

CADDELL CONSTRUCTION COMPANY

CONTRACT NO. V101BC-0130

VABCA-5608

**VA MEDICAL CENTER
ATLANTA, GEORGIA**

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OPINION BY ADMINISTRATIVE JUDGE ROBINSON

Appellant, Caddell Construction Company (Caddell), filed a timely appeal from a final decision by the Contracting Officer (CO) for the Department of Veterans Affairs (VA or Government). The dispute stems from asbestos abatement work performed by Appellant at the VA Medical Center (VAMC) in Atlanta (Decatur), Georgia, under Contract No. V101BC-0130 (the Contract). Caddell claims that the VA required its Subcontractor, National Service Cleaning Corporation (NSC), to perform asbestos remediation and abatement services that

were beyond Contract requirements, and that the VA's excessive and overzealous inspection caused Appellant to incur additional costs. Caddell has sponsored this appeal on behalf of NSC.

The appeal consists of twelve sub-claims, each relating to a specific action or actions by the VA, all of which occurred between April 1, 1996 and November 7, 1996. Each sub-claim is organized according to the date(s) when the event(s) occurred and the date(s) when the alleged cost impact was experienced. The total amount claimed by Appellant is \$1,101,046.

The Government responds that any additional remediation measures that it required of the Appellant were justified because they resulted from Appellant's deficient performance of contractually required work.

An evidentiary hearing was held in Atlanta, Georgia, with both entitlement and quantum at issue. The record for decision consists of the pleadings; the four-volume transcript of the hearing (Tr. I-IV); the VA's Rule 4 file (R4), tabs 1-39, 56, 59-60, 61 (excluding project meeting minutes from Phase IIIB), 62-3, 65 and 66 (with pgs. 112-182 stricken); Appellant's Supplement (R4 Supp.), tabs 500-530; and, Appellant's hearing exhibit A-1. Both parties filed extensive post-hearing briefs.

PRELIMINARY MATTERS

This appeal involves asbestos abatement. As such, many technical terms and regulatory procedures were used in the Contract and during the hearing. They will be mentioned repeatedly throughout these findings and the discussion that follows. These terms and procedures will be defined at the outset. In addition, we identify the primary witnesses involved in the appeal who offer substantial testimony.

GLOSSARY

ACM: Usually meaning asbestos-containing material, which is indicated simply as **A** in this particular Contract. **ACM**, on the other hand, refers to asbestos-contaminated material, including non-asbestos material that can be contaminated by the removal of asbestos-containing material. (R4, tab 4, pg. 01569-8)

AHERA: Asbestos Hazard Emergency Response Act, with implementing asbestos regulations issued by the EPA in 1987.

AIHA: American Industrial Hygiene Association. This organization inspects testing laboratories and their equipment. If certain AIHA quality control criteria and proficiency in sample analyses are met, then a laboratory will be AIHA accredited. The Contract required that all air sample testing be performed by an AIHA accredited laboratory. (R4, tab 4, pg. 01569-114)

Air Monitoring Cassettes: These are the devices within the air monitoring equipment that actually collect samples of the suspended fibers in the air. The samples are then analyzed to determine the number of fibers per cubic centimeter of air.

Amended Water: Water to which a chemical wetting agent called a surfactant has been added. The **surfactant** is a soap-like solution that, when added to water and sprayed in a mist, will adhere to airborne fibers and bring them down. (R4, tab 4, pg. 01560-14; tr. I/307)

Asbestos: On this project, there was a particular type of asbestos that poses a severe threat to one's health if inhaled. **Amosite** asbestos, one of the most toxic, forms of asbestos, is present as a fiber. The sprayed-on fireproofing in this project contained as much as 60% "very friable" Amosite asbestos. Friable asbestos is easily disturbed, becoming airborne and remaining suspended. In this state, it poses the greatest risk of inhalation. (R4, tab 4, pg. 01569-38; tr. IV/38)

Asbestos Analysis: There are two kinds of asbestos analysis that are commonly performed. One, **phase contrast microscopy (PCM)**, uses a standard light microscope to count fibers in the air monitoring cassettes, but does not identify or distinguish asbestos fibers from other fibers present in the sample. The other, **transmission electron microscopy (TEM)**, uses an electron microscope to count fibers and also to distinguish between asbestos fibers and other fibrous materials.

Of the two, TEM testing requires more time to secure the results. (R4, tab 4, pg. 01569-19, 22; tr. I/137-38)

Bulk Sampling: This entails physical removal of a piece of any suspect material (whether fireproofing, wallboard, floor tile, mastic, etc.) that is then forwarded to the testing laboratory for a **polarized light microscopy (PLM)** analysis. Bulk sampling is normally done as a part of the initial project survey to determine the types of ACM that exist at the site. It is also done during performance, whenever an unidentified material is suspected of asbestos contamination. (Tr. I/149-50)

Containment: A securely enclosed airtight area meeting OSHA requirements for safe asbestos abatement under negative pressure. Among other containment measures, this involves installation of one or more layers of 6-mil polyethylene sheeting. Should there be a breach of the containment, the negative air pressure would allow outside air into the containment, rather than allowing inside air containing asbestos fibers to escape the containment. The negative air pressure is maintained by a system of filtered fans exhausting to the outside that must be able to completely exchange the air within the containment four times per hour. (Tr. I/141-44; R4, tab 4, pgs. 01569-17, 50)

HEPA Filter: A high-efficiency particulate air filter. This protective device filters out 99.97% or more of **monodisperse dioctyl phthalate (DOP)** having a mean diameter of 0.3 micrometer. One of the uses of the HEPA filters on this project was to trap fibers exiting the containment area through the (negative air) exhaust fans. On the First and Second Floors, the filtered containment air was exhausted outside the building. On the Ground Floor, the filtered containment air was exhausted into the crawl space. (R4, tab 4, pg. 01569-17; tr. I/125, 144)

M/EDF: Material/equipment decontamination facilities, consisting of a serial arrangement of *wash room*, *holding room*, and *clean room* for removal of equipment and material from the work area. (R4, tab 4, pg. 01569-47)

MANOMETER: A device for monitoring air pressure within the containment area, to allow the technicians to determine whether the requisite negative air pressure is being maintained.

