Board of Contract Appeals
U. S. Department of Housing and Urban Development
Washington, D.C. 20410-0001

REC'D

In the Matter of:	:	
BIO-TECH RESEARCH LABORATORIES, INC.	:	HUDBCA No. 94-C-154-D21
and	:	Docket No. 94-0071-DB(S)
JACOB SAVAGE,	:	
	:	HUDBCA No. 94-C-163-D23
Respondents	:	Docket No. 94-0075-DB(S)

Sheryl Snodgrass Caffey, Esq.
200 West Court Square, Suite 55
Hunstville, AL 35801

For the Respondents

Dane M. Narode, Esq.
Office of General Counsel
U.S. Department of Housing
and Urban Development
451 Seventh Street, SW, Room 10251
Washington, D.C. 20410

For the Government

DETERMINATION
by Administrative Judge Jean S. Cooper

September 28, 1995

Statement of the Case

By separate letters dated June 10, 1994, Respondents Bio-Tech Research Laboratories, Inc. ("Bio-Tech") and Jacob Savage were notified that each was immediately suspended from further participation in primary and lower-tier covered transactions at the U.S. Department of Housing and Urban Development ("HUD") and throughout the Executive Branch of the Federal Government, and from participation in procurement contracts with HUD, pending the outcome of an investigation of their business dealings. The suspensions of Bio-Tech and Savage were based on alleged irregularities concerning Bio-Tech's participation as a contractor performing lead-based paint testing for public housing authorities. Savage is the President of Bio-Tech. Both letters were signed by Joseph Shuldiner, HUD Assistant Secretary for Public and Indian Housing.

To support the suspensions, HUD charges that Bio-Tech altered its Alabama radioactive material license in order to obtain contracts with the Stevenson Alabama Housing Authority and the Housing Authority of Rome, Georgia. HUD also charges that Bio-Tech's testing for the presence of lead-based paint at the Childersburg Housing Authority and the Stevenson Alabama Housing Authority was incomplete and inadequate. HUD further charges that Bio-Tech obtained HUD-funded payments as a result of false statements concerning the nature and extent of the lead-based paint tests that it performed, and the results of those tests. Jacob Savage is charged with knowing or having reason to know of such practices of Bio-Tech. Bio-Tech's practices are currently under investigation by HUD. HUD avers that these alleged irregularities not only constitute cause for suspension, but that immediate suspension of both Respondents is necessary to provide protection to the public and HUD during the course of the investigation.

Bio-Tech made a timely request for a hearing on its suspension, and its case was docketed for a "fast-track" hearing and bench decision to be held within 30 days of docketing of Bio-Tech's case. Subsequently, a request for a hearing on behalf of Jacob Savage was also made, but it was not timely. However, Government counsel agreed that it would participate in a hearing for Savage, so long as it was heard at the same time as the Bio-Tech case, and was consolidated with it.

These cases were consolidated and heard together. The preliminary agreement to have these cases decided by a bench decision pursuant to 24 C.F.R. §26.24(d) was withdrawn by the presiding administrative judge when it became clear that the cases would take longer to present than originally scheduled, and because Respondents wanted a decision to be based on an accurate and complete record of the proceedings. This decision is based on the record in these cases, considered as a whole.

FINDINGS OF FACT

1) Bio-Tech is an Alabama corporation, incorporated on September 9, 1986. Jacob Savage is the President of Bio-Tech. Bio-Tech was formed by Savage and a Board of Directors to provide expertise on toxic waste testing. It currently has offices in Hunstville, Alabama and New Orleans, Louisiana. Savage has a doctoral degree in microbiology, with a specialty in composting. (Exh. R-19; Tr. 488-489, 803, 89-900.)

2) Bio-Tech started testing for lead-based paint in 1986 or 1987, after Savage attended a seminar, at HUD's invitation, on the subject. Savage started a literature search on the subject of lead-based paint, and attended a training course in 1988 at Georgia Technical University ("Georgia Tech"), where he learned about various methods for testing of lead-based paint. This was

the only course Savage has taken on the subject of lead-based paint testing. Nonetheless, Savage considers himself an expert on the subject. He sends Bio-Tech technicians to Georgia Tech for training, and they bring back the course manuals for use by all Bio-Tech personnel. Georgia Tech issues a certificate to those who take its course. This apparently is considered sufficient training for a company to designate such individuals as qualified to perform lead-based paint testing for purposes of state licensing. (Tr. 50, 87, 342, 804-805.)

3) The Alabama Department of Health issued Bio-Tech a radioactive material license that was to expire on October 31, 1992. The license authorized Bio-Tech to use a Princeton Gamma-Tech, Inc. Model XK-3 device for detection of lead in paint. The XK-3 device is a type of portable XRF analyzer. The license was necessary because the XK-3 device contains Cobalt 57, a radioactive material. Those listed on the license as the only individuals licensed to use the SK-3 device on behalf of Bio-Tech were Savage, James Cleveland, and Preston Farish. (Govt. Exh. 12; Tr. 48-49.)

