'S RESPONSE TO SPECIFIC COMMENTS ON DRAFT REPORT ON CSI

The specific comments you made in the enclosure to your letter are listed below, followed by our responses.

## Comment

A. Page 2, paragraph 2 states the conclusion that "State and federal officials generally adhered to federal laws and regulations in their inspections of CSI." Although this statement may be technically correct, it strongly suggests a no-fault scenario. The less-than-diligent history of fines or strong corrective actions--many of which are outlined in the report--does not support this implied conclusion.

# GAO's Response

To ensure that readers of our final report do not misinterpret our findings, we have more clearly linked, in the "Results in Brief" and "Conclusions" sections of our report, the strengths and weaknesses of the regulatory process.

#### Comment

B. Page 4, paragraph 1 states that Caldwell Systems, Inc. is located in Lenoir, North Carolina. CSI is actually located in Hudson, N.C.

# GAO's Response

Although you are correct about CSI's actual location, CSI's mailing address is in Lenoir, North Carolina, and existing studies and documentation cite CSI's location as Lenoir. However, to be technically correct, we have changed the reference to CSI's location in the report from Lenoir to Hudson, North Carolina.

# Comment

C. Page 4, paragraph 1 reports that "Incinerator ash and wastes that were not incinerated were usually sent to approved hazardous waste landfills for disposal." The factualism of this statement cannot be verified in light of contentions to the contrary made by former employees.

## GAO's Response

While there have been allegations that not all of the incinerator ash and wastes were sent to approved hazardous waste landfills for disposal, these allegations have not been substantiated to date. Without such substantiation, we continue to believe the statement is accurate. We have attributed this statement to EPA.

## Comment

D. Page 7, paragraph 2 reads "OSHA found that the state was untimely in inspecting the facility after receiving complaints and incorrectly classified serious violations as other than serious. However, the state did not accept OSHA's assessment of the violations and did not take any further enforcement action against CSI." This certainly raises an important question: Can state-run OSHA programs simply ignore federal OSHA, as was done in this situation?

# GAO's Response

While our report acknowledges that the state did little and that OSHA could have done more at the federal level, the report also points out the reasons the agencies took those actions. Specifically, our report states that "OSHA did not pursue the enforcement issue with the state or CSI because CSI was closed and the statute of limitations for these violations had expired."

## Comment

E. Page 8, paragraph 3 says that North Carolina fined CSI only 13% of potential penalties, but no comparison is given to other cases. Without comparison, it is impossible to conclude whether or not these penalties were typical. There is also some question as to whether these fines have ever been paid. It is important to note that the first substantial penalty came only after Congressman Ballenger contacted the Secretary of the North Carolina Department of Environment, Health, and Natural Resources to ask for additional review of actions taken by field personnel. By error of omission, not including or considering these facts could lead to an erroneous conclusion about the effectiveness of the regulatory process.

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## GAO's Response

Your two points are valid: The report does not compare CSI with other facilities and it does not mention whether fines were ever paid. With regard to the second issue, during final review and processing, we added to the report the information that CSI paid the first fine of \$10,914 and that it has contested the two remaining fines totaling \$85,000. North Carolina is pursuing litigation to collect these fines. With regard to the comparison of CSI's penalties with those of other facilities, we do not believe that a comparative analysis would have been relevant because CSI was assessed only three penalties, two of which were issued just before CSI closed its operation. We do not believe that assessing only these three penalties deterred CSI; more penalties should have been assessed. As we have previously reported, adequate penalties are an important deterrent against future violations. In addition, while the report states that the first substantial penalty (\$10,914) against CSI was assessed in September 1985, we found no documentation to confirm or deny your statement that before September 1985 you contacted the Secretary of the North Carolina Department of Environment, Health, and Natural Resources to ask for additional review of actions taken by field personnel.

# Comment

F. On the same topic, the 2nd paragraph on page 9 stresses EPA's belief that adequate penalties are an important deterrence against future violations. Does EPA consider 13% to be adequate? If not, should EPA have used its oversight authority to mandate more stringent penalties when it learned that North Carolina only assessed 13% of the potential penalties, and in fact did not penalize CSI for several repeat violations? Did these repeat violations demonstrate a pattern of noncompliance that should have been recognized by regulators and handled accordingly?