NESHAP: National Emission Standards for Hazardous Air Pollutants.

NIOSH: National Institute for Occupational Safety and Health.

OSHA: The U. S. Department of Labor, Occupational Safety and Health Administration. This agency is responsible for promulgation and enforcement of the worker safety regulations incorporated in Federal construction contracts.

PDF: Personnel decontamination facilities, consisting of a serial arrangement of *changing room, showers room and equipment room*. (R4, tab 4, p. 01569-43)

PIH: Professional industrial hygienist who meets all the definition requirements of AIHA and OSHA of a “Competent Person” under 29 CFR 1926.1101(b), has completed at least three years specialized courses on asbestos abatement, supervision and management in EPA-endorsed training programs, formal training in respiratory protection and waste disposal, and has a minimum experience of five projects of similar complexity with this project, of which [in] at least three projects serving as the supervisory IH licensed when required by state or local law (Spec. Section 01569, pg. 21). This Contract required that each party have its own PIH available: The Contractor’s professional industrial hygienist (**CPIH**), and the VA’s professional industrial hygienist (**VPIH**). Both the CPIH and the VPIH were certified industrial hygienists (**CIH**). They supervised the work of any industrial hygienist (**IH**) who was not certified. The specification makes it clear that “[t]he work of the VPIH in no way relieves the abatement contractor from his responsibility to perform other such services as specified [monitoring, inspection, testing to insure compliance with specifications]. (R4, tab 4, pgs. 01569-16, 23, 62-63)

Respirator: A device designed to protect the wearer from inhalation of a harmful atmosphere. (R4, tab 4, pg. 01569-21)

STEL: This is the short-term exposure limit set forth by OSHA in 29 CFR 1926.110i (c)(2). It requires the employer to ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty minutes.

Tunnels: Part of an elaborate system of plastic-enclosed corridors extending through the containment areas. These tunnels allowed hospital staff, patients and visitors safe access to different areas of the hospital during the ongoing abatement activities. (Tr. IV/6)

THE PRIMARY APPELLANT WITNESSES

Brian Kasher is the President of PCM Analytics, Inc. and Kasher Communications. Mr. Kasher is a PIH. In January of 1996, he had six years of concentrated training and experience as an asbestos abatement specialist, and has numerous certifications including the following certifications specific to asbestos: project design, management, inspection, supervision and instruction. At the time of the hearing, he had acquired an additional four years experience in managing and training programs for asbestos, lead, hazardous materials and OSHA-authorized safety training, including respiratory protection, HAZCOM, lock-out, tag-out and blood borne pathogens. He has worked for both owners (including VA, EPA, DOJ, DOD and GSA) and contractors. He was not, however, an indoor air specialist. For these services, he relies on a CIH that has been trained with respect to asbestos monitoring. He *is* qualified to oversee the work of a CIH. On this project, his firm had a subcontract with NSC to provide project monitoring services. The Board considered him qualified to give independent expert testimony with respect to monitoring asbestos abatement work, including inspection and oversight of monitoring and testing for asbestos. (R4 Supp., tab 520; tr. III/237-74)

Chuck Koch is the owner of Koch Environmental Management (KEM), and had been in business for five years at the time the Contract was executed. Prior to that, he had spent several years working in the field of industrial hygiene. He is a Certified Industrial Hygienist and served as the CPIH for the project under a subcontract between his firm and NSC. Based on his extensive experience both before and after becoming an industrial hygienist, the Board ruled him qualified to give an informed opinion based on his expertise in the field of industrial hygiene. (Tr. III/135-42)

Mike Lane was NSC's General Manager for the southeast region during the performance of the Contract. He was responsible for estimating and cost control throughout the region, including the Atlanta VAMC project. He was the individual to whom NSC's project manager directly reported. With over fifteen years experience in construction estimating, both as an estimator and in supervising estimators for numerous projects, many as large and complex as the Atlanta VAMC Contract, he was accepted as an expert witness in the area of construction cost estimating. (Tr. III/4-18)

Todd Perotka was the Project Manager for NSC during the entire period of Contract performance. As such, he was at the project site on a daily basis. At the time of this Contract, he had almost ten years experience in asbestos abatement work. Several projects on which he had previously worked required the removal of asbestos-containing fireproofing similar to that at the Atlanta VAMC. Mr. Perotka was qualified as an OSHA "competent person," and possessed an asbestos removal license from the State of Georgia. (Tr. I/241-49)

Gary Thibodeaux was NSC's Regional Safety and Health Director for the VA project. He possesses EPA certifications both as an asbestos abatement supervisor (1988) and an asbestos abatement supervisor/project designer (1993). This certification qualified him as a "competent person" in accordance with OSHA and its applicable regulations. As a "competent person," he had overall responsibility for Contractor compliance with OSHA standards on abatement projects. He possessed the authority to make changes to correct (potentially) hazardous situations on projects to which he was assigned. (Tr. I/93-101) During Phase IIIA of the Contract, he was only on the project site once in early May 1996 and again in October 1996.