4) By letter dated November 3, 1992, the Housing Authority of the City of Rome, Georgia ("HARG"), sent to Bio-Tech a request for a proposal ("RFP") for random lead-based paint testing for HARG. All proposals were to be submitted on or before November 18, 1992, and were to be "in strict accordance with the requirements of this Request for Proposal." The RFP stated that if a portable XRF analyzer were to be used in the testing, the offeror had to provide a copy of a license to use and maintain the XRF analyzer in the State of Georgia, or if an "out-of-state" company, submit certification from the proper regulating agency that the firm had authorization and the proper permits to transport radioactive materials interstate. Copies of training certificates were also required by HARG to ensure that the operator of the XRF analyzer has been "thoroughly trained in the safe use of the XRF analyzer by an educational unit other than the manufacturer of the analyzer." The RFP required a description of the standard operating procedure for quality assurance, a description of how sampling would be performed, inspecting and testing methodology, and how records would be kept. The RFP required that [the offeror]...complete all testing in accordance with "Lead-Based Paint: Interim Guideline for Hazard Identification and Abatement in Public and Indian Housing (Guidelines) issued April 18, 1990 and revised September 90 and May 9, 1991." ("HUD Interim Guidelines"). The RFP also required that the offeror "provide interior and exterior comprehensive testing of all applicable surfaces in each randomly selected unit ... to determined if lead-based paint hazards exist." (Govt. Exh. 15.)

5) On November 16, 1992, Bio-Tech submitted a proposal to perform lead-based paint testing for HARG in response to the RFP. The cover letter for Bio-Tech's proposal was signed by Jacob Savage. The cover letter stated that Bio-Tech would perform the testing in accordance with the Interim Guidelines. The Bio-Tech proposal states at paragraph 3.3. that it estimates each reading with the XRF analyzer would take 15 seconds. It further states:

> A unit containing between 30-50 surfaces and 3 readings per surface give an average testing rate of 2-3 hours per unit.

In addition, at paragraph 3.4, entitled "Data Reduction and Reporting," Bio-Tech stated that it would "reduce" the data resulting from analytical and sample analysis "according to the protocols." It would use a Microsoft Excel MacIntosh computer program for "data reduction, calculation, and conversion." In its proposal, Bio-Tech did not describe how it would reduce the data or the protocols it would use. Bio-Tech stated in its proposal that testing would be done with two XRF analyzers. It estimated that it would take eight working days to complete the on-site testing. (Govt. Exh. 14, Tr. 532-533.)

6) Bio-Tech also included in its proposal to HARG a contract written by Bio-Tech for the work, and signed by Savage. It states, in pertinent part.

> ...The local Public Agency has been mandated by the Department of Housing and Urban Development to test pre-1978 family developments for the presence of lead-based paint in strict accordance with current HUD guidelines;...
>
> * * *
>
> Part B Testing and Preparation of Test Reports.
>
> (1) Testing of Lead-Based Paint shall be performed in strict accordance with current Department of Housing and Urban Development guidelines and the Hazardous Emergency Response Act (AHERA) of 1986.
>
> (2) Consultant shall provide a certificate stating that each development was tested in accordance with DHUD guidelines. (Govt. Exh. 14).

7) Attached to Bio-Tech's proposal, and the proposed contract it wrote and executed, was a copy of the radioactive material license, which had expired on October 31, 1992. (Govt. Exh. 14.)

8) The contract for lead-based paint testing was not actually executed by HARG until January 11, 1993. There were minor changes made in the contract concerning compensation and retainage, but the contract performance schedule was changed dramatically. It stated that testing would take 43 days, not eight days. Attached to the contract was a copy of a radioactive material license for Bio-Tech from the Alabama Department of Health showing an expiration date of October 31, 1993. (Govt. Exh. 11.)

9) A contract for lead-based paint testing, dated January 14, 1993, was executed by the Housing Authority of the City of Stevenson, Alabama ("HASA") and by Savage for Bio-Tech. The text of the contract between HASA and Bio-Tech is the same as that between HARG and Bio-Tech, except for differences in compensation and an eight day testing period. Attached to the contract between HASA and Bio-Tech is a copy of a radioactive material license for Bio-Tech with an expiration of October 31, 1993. (Govt. Exh. 9.)

10) As part of its proposal to HASA that resulted in the contract award, Bio-Tech submitted a document entitled "XRF Lead Base Paint Sampling Plan Hazardous Waste Identification," that is identical in text to paragraphs 3.3 and 3.4 (Testing Time and Data Reduction and Reporting) of the proposal that it had submitted to HARG. (Govt. Exh. 18.)

Alteration of the Radioactive Material License

11) Bio-Tech's radioactive material license had expired on October 31, 1992, and it was not reinstated until February 25, 1993. The copies of the license submitted by Bio-Tech for inclusion in the contracts with HARG and HASA had been altered at Bio-Tech to make it appear that Bio-Tech had a current license, when, in fact, it did not. A current license was required for both contracts. (Tr. 73, 95, 374, 377-378.)

12) Savage was aware that Bio-Tech's radioactive material license had expired when the contracts were executed with both HASA and HARG. He gave little or no attention to the need to get the license renewed on time, and claimed to be unaware that the license had expired until contracts for which it was required were at stake. He was told of this problem by his staff. Bio-Tech did not request a renewal form for the license until December, 1992, and it was not submitted until January 14, 1993. Savage admits that someone altered the copy of the license sent

to HASA and HARG, but he claims no knowledge of who did the alteration. He denies any personal involvement in the alteration of the radioactive materials license. He also denies that he was aware that altered copies of the license had been sent by Bio-Tech to either HASA or HARG. Bio-Tech had originally submitted copies of the expired license in its bid proposals to both HASA and HARG. However, after that error was called to Bio-Tech's attention, the altered copies of the license were submitted by Bio-Tech. (Govt. Exh. 23; Tr. 87, 580-582, 587-588, 590-591, 716-718, 725, 736-738.)