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<sup>&</sup>lt;sup>1</sup>Environmental Enforcement: Penalties May Not Recover Economic Benefits Gained by Violators (GAO/RCED-91-166, June 17, 1991), Air Pollution: Improvements Needed in Detecting and Preventing Violation (GAO/RCED-90-155, Sept. 27, 1990), and Hazardous Waste: Many Enforcement Actions Do Not Meet EPA Standards (GAO/RCED-99-140, June 8, 1988).

# GAO's Response

We developed the 13-percent figure during our review. We found no information in EPA's files during our review that indicated that EPA had calculated a similar percentage. In reviewing a draft of the report, EPA did not comment on our 13-percent figure. Finally, our report states that EPA could have done more with respect to penalties to bring CSI into sustained compliance with regulations, a point we have made in previous reports.

## Comment

G. In the discussions of both OSHA and air quality inspections, the important issue of announced vs. unannounced inspections is never considered.

# GAO's Response

It is North Carolina's policy to conduct unannounced inspections—as OSHA did. However, documentation available on air quality inspections could not confirm that North Carolina made unannounced inspections. More importantly, as the report indicates, regardless of whether the inspections were announced or unannounced, the inspectors found significant violations. Furthermore, while corrective actions were being taken, subsequent inspections continued to identify violations.

## Comment

H. Page 13, paragraph 1 says, regarding potential air emission violations, that "Because qualified air quality inspectors were not in the area during most of these incidents to measure opacity, North Carolina could not confirm these incidents as violations." Since the state Department of Environmental Management had previously noted violations of this nature, should the state have been more diligent in monitoring the facility to curtail further violations?

## GAO's Response

Our documentation indicates that state air quality inspections and surveillance at CSI, which was classified as a minor source of air pollution, were more frequent than for other similar facilities. While a state report indicates that most minor sources of pollution were inspected once every 2 years, CSI was inspected every 6 to 8 months. In addition, the state's air quality staff

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routinely conducted surveillance of the facility anytime a staff member was in the area. Surveillance activity occurred 2 to 3 times a week during periods when citizen complaints were being received; during other times, the facility was observed 1 to 2 times per month. However, as our report notes, detecting violations that occur when inspectors are not on-site is difficult unless physical evidence of the violation, such as the residue from a spill or illegal dumping, is visible or the incident is recorded in the facility's operating logs.

Had CSI been operating under permit regulations, many of the air emission violations could have been prevented. As discussed in the report, a permitted incinerator must have continuous monitoring equipment that automatically cuts off waste to the incinerator when operating conditions do not comply with the requirements of its permit.

## Comment

I. Page 16, paragraph 1 assigns a percentage to the amount of waste CSI handled from the U.S. Navy and the EPA compared to its total waste stream. This percentage should be verified and the source noted; anecdotal reports have suggested that the percentage was considerably higher.

# GAO's Response

While we agree that some reports suggested a higher percentage of waste, we chose to rely on EPA's information. During the final review and processing of the report, we found that EPA is currently recalculating the total quantities sent by each customer to CSI. We have added attribution in the report for the information on the percentage of Navy waste being handled by CSI. The report does not discuss the percentage of EPA waste handled at the facility.

# Comment

J. Page 17, paragraph 3 (continued on page 18) states that the EPA Region IV RCRA Compliance Chief did not consider releases from CSI to be environmentally significant. This paragraph goes on to say that the Agency for Toxic Substances and Disease Registry later asked that the site be evaluated for Superfund cleanup. There is a huge discrepancy between the evaluation of the two agencies, and it is never addressed in the report. Why was one agency under the impression that the releases were not environmentally significant, while another

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agency considered the contamination to be serious enough to consider Superfund action?

# GAO's Response

We addressed this question on page 10 in Enclosure I.

# Comment

K. Page 17, paragraph 3 further states that the "public concern has caused EPA to devote increased attention to facility cleanup since it closed." In fact, EPA took little or no substantive action until Congressman Ballenger spoke directly with EPA Administrator William Reilly in December, 1989.