THE PRIMARY GOVERNMENT WITNESSES

Layne Crabtree was the VA's Senior Resident Engineer (SRE) for this Contract, also possessing contracting officer authority delegated him by the VA's Washington, D.C. home office. Prior to the Atlanta VAMC project, Mr. Crabtree had supervised several other large hospital construction projects for the VA. The SRE did not personally enter to inspect the work areas in containment. He relied on his VPIH to keep him informed of conditions therein. He also delegated authority to the VPIH to stop work whenever safety/hospital contamination was threatened by conditions on the job site. (Tr. IV/200-01)

Richard Potter was the President of Richard C. Potter & Associates, Inc., the firm with which the VA contracted for project design services for the asbestos abatement project. He was also retained to provide contract period services to the VA. Mr. Potter is a registered professional engineer and a CIH, with over thirty years of experience in project design dealing with a variety of industrial hygiene problems, including asbestos. His education, training and extensive experience rendered him qualified to give independent expert testimony with regard to project design and inspection for asbestos abatement. (R4, tab 62, Tr. IV/243-59)

Scott Marko, an employee of HUB Testing Laboratory (HUB), was assigned as Project Manager and the VPIH for this Contract. HUB maintained a laboratory on site where samples were first analyzed before being sent to HUB's laboratory in Massachusetts. Mr. Marko possesses a Bachelor of Science degree in microbiology. Prior to this project, Mr. Marko had worked for two years in the Idaho National Engineering Laboratory (INEL), performing a variety of industrial hygiene tasks, including bulk asbestos fiber sampling and analysis as well as PCM analysis of air samples. This was followed by five years in the field performing assorted industrial hygiene tasks for INEL. During that five -year

period, Mr. Marko took periodic training in respiratory protection, ventilation and asbestos analysis (fiber counting) while identifying and monitoring asbestos hazards as well as radiation, toxic gasses and chemicals, and assorted carcinogens. He is qualified as an AHERA inspector/manager and has been a CIH since 1988. In his words, as an industrial hygienist he has the “experience and knowledge to recognize, evaluate and control health hazards in the workplace.” (Tr. III/375-80; tr. IV/5, 231)

David Deal was an IH employed by HUB to assist in project management for this abatement Contract. He was present at the project site on a full-time basis during all of 1996. His task was to collect and analyze air samples inside and around the work area, while monitoring the Contractor’s work practices for quality control and compliance with Contract requirements. Mr. Deal did not take any ambient air samples for background (preexisting) air quality prior to the start of abatement work. He was supervised by VPIH Marko. (Tr. IV/121-22)

GENERAL FINDINGS OF FACT

On September 29, 1995, the VA Medical Center in Atlanta (Decatur), Georgia (VAMC Atlanta) awarded Contract No. V101BC-0130, in the total amount of \$28,312,000, to Caddell for “Renovation of Main Building, Clinical Addition, Phase III.” The work involved general construction, demolition and asbestos abatement. The project was divided into two phases. The Contract required completion of Phase IIIA within 660 calendar days, followed by a break of 42 days. Phase IIIB would then commence for period of 240 calendar days. This appeal and the underlying claim relate only to the asbestos abatement work in Phase IIIA. (R4 Supp, tab 518)

VAMC Atlanta is a twelve-story building. Phase IIIA required asbestos abatement of the Ground, First and Second floors of the building. These three

floors contained administrative offices, research facilities, outpatient services and various hospital support services. The building dates from 1963, a time when asbestos was commonly used to fireproof the structural steel frames of buildings such as the VA hospital in Atlanta. The sprayed on Amosite asbestos often reached a thickness of as much as six inches. The three floors in Phase IIIA were the last remaining areas to be abated. All other floors, elevator shafts and mechanical rooms had been abated under prior contracts. By the time this project was designed, the Amosite asbestos fireproofing had dried, making it friable and quite easily disturbed. (Tr. IV/209-10, 259-61)

The Contract contains the usual Federal Acquisition Regulation (FAR) and VA Acquisition Regulation (VAAR) clauses mandated and suggested for inclusion in construction contracts. A partial listing includes: DISPUTES, FAR 52.202-1 (OCT 1995); CHANGES, FAR 52.246-4 (AUG 1987); CHANGES SUPPLEMENT, VAAR 852.236-88 (JUN 1987); SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK, FAR 52.236-3 (APR 1984); SUSPENSION OF WORK, FAR 52.242-14 (APR 1984); INSPECTION OF CONSTRUCTION, FAR 52.246-12 (AUG 1996); GOVERNMENT SUPERVISION, VAAR 852.236-78 (APR 1984).

Specification Section 01569 (R4, tab 4), titled ASBESTOS ABATEMENT, consisting of 116 pages, describes the "Extent of Work" in Paragraph 1.1.2.A to include all materials, whether asbestos or non-asbestos. Paragraph 1.1.2.B more particularly describes the work as follows:

Preparation, demolition and removal and disposal of the following asbestos-containing material, asbestos-contaminated material, and asbestos-containing elements, under full containment, including the demolition of ceilings, walls, systems, equipment, and services, from the Basement, Crawl Spaces, Ground Floor, First, Second and Third Floors.

The above paragraph is followed by a complete tabular listing of the twenty-four structures, equipment, fixtures and materials to be removed, with the VA's estimate of the quantities to be expected on each level. For instance, sprayed on fireproofing (asbestos), on the undersides of the decking above each ceiling, was estimated in square feet (sf) at 67,000 on the Ground Floor, 105,000 on the First Floor, and 48,000 on the Second Floor. The removal of this sprayed on Amosite asbestos fireproofing represented the largest quantity of such material to be abated. Another large quantity of material to be abated was the debris from demolition of the interior plaster/dry walls. These asbestos-containing walls were estimated at 40,000 sf on the Ground Floor, 126,000 sf on the First Floor, and 42,000 sf on the Second Floor. There were also hollow masonry block partition walls that were also listed as asbestos-containing. They were estimated at 21,000 sf on the Ground Floor, 43,200 sf on the First Floor, and 21,000 sf on the Second Floor. All of these interior walls are identified as "AC - Asbestos-Contaminated Material (including Non-Asbestos Material that can be contaminated by the removal of Asbestos-Containing Material)." (R4, tab 4, pgs. 01569-3 through 8)

Specification Section 01569, paragraphs 3.7.5 and 3.7.6 describes the procedures to be followed by the Contractor with respect to the "First Cleaning" of all surfaces of any particular work area and the subsequent "Pre-Clearance Inspection and Sampling." This includes "a thorough and detailed visual inspection at the end of the first cleaning to determine whether there are any signs of visible ACM or dust in the work area." (R4, tab 4, pg. 01569-108)

Paragraph 1.12.2 of the Specification (R4, tab 4 at pgs. 01569-64, 65) is entitled "Outline of Scope of Services of the VPIH." It requires, *inter alia*, that the VPIH perform the following:

Task 1: Establish background levels outside of containment before abatement work will start. This will include taking background

samples (at least five samples on each floor of the Basement through Second Floor) and retaining samples for possible TEM analysis.