13) At least two former employees of Bio-Tech, [redacted] Phillips and [redacted] Williams, have recollections of the circumstances that resulted in the alteration of Bio-Tech's radioactive material license. [redacted] Phillips was employed at Bio-Tech as a laboratory technician from November 1, 1992 to the end of June, 1993. She was generally familiar with the radioactive material license because it was routinely copied and sent out by Bio-Tech with bid and proposal packages. Phillips did not assemble bid packages for Bio-Tech. That task was done at various times by [redacted] Stewart, [redacted] Williams, and [redacted] Petty. (Tr. 98-103, 325.)

14) Phillips recalls that one day she was in the Bio-Tech office in Hunstville, Alabama, signing in samples. She cannot recall the time period, other than that it was cold and she had a coat with her. She was present when Savage called [redacted] Stewart into his office for a private conference. Later, Phillips saw Stewart leave Savage's office with a piece of paper in her hand, and heard Stewart say something to the effect of "if this ever comes up again, this was not my idea." At the time, Phillips did not understand Stewart's reference. Later, after Phillips left Bio-Tech, she was told by Toni Williams during a telephone conversation that Stewart was referring to alteration of the expired radioactive material license. Williams also told Phillips that Savage had directed Stewart to alter the date on the license to make it appear that it would not expire until October 31, 1993. Williams did not tell Phillips any of this until sometime in November, 1993, after Phillips no longer worked at Bio-Tech. Williams had initiated the telephone call. (Tr. 104-112.)

15) [redacted] Phillips was a self-protective witness who was very careful in the answers that she gave to questions. I find that she knew more about this matter than she was willing to testify to, based upon the testimony of Williams that Phillips discussed the matter with her in some detail when Williams contacted Phillips about being a witness in this case. I credit that part of Phillips' testimony in which she described what she observed at the office when Savage called Stewart into his office, and when Stewart later made a statement expressing disagreement and concern at something she had been told by

Savage. Phillips' knowledge of what Savage had told Stewart, or what Savage might have asked Stewart to do, was not first-hand knowledge. She did not hear it from Stewart or Savage; she heard it from Williams almost a year later. That part of Phillips' testimony is not sufficiently reliable or untainted to make a finding based on it that Savage directed Stewart to alter the radioactive material license. Also Phillips' recollection of seeing Stewart take a one-sheet form to another office to type on it was refuted by all other witnesses, and I do not credit that part of her testimony about where the typing took place. Based upon the testimony of Williams, and to a lesser extent, Stewart, it is most likely that the alteration of the date on the license was done in the Bio-Tech outer office on Bio-Tech's typewriter, and that Phillips actually was present in the room when it occurred, even if she did not know what was being done to the license at that time. (Tr. 111-116, 373-374, 447.)

16) [redacted] Williams was employed at Bio-Tech as a replacement officer manager in the Hunstville office. She was employed from October 23, 1992 to October 18, 1993. One of her duties was to generate bids and proposals for lead-based paint testing and to send those bid and proposal packages to public housing authorities. The contract proposals for the HARG and HASA RFPs were assembled by Stewart, not Williams. Williams was hired to replace Stewart, once Stewart trained her. Williams, however, did sign the HARG contract as a witness. Although Williams initially had a good relationship with Savage, she soon became critical of him. She holds deep resentment against Savage for a variety of reasons, most involving money, and has vowed to "destroy" him. Her testimony has been carefully weighed to separate out those facts on which her testimony was reliable and truthful, despite her animosity toward Savage, from that which was self-serving or clearly false. In the critical areas of the issues in dispute in this case, her testimony is corroborated by other witnesses, including Savage. Those areas in which I found her testimony untruthful are ancillary to the charges in this case, and require no findings. (Tr. 316, 393, 660, 667, 756-758, 767-768.)

17) Williams remembers the day that Savage called Stewart into his office. Williams has a recollection somewhat similar to [redacted] Phillips' about this incident. Williams recalls that when Stewart left Savage's office and returned to the outer office where Williams and Stewart were both sitting, Stewart said that she was "not going to go to jail for Dr. Savage." Williams claims that Stewart told her that Savage had directed her to alter the expiration date on the license, but that Stewart would deny it if it ever came up. Williams also claims that Stewart asked her to help line up the license in the typewriter, where the year had been obliterated by "white out," which Williams did, but that Stewart actually typed in the altered date. On cross-examination, Williams also claims to have overheard Savage give

some direction to Stewart about altering the license. I do not credit Williams' testimony that she overheard Savage tell Stewart to alter the license. (Tr. 375, 420-421, 436-438.)

18) [redacted] Stewart worked for Bio-Tech twice, once from November, 1991 to January 1992, and again in late 1992 when she returned to help Savage find an office manager. During that time, Stewart also acted as office manager. Stewart sent out the bid and proposal packages for lead-based paint testing, which were set up in the Bio-Tech computer. She did this during the period of late fall of 1992 to early winter of 1993, when the Bio-Tech proposal packages were sent to both HASA and HARG. The other bid and proposal materials, including a proposed contract, company experience, resumes, references, and the radioactive material license were already photocopied and bound together to make a complete bid and proposal package to be sent, as needed. (Tr. 239-242, 244-246.)