# GAO's Response

During the final review and processing of our report and on the basis of documentation in our files, we have clarified the statement to indicate that the increased attention of EPA was in response to public concern and pressure by an elected official.

## Comment

L. Page 29, paragraph 3. It is important to note that NIOSH may be reconsidering its findings in light of new information that was not previously considered.

# GAO's Response

On May 11, 1992, a NIOSH official told us that NIOSH is not reconsidering the study findings discussed in our report. The NIOSH official suggested, and we have included, a sentence in the report stating that a study specifically designed to decide whether the reported health conditions are related to exposures at CSI (and related companies) was determined not to be feasible by NIOSH.

# Comment

M. Page 30, paragraph 3 states that "In May 1990, at EPA's request, the Agency for Toxic Substances and Disease Registry...evaluated the potential public health threat posed by CSI." The request to ATSDR was actually made by Congressman Ballenger. (Items E, K, and L are not meant to assign credit; rather, they demonstrate that the regulatory process did not work by natural progression.)

# GAO's Response

An ATSDR official acknowledged the receipt of your request for an evaluation of the potential health threat posed by CSI. However, the ATSDR official reaffirmed ATSDR's previous position that ATSDR initiated the evaluation because of an earlier request by EPA. For this reason, we have not revised the language in our report.

## Comment

N. Page 31, paragraph 1 implies that ATSDR studies are complete. In reality, ATSDR still has significant studies in process.

# GAO's Response

During the final review and processing of our report, we found additional information from an ATSDR official that enabled us to update the report to reflect the status of another ATSDR study.

## Comment

O. Page 31, paragraph 3, line 9. The word resident should read residents.

## GAO's Response

This typographical error was corrected during the final processing of the report.

## Comment

P. Pages 35-36. The discussion of fines levied against CSI again fails to mention whether the fines have been collected, whether the state actively pursued collection, and what actions the state took to collect the fines in this and other cases.

# GAO's Response

We addressed this question in our response to question "E" on page 14.

# Comment

Q. Page 45, paragraph 2, line 3 "can received" is grammatically incorrect."

### GAO's Response

This typographical error was corrected during the final processing of the report.

# Comment

R. Page 48, paragraph 2, line 5 "each of violations" needs clarification.

# GAO's Response

This typographical error was corrected during the final processing of the report.

## Comment

S. Page 53, paragraph 3 (continued on page 54) reads "In February 1986, after CSI's fourth notice of deficiency, EPA Region IV recommended that North Carolina consider terminating CSI's interim status, as provided for by RCRA regulations, should CSI submit another inadequate trial burn plan in its application." On February 10, 1986, James H. Scarborough, Chief of EPA Region IV's Residuals Management Branch, sent a letter to the N.C. Solid and Hazardous Waste Management Branch that read, in part, "Since this is Caldwell's fifth NOD, a substantial penalty and an order (with detailed compliance schedule) are recommended. If the resubmitted plan is at all inadequate, we recommend that you consider immediately terminating Caldwell's interim status." Is the GAO draft report correct in referring to the fourth NOD, or was it the fifth? (The second paragraph on page 54 refers to a fifth NOD as being issued in July, 1986; was it the fifth or sixth?) Although CSI's RCRA permit application continued to show deficiencies after that time, why did the state not take further action and why did the EPA not insist on it?

# GAO's Response

The paragraph as stated in the report is correct. Our review of the CSI case file indicates that at the time of Mr. Scarborough's February 10, 1986, letter, North Carolina had issued four notices of deficiencies (NODs). The fifth NOD mentioned in the letter was actually a draft NOD that North Carolina had submitted to EPA Region IV for comment (prompting Mr. Scarborough's letter). The fifth NOD was not completed and issued to CSI until

July 1986. Mr. Scarborough's letter also recommended that North Carolina consider terminating CSI's interim status if the facility's trial burn plan was found deficient in any way. Although North Carolina subsequently cited CSI for permit application deficiencies, none of these deficiencies involved the trial burn plan.

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