Task 2: Perform, at the initiation of the Resident Engineer, an inspection of the individual work area containments, including glove-bag and mini-containment set-ups, for the complete isolation of the work area and satisfactory operation of the negative pressure filtration system before abatement work starts.

Task 3: Perform continuous air monitoring, inspection and testing outside the work area during actual abatement work to detect any faults in the work area isolation and any adverse impact of surroundings from work area activities.

Task 4: Perform unannounced site visits to spot check overall compliance of work with contract documents. These visits may include any inspection, monitoring and testing inside and outside the work area and all aspects of operation, including personal monitoring of workers.

Task 5: Provide support to the Resident Engineer such as evaluation of submittals from the contractor, resolution of unforeseen developments in abatement work, etc.

Task 6: Perform, at the initiation of the Resident Engineer, final visual inspection for the complete removal of the asbestos-containing and asbestos-contaminated material and clearance air testing of a decontaminated area at the conclusion of the abatement and clean-up work to certify compliance with the VA decontamination standards.

Task 7: Issue certificate of decontamination for each work area.

The Specification further provides, *inter alia*, that:

B. All data, inspection results and testing results generated by the VPIH will be available to the contractor for information and consideration. Contractor shall provide cooperation and support to the VPIH for efficient and smooth performance of their work.

- C. Monitoring and inspection results of the VPIH will be used by VA to issue any stop removal orders by the Resident Engineer to the contractor during abatement work and to accept or reject the work area or a building as decontaminated.

(R4, tab 4, pgs. 01569-64, 65)

Prior to the bid opening, Caddell obtained a bid for the asbestos abatement work from NSC, and relied on that price in submitting its bid to the Government. Caddell subsequently subcontracted the asbestos abatement and demolition work in Phase IIIA to NSC, at a price of \$4,042,000.00 (R4 Supp., tabs 501, 500, Tr. II/222; tr. I/135)

While this project was ongoing, the VA would continue operations inside a surgical suite (OR) located in a corner of the south end of the First Floor. Access to the OR and between stairwells was maintained through the tunnel system. The planned construction started with abatement work, followed by demolition on the Second floor of the building, progressing to the First floor and finishing with the Ground floor. After the Second floor was certified to be clean, construction, including a new surgical suite to replace the one on the First floor, would begin. The First Floor surgical suite would be kept in operation until the Second floor suite was ready for beneficial occupancy. (Tr. IV/193-94)

The Contract has two types of air monitoring requirements. *Personnel monitoring* requires that a pump be placed on an individual worker. A filter medium is hung over the worker's shoulder in his "breathing zone," the area on his frontal side where he is receiving air. *Area monitoring* requires stationary pumps strategically located in and around the perimeter of the containment or regulated area to obtain an airborne fiber count, both inside and outside the containment, to see if there is any fiber migration outside of the work area. OSHA requires both types of air-monitoring. For this abatement project, NSC subcontracted for the air-monitoring regime with Koch Environmental

Management (KEM). The owner of KEM, Chuck Koch, served as the CPIH for the project. However, in mid-May of 1996, he no longer visited the work site on a regular basis. He relied on Walter House, an industrial technician under his supervision, for performance of daily CPIH functions. (Tr. I/133-36)

Specification Section 01569, paragraph 1.7.3 is titled RESPIRATORY PROTECTION REQUIREMENTS. Generally, the type of respirator to be used depends on the work to be performed and the level of asbestos exposure. Fiber levels are to be determined by a thirty-minute, short-term exposure level (STEL) personal exposure sample at 2 liters/minute. Under paragraph 1.7.3.A, three types of protective devices are specified for the abatement workers. The first is the full-face Type-C supplied-air pressure-demand respirator with an auxiliary positive pressure self-contained breathing apparatus, which must be worn whenever airborne fiber concentrations inside the work area (containment) are equal to, or greater than, 10.0 f/cc. The air is supplied through hoses connected to the apparatus from a source outside the containment such as bottled air or an air compressor, offering the highest degree of protection for the worker. The second is the full-face Type C supplied-air pressure-demand respirator with HEPA-filtered air-purifying escape filters, which must be worn whenever airborne fiber concentrations inside the work area are equal to, or greater than, 1.0 f/cc and less than 10.0 f/cc. This breathing apparatus is self-contained and similar to that worn by SCUBA divers. The third is the full-face powered air-purifying respirator (PAPR) equipped with HEPA filters, which must be worn whenever airborne fiber concentrations inside the work area are less than 1.0 f/cc. This PAPR is self-contained and battery-powered. It allows the worker to breathe filtered air from within the containment itself. As a "rule of thumb," the more protection offered, the more cumbersome the breathing apparatus that must be worn. (R4, tab 4, pgs. 01569-37, 38, 39; tr. I/124-28; 214-15)

NSC equipped its workers with the Type C supplied-air and PAPR respirators. The Contract specification regarding mandatory use of these respirators is ten times stricter than OSHA requirements. While the Contract requires that the workers wear PAPR only when fiber concentrations are below 1.0 f/cc, OSHA allows PAPR to be worn with fiber concentrations up to 10 f/cc. The Contract calls for use of the Type C respirator whenever fiber concentrations run between 1.0 f/cc and 10 f/cc., while OSHA allows its use with fiber concentrations up to 100 f/cc. (Tr. I/131-33)

There was a set procedure by which workers entered and left the containment areas. A worker entered through a personnel decontamination chamber, consisting of three rooms with two air locks, sometimes referred to as a "five-stage" arrangement. On entering the "clean room," the worker completely removes his street clothes, including any personal adornments such as watches, rings and jewelry, and places them in a container, then dresses in a Tyvek suit, clean boots and hard hat and dons the particular respirator required by the airborne asbestos level within the containment. Per the Contract, the 25% of workers to be air monitored on any one day would also be fitted by a technician with a monitoring device consisting of a belt-mounted battery and pump with a cassette. Once dressed and outfitted, the worker would proceed through the first air lock, into the shower, through another air lock and then into a "dirty room." Air (that is considered contaminated) has passed from the "clean room" through the shower area and into the "dirty room" - but *never* in the other direction. From the "dirty room," one enters the containment work area. On leaving the containment, the process just described is simply reversed. (Tr. I/159-62)