19) Stewart testified that she "had no knowledge" of whether the date had been altered on Bio-Tech's radioactive material license, and she "recalls" no conversations with Savage in which he directed her to alter the license to make it appear that it had not expired. She also testified that she "recalls" no conversation with Williams about the altered license or its expiration. I find Stewart's testimony on this subject to be worded in a deliberately self-protective fashion, and I find that it is not credible when she denies any knowledge that would indicate her involvement in or knowledge of the alteration of the license. When asked more general questions about the expiration of the license and the circumstances surrounding its renewal, her memory not only improved noticeably, but she corroborated the testimony of Williams on an important disputed fact. (Tr. 252-256, 258-260.)

20) Williams testified that the reason that Bio-Tech applied to have the license renewed so late was because the company lacked the funds to pay to have the license renewed. Even after everyone at Bio-Tech, including Savage, was on notice that the copy of the license sent by Bio-Tech in response to some RFPs had expired, Bio-Tech did not immediately apply to have it renewed, but knowingly sent out copies of the altered license. Stewart's testimony corroborates Williams' testimony that the reason the expired license was not immediately reactivated was because of the cost. In fact, Stewart not only knew that the radioactive material license had expired, she heard that matter discussed between Williams and Savage as to how the cost of the license would be paid for by Bio-Tech. Stewart denies that she was to request the reapplication form for the license, stating that Savage had directed Williams to do so. Williams denies any responsibility at all for obtaining a new Alabama radioactive material license. I credit Stewart's testimony in this regard, because Williams admitted to a practice of holding back payments

on bills that Bio-Tech owed so that Bio-Tech employees would receive their paychecks on time. Williams perceived the financial situation of Bio-Tech as so precarious that, if bills were paid on time, Bio-Tech employees would not be paid on time. By her own admission, Williams played an active role in deciding what bills would be paid, and how routine finances would be handled. Savage has denied that the decision to reapply for the license so late was in any way related to financial reasons, or that the Bio-Tech's ability to pay for renewal of the license was even discussed. His testimony in this regard lacks credibility, and the mutually corroborating testimony of Stewart and Williams is more reliable on this disputed fact. I find the decision not to reapply for the Alabama radioactive material license until January 14, 1993 was a financial one, made by Williams and Savage, and not merely one of inadvertence. Furthermore, Savage admitted that he viewed the license renewal as pro forma. (Tr. 252, 255, 322-325, 380-381, 395, 402, 866-868, 887.)

21) I find, based upon adequate evidence in the record, that Savage knew that Bio-Tech's Alabama radioactive material license had been altered, that it was likely done, at least in part, at his direction, and that he was either aware, or had reason to be aware that copies of the altered license were being sent to public housing authorities by Bio-Tech. This was the purpose of the alteration. Williams testified that Savage directed that the altered license be sent in all bid packages until the license was renewed. No other witness corroborated this testimony, and Savage denied it. Although it may be true that Savage did direct the inclusion of the altered license in bid packages, I decline to make a finding to that extent based solely on Williams' testimony. However, Savage certainly had reason to know this was occurring, even if he did not direct it. (Tr. 378-379.)

Inadequate and Incomplete Testing for Lead-Based Paint

22) Despite the written statements in the bid and proposal documents signed by Savage and sent by Bio-Tech to HARG and HASA, it was not Bio-Tech's intent or company policy to take three readings on any surfaces with the XRF analyzer, in performing lead-based paint testing. Rather, certain surfaces would be tested once with the XRF analyzer and that test data would be recorded in writing at the site, either by the Bio-Tech tester or by another individual accompanying the tester. Only a few units with what Savage described as a common paint history would have between 30 and 50 different surfaces tested at all. Those surfaces would each be tested with one reading of the XRF analyzer. Once those few units were tested in this manner, only a few surfaces in other units with a similar paint history would be tested at all. Once the Bio-Tech tester or testers returned to the office, the recorded test data was entered into Bio-Tech's computer. Savage had devised a computer program that would

"calculate" two other test "readings," based on the one reading actually taken by the Bio-Tech tester with the XRF analyzer. That computer-generated data, reported as actual test results, was based on the law of probabilities, mathematically calculated from the inputted test results actually collected. The difference in the computer-generated "test" results were usually between plus and minus one to three from the true test result. Bio-Tech would produce a test report, which it would submit to whatever public housing authority had contracted for its services. These reports would purport to record three readings taken with the XFR analyzer on between 30 and 50 painted surfaces in each unit to be tested. (Govt. Exhs. 7 and 25; Tr. 328-336, 346, 356, 498, 500, 815-818.)

23) The way in which Bio-Tech tested surfaces for lead-based paint, at the specific direction of Savage, was not in compliance with Bio-Tech's description of its method of testing which it included in its bids and proposals, and which became a part of its contracts for testing for lead-based paint. (Govt. Exhs 14 and 19; Tr. 328-336, 498, 500, 878-879.)

24) Bio-Tech also stated in its bids and proposals that it would conduct lead-based paint testing in "strict accordance with" current HUD guidelines for lead-based paint testing. At all times relevant to the charges in this case, the operative HUD guidelines were contained in "Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990, Revised May 1991." (Govt. Exhs. 1, 9, 14.)

25) The HUD Interim Guidelines for testing for lead-based paint state, in pertinent part, as follows:

> The preferred method for testing paint in housing is the portable XRF... An inspector using a direct-reading XRF should be able to inspect a unit in 2 to 3 hours, measuring from 30 to 50 samples. With a spectrum analyzer, the work should go much faster because a single reading is usually sufficient, and corrections for substrate interferences are infrequent. (Govt. Exh. 1 at 4.0)

26) Bio-Tech used direct-reading XRF analyzers, not spectrum analyzers. (Tr. 49, 815.)

27) The HUD Interim Guidelines, at Table 4.2, list the surface testing sites for each area of each unit. The list would result in 30 to 50 different surfaces being tested in each unit,

if the Guidelines were followed. This also comports with the description in paragraph 3.3 of Bio-Tech's bid and proposal documents that states that Bio-Tech will test so many areas, that each unit will take approximately 2-3 hours to test, and that 3 readings will be taken per surface. (Govt. Exhs. 1 and 14.)

28) When Bio-Tech's testers arrived at the HASA to perform lead-based paint testing, it took the testers between one and ten minutes to test each unit. Also, the testers were only taking lead-based paint readings in the living rooms and on the back kitchen doors, when observed by Cecil Sartin, a maintenance mechanic at HASA. The Bio-Tech testers at HASA were Robert Savage, who is the nephew of Jacob Savage, and Melissa Patterson. They brought back their test results for Toni Williams to input into Bio-Tech's computer to create the test report. (Tr. 33, 44, 335-336.)

29) Bio-Tech did not test 30-50 surfaces in each test unit at HASA. To test 30-50 surfaces would take at least two hours per unit. Furthermore, based on the credible testimony of Toni Williams, which was generally corroborated by Jacob Savage, I find that Bio-Tech only took a single lead-based paint reading with the XRF analyzer on each surface that it did test, and that the remaining data represented as test results were created by a Bio-Tech computer program, and were not actual test reading results. The computer created a report to be given to HASA that made it appear that three readings had been taken by the testers on 30-50 surfaces in each unit. (Tr. 368-369, 498-500.)

30) [redacted] Whetstone, the maintenance foreman of the Childersburg Public Housing Authority (CPHA) has a certificate from Georgia Tech's lead-based paint abatement program. The training he received at Georgia Tech included training on the HUD Interim Guidelines. He had already received this training when a tester from Bio-Tech, Robert Savage, arrived at CPHA to perform testing for lead-based paint pursuant to a contract between CPHA and Bio-Tech. Whetstone observed that Robert Savage did not test every painted surface in every unit. Whetstone expressed his dissatisfaction to Robert Savage and to the Executive Director of the CPHA because he believed that the testings done by Robert Savage was not in accordance with the HUD Interim Guidelines. (Tr. 136-148.)

30) Robert Savage's testing technique remained unchanged, even after Whetstone complained about them. The contract between Bio-Tech and CPHA required that the testing was to be done in accordance with the HUD Interim Guidelines. Whetstone called [redacted] Williams to notify her that Savage was not conducting the tests in accordance with the HUD Interim Guidelines. He also

told Williams that CPHA would cancel the contract unless the testing was done in accordance with the contract. He also sent Williams a letter to that effect. (Govt. Exh 7; Tr. 148-152, 358-359.)

31) About a week later, Williams, [redacted] Patterson, [redacted] Long, and a fourth Bio-Tech employee named Draper, returned to CPHA to complete the lead-based paint testing. Robert Savage had tested between 30 and 40 units. Williams and the three other Bio-Tech employees divided themselves into two testing teams. Each team had one XRF analyzer. Williams was not certified to use the XRF analyzer, but she had been shown how to use it by Robert Savage. These testing teams did not retest any of the units tested by Robert Savage, and were apparently not asked to do so. The two Bio-Tech testing teams tested about 100 units. Whetstone accompanied Williams' team periodically. He observed that Williams' team was performing the lead-based paint testing in accordance with his understanding of the HUD Interim Guidelines. While Whetstone was present, Williams' team took three readings on each painted surface. (Tr. 154, 160, 178-180, 365-368.)

32) Williams and Long generated the report to CPHA by entering the XRF test results into the Bio-Tech computer. Robert Savage's data was only based on one reading per surface. The Bio-Tech computer created a report that made it appear that three tests with the XRF analyzer had been made on each painted surface. The computer "created" two additional readings for surfaces only tested once. The computer-created "readings" were .1 higher and .1 lower for each surface. (Govt. Exh. 25; Tr. 367-368.)

33) Whetstone was dissatisfied with Bio-Tech's lead-based paint test report because he discovered errors in the descriptions of some units. However, there is no evidence that CPHA requested that Bio-Tech make any corrections or do further testing. Bio-Tech was apparently paid by the CPHA in accordance with the contract cost terms for its testing. (Tr. 154-156, 180.)

34) The testing done by Robert Savage at CPHA was not done in accordance with the contract requirements, and it was also not done in accordance with the HUD Interim Guidelines because he was not testing a sufficient number of surfaces and because he was not taking 3 readings on each surface with the XRF analyzer. The report submitted to the CPHA by Bio-Tech was both false and misleading because it purported to represent that three XRF analyzer readings had been taken on a great number of painted surfaces in each unit when, in fact, such readings had not always been taken. (Tr. 357-359, 366-369, 425-426.)