During the actual asbestos removal process, NSC would have as many as thirty to forty people working inside the containment area. Four or five workers would be spraying amended water to saturate the ACM, with crews climbing

ladders and scaffolding to manually scrape the dampened fireproofing material from the ceiling slab. The material would drop into chutes and then be funneled to a collection area where workers would put it into bags. These bags were then brought to the decontamination chamber where they were closed and washed down. Each bag was secured by twisting the top into a gooseneck shape and securing with duct tape to make a water tight seal. After this, each bag was taken to the “clean room,” placed into a second bag, and again secured at the neck with duct tape as before. After this, the bags were taken to a secure dumpster for disposal at an appropriate waste facility. During the abatement, NSC employed two ten-hour shifts working day and night. (Tr. I/152-58; tr. IV/201)

Appellant’s witnesses testified, without rebuttal, that despite their repeated requests to the VA that test results be furnished, as provided by the Contract Specification, their requests were not honored. Prior to the hearing, with the exception of certain test reports associated with the Second Floor recontainment order, the VA had not identified or furnished such reports to the Appellant or the Board. (Tr. I/308; tr. III/181-84; R4, tab 4, pg. 01569-65)

Caddell presented a claim by NSC to the VA and sponsored an appeal from the CO’s denial of that claim. The claim is comprised of twelve sets of sub-claims, with calculations based on dates when Appellant attributes the expenditure of unanticipated labor and materials to unreasonable actions by the VA and its representatives.

CLAIM CATEGORY 1, STOP WORK ORDERS, SUB-CLAIMS 1, 2, 3

FINDINGS OF FACT

Under the Contract, if certain specified events occur during abatement, the VA is empowered to order the Contractor to stop asbestos removal until the

situation is corrected. Specification Section 01569, paragraph 1.3, is titled STOP ASBESTOS REMOVAL. Because of its importance, it is herein quoted in its entirety:

A. If the Contracting Officer or the Resident Engineer presents a written stop asbestos removal order, immediately stop all asbestos removal and initiate fiber reduction activities. Do not resume asbestos removal until authorized in writing by VA. A stop asbestos removal order will be issued at any time VA determines abatement conditions are not within specifications requirements. Stoppage will continue until conditions have been corrected. Standby time and costs for corrective action is at contractor's expense.

B. The occurrence of the following events shall be reported in writing to the Resident Engineer and shall require the contractor to immediately stop asbestos removal and initiate fiber reduction activities: 1. Excessive airborne fibers outside containment area; 0.01 f/cc or greater, or levels that are statistically greater than pre-abatement levels. 2. Break in either the primary or secondary containment barriers. 3. Loss of negative air pressure; at or below 0.01 in. of water. 4. Serious worker injury within the containment area which necessitates interruption of the normal decontamination procedures. 5. Presence of a fire and safety emergency. 6. Respiratory protection system failure. 7. Power failure. 8. Excessive airborne fibers inside containment area; 0.5 f/cc or greater when wet methods are employed.

(R4, tab 4, pg. 01569-12)

(1) April 1-2, 1996 Stop Work Order – Second Floor

As planned, NSC began its initial abatement efforts on the Second floor of the hospital. The containment was constructed and work was ongoing inside the area. According to the HUB Daily Log, at 1515 hours on April 1, 1996, while in the process of dropping the ceiling, the Contractor was directed by the VPIH, Scott Marko, to “stop all duct removal activities and initiate a corrective action plan that demonstrates the containment is maintaining adequate (-0.02 inches H₂O) pressure throughout the containment.” VPIH Marko cited as his reason, a

low alarm indicator for negative pressure within the containment (-0.01 inches H₂O). No manometer readings were offered into evidence prior to the hearing. (R4 Supp, tab 506, pg. 2)

The KEM Daily Project Logs for April 1, 1996 were prepared for NSC by its industrial hygienists. According to these Logs, ductwork removal began at 0800 and continued until between 1730 and 1830. Amended water was being used and workers were wearing PAPR for respiratory protection. NSC returned to the jobsite at 1930, working until 0530. At 1940, the negative pressure gage had a reading of -1.125 inches H₂O. There was heavy water leakage from a broken pipe in the work area. (R4 Supp, tab 506, pgs. 9, 10)

NSC also kept Daily Operational Logs. According to the NSC Logs for April 1, 1996, at 0700 hours, the foreman put sixteen workers on the Second Floor to begin demolition of ducts. At 1710, the Second Floor workers finished their work and left the site. At 1725, the HUB's VPIH Marko entered containment where he remained for just over one hour. The foreman making the Log entries was concerned that VPIH Marko was alone, which is a safety concern. When VPIH Marko left containment, he failed to shower or to decontaminate his clothing and equipment. The night crew arrived at the job site at 1830 hours. (R4 Supp., tab 506, pg. 4)

At 1230 on April 2, 1996, VPIH Marko recorded the following on the HUB Daily Log:

Due to visible debris identified on the ductwork and other sheet metal pieces, NSC is requested to return all ductwork and metal pieces to the EDF for another cleaning. In addition, we request that NSC's IH perform a visual inspection of all material exiting the containment and provide a written inventory and signature verifying that all material is clean. Bulk sampling to verify that the material is clean may be performed at our discretion.