35) Jacob Savage was aware since 1990 that HUD expected three readings to be taken with the XRF analyzer on each painted surface in a unit to be in accordance with the HUD Interim Guidelines. He was told this by three HUD engineers at different times. One of the engineers also wrote to Savage about how HUD expected lead-based paint tests to be performed. Savage ignored these directives. Savage admits that Bio-Tech was not taking three readings on the same spot of each painted surface at any time until January or February, 1994. He did not regard the complaints made by Whetstone to be serious. He also refused to take seriously a very strongly worded 1991 letter from Southern Earth Sciences, a consulting engineering firm in Panama City, Florida, complaining that Bio-Tech's testing methods were unacceptable because they failed to take three readings per surface with the XRF analyzer. (Govt. Exhs. 4 and 7; Tr. 820-824.)

36) In January or February, 1994, Jacob Savage met with Ron Larkin, an engineer in HUD's Atlanta Office, who told Savage unequivocally that Bio-Tech had to take three XRF readings, in the same place, of each painted surface, to be in conformance with the HUD Interim Guidelines. Although Larkin told Savage nothing different than he had been told by a number of HUD engineers and private parties since 1990, he treated Larkin's statement as an order. (Tr. 824, 855-856, 861.)

37) According to Savage, "his" method for testing for lead-based paint was "in accordance with" the HUD Interim Guidelines prior to 1994, and he believed that it was, in fact, superior to the method prescribed in the HUD Interim Guidelines of taking three readings with the XRF analyzer on each surface. (Tr. 597. 728-731, 807-808, 827-828.) Savage based his belief on his reading of Paragraph 4.1.3 of the HUD Interim Guidelines, entitled "Sources and Types of Error in LBP Testing," which provides, in pertinent part, as follows:

> The measurement of lead levels in paint is not a simple process, and requires the use of sophisticated methods. A recent study of direct-reading XRF's (McKnight, et a., 1989) by the National Institute of Standards and Technology (NIST) shows that the relative measurement error can be very large when the level of lead in the paint is close to the regulatory standard of 1.0 mg/cm^2 . Some individual direct-reading instruments can be very precise yet very inaccurate. That is, repeated readings can be very close together, yet far from the true value, so that repeated measurements do not necessarily produce more accurate results. Usually, however, XRF

> error can be reduced by taking repeated measurements and averaging them, as described in detail in Appendix 4. Nevertheless, the NIST study (McKnight et al., 1989) found that the error remaining after this averaging process can still be as large as 50% - 60%. Thus, either false negatives (failure to detect lead contamination on a tested surface), or false positives ("finding" lead contamination when it is not really there), can easily result. The two error types have different practical consequences. A false negative results in the failure to abate a lead hazard (with the potential for poisoning a resident child), while a false positive results in unnecessary abatement.
>
> An effective sampling scheme must be able to control both false negative and false positive errors, so that those components which require abatement are detected, while those that do not are eliminated from consideration. One way to achieve this goal is to conduct confirmatory laboratory analysis of the paint whenever the XRF result is not definite. (Govt. Exh. 1.)

38) Appendix 4 of the Interim Guidelines, at Section A-4.1.2., entitled "Improving Precision by Repeated Measurements," expressly referred to in the Sources and Types of Error Section of the Interim Guidelines relied upon by Savage, provides as follows:

> The basic technique for reducing the variability of XRF readings is to take repeated measurements at the same point. Statistical theory shows that the variability of the average of a set of repeated measurements is less than the variability of individual measurements. For example, the average of three independent readings is 42% less variable than a single reading. The greater the number of repeated measurements, the greater the reduction in variability. For practical reasons, XRF operators are generally required to take three readings at each sampled point. An exception may be made when the first two readings are very high, e.g., over 6.0 mg/cm^2. Two such readings are considered reliable evidence that the lead level in the paint exceeds the standard. In the rest of this section, an XRF reading will

be assumed to be the average of three repeated measurements, unless otherwise noted. (Govt. Exh. 1)

39) The HUD Interim Guidelines, at Appendix 4.1.3., also address how to improve accuracy by correcting substrate readings of painted surfaces. They recommend taking three surface paint readings and averaging those three readings, which gives the apparent lead concentration ("ALC"). Then, the tester is to remove the paint down to the bare substrate if the ALC falls within a certain range that raises questions about interference of the substrate with the ALC. In such circumstances, the tester takes three readings of the scraped substrate and averages them, which gives the substrate equivalent lead ("SEL"). To arrive at a corrected lead concentration ("CLC"), the tester subtracts the SEL from the ALC. The Interim Guidelines state that the substrate correction accomplished by this testing process and calculation, "removes any bias in the lead concentration reported by the XRF." (Govt. Exh. 1.)

40) The Interim Guidelines require that 3 paint surface readings be taken with an XRF analyzer on each surface, with between 30 and 50 surfaces tested in each unit. Methods for eliminating any testing error resulting from the use of the XRF analyzer are provided in Appendix 4 of the Interim Guidelines. Methods for correction do not include taking only a single reading on a few selected surfaces, and using a computer program based on a law of probabilities formula to fabricate other data in place of actual test results. Although alternative testing methods may be used, they must be fully documented to the satisfaction of the public housing authority contracting for such services, before they may be used, as stated in the Interim Guidelines. (Govt. Exh. 1.)