(R4 Supp., tab 506, pg. 3)

The KEM Daily Project Log for April 2, 1996, prepared by CPIH House, recorded the use of amended water, with the workers wearing PAPR devices. They were removing ACM floor tiles and insulation from ducts, pipes and ceilings. From 1230 when the VPIH asked that the ductwork be returned to containment, until 1550, VPIH Marko ran bulk sampling. From 1550 until 1730, after STELs were run by KEM, the asbestos workers removed duct, conduit and pipes. The second shift reported for work at 1900. VPIH Marko shut the Second Floor containment work down at 2015, citing an area sample taken in the north stairwell (#3) with a "high" reading of 0.02 f/cc. NSC supervisors checked the areas sampled and made these observations:

The areas where tonight's and other outside samples have come back "high" from HUB's air sampling are stairwells that are very dusty, have suspended ceiling tile above where the sampling took place, have an existing air plenum which contained structural members sprayed with fireproofing, and is subject to vibration from the work area. The negative pressure has consistently been maintained in this work area. PCM and TEM sampling will confirm the obvious; the contamination is occurring outside of the work areas. NSC directed to clean the stairwells thru HEPA vac. and wet wiping. Also NSC will prep the suspended ceiling in the stairwells with a layer of 6 mil poly.

(R4 Supp., tab 506, pgs. 11-12a)

At 0100 hours on April 3, 1996, VPIH Marko recorded the following on the HUB Daily Log:

Due to the high fiber counts in the main stairwell, NSC is requested to stop all removal activities on the 2nd Floor. In addition, a manometer (functioning) shall be placed in this stairway and the area cleaned. Isolate the area by placing construction tape across the door. NSC's IH shall conduct ongoing air monitoring. Please provide the R.E. a plan for cleaning up this area and reducing the fiber counts, and addressing how this (problem) issue arose. NSC should thoroughly survey the containment to verify that no breach has occurred.

(R4 Supp., tab 506, pg. 1A)

The KEM Daily Project Logs for April 3, 1996 show NSC workers on the Second Floor using amended water, wearing PAPRs, and removing floor tile, pipe, duct and sprayed-on ceiling insulation. At 0715, before work began, Mr. Perotka and CPIH House checked the manometer in the north stairwell, observing that the reported high air count of the night before was likely caused by the proximity of the elevator shaft/mechanical room. Abatement and duct removal continued inside the containment. During the second shift, the KEM Logs show the Contractor removing duct until the shift ended. (R4 Supp, tab 506, pg. 14-16)

Only NSC produced test results relating to the work performed on the Second Floor of the hospital for the period in question. The VA provided none of the sample results upon which it relied in shutting down the work. NSC's sampling was done on both of the days that work was impacted by the VA's shut-down order. On April 1, 1996, KEM personnel took and analyzed six air samples. Three personnel samples were taken between 0800 and 0835, with the *highest* fiber count at 0.102 f/cc. Three more personnel samples were taken between 1602 and 1645, with the *highest* fiber count at <0.45 f/cc. On April 2-3, 1996, KEM personnel took and analyzed twelve air samples. Three personnel samples were taken between 1005 and 1039, with the *highest* fiber count at 0.045 f/cc. Three personnel samples were taken between 1505 and 1540, with the highest fiber count at 0.053 f/cc. Four more personnel samples were taken between 2040 and 2135, with two *high* fiber counts of 2.23 f/cc and 1.60 f/cc. A third sample was incapable of being read due to a wet cassette. Finally, two area samples were taken. One, taken in Stairwell #3 from 2218 to 0030, had a fiber count of 0.007 f/cc. The other, taken in Stairwell #2 from 2215 to 0033, had a

fiber count of 0.002 f/cc. The action level for shutting down activities outside containment was .01 f/cc. (R4 Supp., tab 506, pgs. 17-19; tr.I/286)

Mr. Perotka testified that after the April 2 shutdown, the stairwell with the alleged high fiber count was adjacent to the containment. When he investigated, he found that there was an air-handling unit above the ceiling tile. It was possible that the vibration from this unit could release fibers from the deck area. The VA was required to take and furnish background air samples in order to establish the ambient air fiber level prior to the start of abatement activities. Because the Government provided no background samples, NSC personnel ran side-by-side area samples on April 3, 1996. Both samples were at a clean level – less than .01 f/cc. (Tr. I/281-86; tr. III/281-84)

(2) April 13, 1996 Stop Work Order – Second Floor

On April 13, 1996, at 1515 hours, HUB industrial hygienist David Deal recorded the following entry on the HUB Daily Log:

Citing Part 1, Section 1.3, Paragraph B, part 8 (page 1569-12 of Contract Specs), I hereby order stop work for Second Floor containment. Two samples were collected. One being an area sample that returned too many fibers to count. The personnel I ran on myself returned 3.29 f/cc. This is far in excess of contract spec of 0.5 f/cc. The following factors can be contributed [sic]: 1) Though water was generally in use, it was not amended water. 2) Two areas of scrape down not using designated scaffolding. Asbestos material was being dropped to floor and without HEPA in vicinity. 3) One area being scraped dry when water could be used.

There were no lab test reports attached to the HUB Log nor were any produced by the Government. (R4 Supp., tab 507, pg. 2)

The KEM Log for April 13, 1996 shows NSC personnel to have completed morning STELs and met with HUB's IH, David Deal, with removal of floor tile, pipe, duct and ceiling insulation, that continued until IH Deal issued the stop

work order at 1515. From that point until 1715, the end of the shift, the crew was wetting down and bagging gross debris and conducting general cleanup. The scheduled second shift did not report to the job site. CPIH House recorded that NSC was working in the wet, but did not indicate that amended water was being used. He did report that the workers were using type "C" respirators with supplied air. The scheduled second shift did not report to the job site. (R4 Supp., tab 507, pg. 3)

Only NSC produced any test results relating to the work performed on the Second Floor of the hospital on April 13, 1996. KEM personnel took and analyzed six air samples. Three personnel samples were taken between 0850 and 0923, with all fiber counts reading <0.045 f/cc. The same fiber count was made of the three personnel samples taken between 1414 and 1447 on that date. (R4 Supp., tab 507, pg. 4)

(3) April 16-19, 1996 Stop Work Order – Second Floor

On April 16, 1996, at 1100 hours, VPIH Marko recorded the following entry on the HUB Daily Log:

Due to low pressure readings (< 0.01" H₂O) on the south stairwell manometer, NSC is requested to stop all removal activities. NSC is permitted to conduct activities that will reduce ambient fiber levels and obtain adequate negative pressure (cleanup of debris, wetting of area, checking for breaches in containment and checking the HEPA exhausts systems to ensure they are functioning properly). NSC is further requested to obtain two hours of satisfactory readings from both manometers prior to starting any further removal activities.