41) Bio-Tech did not perform lead-based paint testing at either HASA or CPHA in accordance with the HUD Interim Guidelines, which were mandated in each of the contracts. (Govt. Exhs 1, 14, 19; Tr. 491-492, 498.)

42) Lead-based paint poses a serious health hazard to both adults and children. The group most at risk from exposure to lead are pregnant women, fetuses, infants, and children under seven. HUD has a statutory obligation to ensure that public housing authorities inspect dwelling units, common areas, and exterior surfaces for the presence of lead-based paint, to be completed by 1994. HUD provides funding for this testing under the Comprehensive Improvement Assistance Program ("CIAP"), and monitors such testing activities through the CIAP reporting process. (Govt. Exh. 1, at paragraph 1.3.1 and 3.2.)

43) The lead-based paint testing performed by Bio-Tech for HASA and CPHA was funded in whole or in part with CIAP funds

provided by HUD to those public housing authorities for that purpose. (Govt. Exh. 1 at paragraph 3.2)

Bio-Tech Activities Since January, 1994

44) Bio-Tech was reorganized in January, 1994. [redacted] Lee was hired as the administrator of the Huntsville Office. [redacted] Barard was hired as the administrator of the New Orleans Office. Both are excellent administrators. Lee has developed a number of "how-to" manuals for Bio-Tech. However, there is no "how-to" manual developed by Lee for lead-based paint testing. Savage still believes that Bio-Tech's pre-January 1994 methods were proper, and has held off having Lee prepare a testing manual. Since January or February, 1994, Bio-Tech has had its testers take three readings with the XRF analyzer at each surface location, and uses two testers on each job. Lee checks the field reports of the testers to make sure that the data is complete and transcribed properly. The field data is entered into the Bio-Tech computer to produce lead-based test reports. The computer program that fabricated test results is not currently being used by Bio-Tech. (Tr. 824, 837-842, 847, 893-894, 914-918.)

45) Since the 1994 reorganization, Jacob Savage oversees and monitors the operation of Bio-Tech. He trains all Bio-Tech employees on HUD "protocols," even though he still personally disagrees with HUD's requirements for testing. He provides training to employees on company policies. He gives presentations for marketing purposes. He still has overall responsibility for Bio-Tech, even though Lee and Barard now administer the two offices. (Tr. 842, 862, 894, 909.)

46) Jacob Savage still maintained, as of the date of the hearing, that Bio-Tech's pre-1994 testing methods were in conformance with the HUD Interim Guidelines, and that those methods were scientifically correct, based on average standard deviation principles. Bio-Tech has not offered to do any re-testing at public housing authorities for which it did lead-based paint testing prior to 1994, nor has it notified those entities that the testing was not done in conformance with the HUD Interim Guidelines or the terms of the standard Bio-Tech contract. (Tr. 827-828, 850-852, 861, 864, 868, 895.)

47) Bio-Tech is currently the subject of an investigation by the HUD Office of Inspector General ("IG"). Jacob Savage is also under investigation by the HUD IG. The investigation of Bio-Tech and Savage was begun, based on information obtained from investigation of another lead-based paint testing company. That information first came to HUD's attention in January, 1994. The

IG investigation of Bio-Tech and Savage began on May 31, 1994. Kevin Whalen is the special agent assigned to the case, and he is actively investigating the activities of both Respondents. (Tr. 481-482.)

48) The Alabama Public Health Department ("APHD") conducted a five-year routine inspection of Bio-Tech and it also investigated a written complaint about Bio-Tech made by Toni Williams in October, 1993, including some of the charges that are the basis for this suspension case. The APHD sent Bio-Tech a Notice of Violation, which has now been resolved except for the amount of the civil penalty that will be imposed for the alteration of the radioactive material license. (Govt. Exhs 8, 16, 17 (as reacted); Tr. 50-56, 73, 85-86.)

Discussion

HUD has suspended Bio-Tech and Jacob Savage pending completion of the HUD IG investigation presently ongoing, and any legal or debarment proceedings as may ensue. A suspension is a serious action, only to be imposed where there exists adequate evidence of one or more causes for suspension and when immediate action is necessary to protect the public interest. 24 C.F.R. § 24.400.

A cause for suspension is established if there is adequate evidence that cause for debarment under Section 24.305 may exist. 24 C.F.R. § 24.405(a)(2). HUD contends that there is adequate evidence that Bio-Tech failed to properly test for lead-based paint at two public housing authorities, in violation of the terms of the public contracts for that work, and in violation of the HUD Interim Guidelines. HUD also charges that Bio-Tech falsified its Alabama radioactive material license to obtain contracts with two public housing authorities. HUD further contends that there is adequate evidence that Jacob Savage either directed those actions, or knew or should have known of them. These actions, if established, would constitute cause for debarment pursuant to 24 C.F.R. §§ 24.305(b)(1), (b)(2), (b)(3), and (f), and are also cause for suspension. 24 C.F.R. § 24.405(a)(2).