(R4 Supp., tab 508, pg. 2)

The KEM Daily Project Logs for April 16, 1996 were prepared for NSC by CPIH House. According to that Log, work began at 0830 and continued until shut down prior to 1430 by the VPIH, based on area fiber counts above .5 f/cc.

NSC's workers were using type "C" (supplied air) respirators. NSC crew misted and cleaned up until 1600 when KEM moved into containment to run area samples. These samples were dropped off at the lab at 1500 hours. At 1900 hours, the second shift reported to the site, where gross removal was resumed using both PAPRs and Type "C" respirators until the shift ended at 0530. Sometime during this shift, the area sample analysis was received, with the results below 0.5 f/cc. (R4 Supp., tab 508, pgs. 5, 6)

On April 17, 1996, at 1030 hours, VPIH Marko issued a Stop Work request, making the following entry on the HUB Daily Log:

Due to high fiber counts (0.5 to 1.4 f/cc) obtained within the Second Floor, NSC is requested to stop removal activities and initiate fiber reduction procedures. Please obtain inside area samples verifying ambient fiber levels are below 0.5 f/cc prior to proceeding with any additional removal activities.

(R4 Supp., tab 508, pg. 3)

The KEM Daily Project Logs for April 17, 1996 were prepared for NSC by CPIH House (1st shift) and by a Mr. Jones (2nd shift). According to those Logs, Second Floor work began at 0700 and continued until shut down at 1030 by VPIH Marko, based on high area fiber counts from the previous shift. NSC was using amended water, according to the Log. Its workers were using type "C" (supplied air) respirators. They reentered containment at about 1400, after the lab delivered all samples, showing them to be within contract limits. The second shift worked from 1900 until 0530 scraping sprayed on insulation. At 1900 hours, the second shift reported to the site, gross removal was resumed and debris was double-bagged and removed from containment. The workers began wearing ½ face respirators but switched to full face PAPRs when directed by HUB. (R4 Supp., tab 508, pgs. 7, 8)

The KEM Daily Project Logs for April 18, 1996 were prepared for NSC by CPIH House. According to those Logs, Second Floor work began at 0700 and continued until 1100 when gross removal of insulation debris was “winding down.” Mr. House met with both VPIH Marko and SRE Crabtree to discuss respiratory protection during bag-out. The shift ended at 1730 hours. The second shift worked on the Second Floor (removing ACM insulation) from 1900 until work was stopped by the VPIH at 2100 hours. The rest of the time, until 0530, work was performed on the First Floor (preparing containment barriers). (R4 Supp., tab 508, pgs. 9, 10)

On April 19, 1996, VPIH Marko made the following entry, relative to the Second Floor containment, on the HUB Daily Log:

Marie and I entered the containment around 1700 to inspect the area. We identified several problems including debris on ground (no local exhaust or chutes used) which was also dry, air hose connections found inside the containment, small penetrations in walls. We obtained some pictures of these problems. Then we noticed in the kitchen area 6-7 drains had been opened (no barriers in place). We (David Deal and I) returned to the containment to take pictures of the open drains, while in the containment, Dave also identified a worker without any respiratory protection on at all, and took a picture of him also. When went to leave the back PDF, we tried to shower out, but the water supply was not functioning. After we left the containment, we informed Ramiro, Todd and Bull that high fiber counts were obtained earlier in the day shift (0.6 to 1.7 f/cc) and that we had identified a worker inside the containment without a respirator on. We decided that with all the workers out of the containment that we would wait until the morning to address the problems with the drains.

(R4 Supp., tab 508, pg. 4)

The KEM Daily Project Logs for April 19, 1996 were prepared for NSC by CPIH House. According to those Logs, Second Floor work began at 0700, but only with meetings to discuss the problems with the open drains inside the

containment. At 1000, KEM began area sampling inside containment and the “rush” results were received at 1430. The bulk of work appears to have taken place on the First Floor. The first shift was off-site at 1730. The Second Shift began at 1900 hours, with the crew on the Second Floor in type “C” respirators and amended water being employed. The bulk of work on the Second Floor was removal of floor tiles, with some amount of prep work taking place on the First Floor. The crew left the job site at 0530. (R4 Supp., tab 508, pgs. 11-12)

Only NSC produced any test results relating to the work performed on the Second floor of the hospital for the period in question. The VA provided none of the sample results upon which it relied in shutting down the work. NSC’s sampling was done on all four days that work was impacted by the VA’s shut down order. On April 16, 1996, KEM personnel took and analyzed a total of thirteen air samples. Three personnel samples were taken between 0930 and 1005, with the *highest* fiber count at 0.11 f/cc. Four area samples were taken at different locations between 1530 and 1635, with the *highest* fiber count at 0.265 f/cc. Another six personnel samples were taken between 2100 and 2230, with the highest reading at 0.12 f/cc. On April 17, 1996, KEM took and analyzed thirteen air samples. One area sample was taken outside the decontamination area, near stored bags, between 0815 and 1845, with a reading of 0.04 f/cc. Three personnel samples were taken between 0825 and 0903, with the *highest* reading at 0.17 f/cc. Three additional area samples were taken between 1113 and 1217, with the *highest* reading at 0.411. Another six personnel samples were taken between 2100 and 2245. The readings from all six samples were too low to measure. On April 18, 1996, KEM took and analyzed nine personnel samples. Three taken between 0820 and 0853 recorded the *highest* reading at 0.155 f/cc. Three taken between 1555 and 1628 recorded the *highest* reading at .388 f/cc. Of the final three samples, taken between 2045 and 2118, the highest reading was 0.0613 f/cc.