Adequate evidence is a minimal standard of proof, and it is all that is required to support a suspension. It is defined in the regulations applicable to suspension as "information sufficient to support the reasonable belief that a particular act or omission has occurred." 24 C.F.R. § 24.105(a). The adequate evidence test in the context of a suspension has been analogized to the standard of probable cause necessary for an arrest, search warrant, or a preliminary hearing. Horne Bros., Inc. v. Laird, 463 F. 2d 1268 (D.C. Cir. 1972). See also, Transco Security, Inc. of Ohio v. Freeman, 639 F. 2d 318 (6th Cir. 1981).

The purpose of a suspension is to protect the Government and the public interest. To that end, HUD may impose a suspension against participants and principals who it believes, based upon adequate evidence, may not be "responsible." "Responsibility" is a term of art that includes the ability to perform a contract, but it also includes the honesty and integrity of participants and principals. 48 Comp. Gen. 769 (1969). The test for whether a suspension or debarment is necessary is based on a determination of present responsibility. However, a lack of present responsibility may be inferred from past acts. Schlesinger v. Gates, 249 F. 2d 111 (D.C. Cir. 1957).

Bio-Tech is a "participant," as defined at 24 C.F.R. § 24.105(m) because it has participated in the past in lower-tier covered transactions with public housing authorities that receive assistance from HUD to perform lead-based paint testing, and it is reasonable to believe that Bio-Tech will do so again in the future, if permitted. See also, 24 C.F.R. § 24.105(a)(2)(ii). Jacob Savage is a "principal," as defined at 24 C.F.R. § 105(p), because he has had critical influence and control over covered transactions between Bio-Tech and public housing authorities in the context of performing contracts for lead-based paint testing. As such, both Bio-Tech and Savage are subject to suspension by HUD.

I find that the Government has carried its evidentiary burden of proof that cause for suspension of both Respondents exists. Indeed, the Government's evidence has far exceeded the level of proof required in a suspension case. Its evidence would support causes for debarment.

The radioactive material license was altered by Bio-Tech to obtain contracts with HASA and HARG. The sole purpose of the alteration was to be able to show that Bio-Tech had a current license so that contracts could be awarded to it during the time when its license had expired and was not yet renewed. This was done knowingly and willfully, with the intent to mislead. It was not inadvertent.

A chief corporate executive may not remain deaf, dumb and blind to what is going on around him. He is responsible for that which he could have reasonably prevented, as much as for that which he actively directed. The Mayer Company, Inc. and Carl A. Mayer, Jr., HUDBCA No. 81-544-D1 (Dec. 1, 1981). I need not find conclusively that Savage directed the alteration of the radioactive material license to support a suspension based on that charge. Rather, I need only find that there is adequate evidence to reasonably support a suspicion that it occurred. I find that the Government has met its burden of proof that there is adequate evidence to support a suspicion that this occurred. Furthermore, there is a preponderance of the evidence that Savage should have known the license had been altered, even if he did

not actively direct it, because an active license was required for contract award. The license was not a mere formality. It was Savage's responsibility as the President of Bio-Tech to make sure that its bid proposals were truthful and accurate, particularly because his signature bound Bio-Tech on proposals and contracts. Savage's cavalier attitude about the public purpose of the license raises very serious questions about his present responsibility.

More disturbing, Bio-Tech, at Savage's direction, never performed lead-based paint testing in accordance with either the contract terms proposed by Bio-Tech, or in accordance with HUD's Interim Guidelines at any time until January or February, 1994. Even though Bio-Tech finally started taking three readings with the XRF analyzers on the requisite number of painted surfaces, and stopped creating false reports containing computer-generated "test results," it never went back to redo the work that it had done improperly. Bio-Tech had been paid for lead-based paint testing as though it had been performed in accordance with contract specifications and the Interim Guidelines.

The work actually done by Bio-Tech was far less than required by the contracts. Bio-Tech testers were in and out of whole dwelling units in about ten minutes because they were only testing a few surfaces. Worse, the form of Bio-Tech's report induced a false reliance on the reliability of the test results, which were largely not test results at all, but a computer simulation based on the law of probabilities. Computer simulations are unacceptable substitutes for actual testing. The Interim Guidelines do not provide for them. These testing and reporting practices were a technical and business scam, plain and simple.

There was real public harm done by Bio-Tech, a fact that Savage has never acknowledged. Public health and safety were severally compromised by Bio-Tech's way of doing business. It was harmful to all who put their trust in Bio-Tech's test results. The purpose of the tests was to pinpoint the actual locations of lead-based paint so that it could be removed. By failing to test more than a few surfaces, Bio-Tech's methods were inadequate to accomplish the public purpose of lead-based paint testing, which was required by Federal law.

The fact that Bio-Tech did not go back and test properly at any housing authority where it had performed lead-based paint tests prior to January, 1994, is a testament to the necessity for the suspension of both Bio-Tech and Savage. Bio-Tech showed a willful disregard for the health and safety of the residents of public housing. I consider Bio-Tech's reckless practice of promising contract performance that it had no intention of

fulfilling, and its company policy of evading the clear and unequivocal Interim Guidelines for how to test with an XRF analyzer to be so appalling that it would be unconscionable not to uphold the suspensions of Bio-Tech and Savage.

CONCLUSION

For the foregoing reasons, Bio-Tech Research Laboratories, Inc. and Jacob Savage, shall remain suspended until the conclusion of the ongoing investigation being conducted by HUD, and such debarment and other proceedings as may ensue.

Jean S. Cooper
Administrative Judge