On April 19, 1996, KEM took and analyzed seven air samples. Of four area samples taken between 1118 and 1221, the highest was at 0.21 f/cc. Of three personnel samples taken between 2015 and 0927, the highest was at 0.333 f/cc. (R4 Supp., tab 508, pgs. 13-22)

Both Mr. Perotka and Mr. Koch repeatedly requested copies of the sample and test results from HUB area air sampling. Neither the VPIH nor the SRE produced these documents during the course of construction, despite promising to do so. Neither the VPIH nor the SRE actually refused to provide these samples and test results. They simply failed to furnish them (with the exception of test results surrounding the final inspection of the Second Floor, *infra.*). Neither were any manometer logs forthcoming. The testimony by these witnesses was not rebutted. Also, despite reports by the VPIH and his assistant, Mr. Deal, that photographs were taken of conditions inside the Second Floor containment, the Government did not enter them into evidence. (Tr. I/308; tr. III/181-84, 305-06)

At the hearing, both VPIH Marko and IH Deal essentially confirmed what they had reported on the HUB Daily Logs for the periods in dispute, again however, without test reports or photographs or other tangible evidence to support their observations and conclusions. (Tr. IV/16-23, 125-31)

Mr. Lane prepared the Appellant's cost calculations for all of the sub-claims. He testified that it takes a crew as long as an hour to don their protective gear prior to entering containment. For this reason, NSC works crews of between thirty and forty men for two ten-hour shifts, to avoid lost time in bringing them out of and back into containment more times than necessary. The NSC certified payrolls generally confirm the numbers of men working the two daily shifts. (Tr. III/26-27)

Mr. Lane examined the certified payrolls for each day (or days) for which NSC claimed that actions of the HUB personnel had caused its workers to be idle or unproductive. He calculated the labor rates as a composite of the wages paid to foremen, journeymen and laborers during the periods in question. Because there would be a different mix of such personnel from one day (or shift) to the next, the composite rates are not uniform. The Board has itself examined the payroll reports and finds this explanation to be reasonable. The composite hourly rates (varying from \$11.21 to \$14.16) are acceptable to the Board. (Tr. III/30; R4 Supp., tabs 506, 507, 509)

The Appellant has documented its other costs associated with its sub-claims. The rates for consumables (materials used per man-hour) are supported as a rounded \$4.00 per hour. These consumables consist of Tyvek suits, respirators, filters, spray glue and other small tools used by workers inside the work area. This \$4.00 rate was calculated by dividing the total consumables cost for the project by the total number of man hours expended. The labor burden of 21% was taken directly from the certified payroll reports. The cost of air monitoring at \$300 per shift is supported by a 1995 fee proposal and subsequent KEM invoices. The rental costs associated with Sub-claim 3 are attributable to the rental of scaffolding inside containment as well as testing and monitoring equipment, negative air pressure equipment, manometers, filtration equipment, etc. The documentation provided in support of a daily rental expense of \$500 is acceptable. The Government offered no witness to challenge the Contractor's asserted costs of performance. (Tr. III/26-51; R4 Supp., tab 519)

DISCUSSION

The Appellant asserts that the VA, through its VPIH, was not justified in shutting down abatement activities on the Second Floor on several occasions in

April 1996. The Board will address these dates chronologically. First, however, we will address the positions of the parties regarding the Appellant's entitlement to an equitable adjustment.

The Government cites Specification Section 01569, Paragraph 1.3.A, that authorizes the VA to issue an order to cease asbestos removal activities "at any time VA determines abatement conditions are not within specification requirements." The concluding sentence is: "Standby time and costs required for corrective action is at the contractor's expense." (VA Brief, p. 39) This provision presupposes, however, that the VA is justified in issuing the order in the first place. If there is insufficient justification, then it stands to reason that the Contractor must be made whole for costs occasioned by reason of the unjustified interruption in its performance. The best evidence of justification for the order is, in our view, the test result(s) that VA relied upon in issuing the stop work order. Notwithstanding testimony from the industrial hygienists employed by HUB to monitor the project on behalf of the VA, we have found that not only did the Government fail to provide the test results to the NSC when requested during construction, no such reports were entered into evidence during the subsequent litigation. These disputes do not involve the entire Contract duration, but only discrete points in time when certain actions were taken by individuals acting on the Government's behalf. The argument by the Government that such data was simply too voluminous is unpersuasive.

Appellant cites this Board's recent decision in *Nicon, Inc.*, wherein we stated:

When the Government rejects work as not being in compliance with its specifications, the burden is upon the Government to demonstrate that fact. *Southwest Welding & Mfg. Co. v. United States*, 413 F.2d 1167 (Ct. Cl. 1969); *Berkeley Construction Co., Inc.*, VABCA No. 1962, 88-1 BCA ¶ 20,259; *International, Inc.*, ASBCA No. 43060, 95-2 BCA ¶ 27,720.

Nicon, Inc., VABCA No. 5949, 002-BCA ¶ 31,117 at 153,689.

The *Nicon* appeal involved the Government's rejection of HVAC work performed at a VA hospital. The VA received a detailed and certified airflow report from the contractor purporting to show that the system had been properly tested and balanced. The VA rejected the work based on certain smoke tests that its personnel allegedly performed on the system's ducts, the documentation for which was never produced. The VA then hired its own firm to test and balance the system. Although the results seemed to support the VA's position, the second firm's report was not certified. *Nicon* had its subcontractor prepare a second report. That certified report conformed to its first report. The contractor sought the costs of what it considered to be an unnecessary second set of tests. Citing the provisions of the contract's INSPECTION OF CONSTRUCTION clause (FAR 52.246-12, AUG 1996), the Board awarded appellant its costs of the second inspection. While the instant appeal involves a claim for having to pay continuing labor and equipment costs during time lost attempting to satisfy the Government, the principle involved is the same as in *Nicon*.

The best evidence of the condition of the air inside the Second Floor containment during these disputed April dates is contained in the lab test reports submitted by the parties. The Specification requires that the VA, through the VPIH, base any actions taken with respect to correcting or stopping abatement work on sample reports and other test reports. Such records must also be made available to the Contractor. Appellant has testified, without rebuttal, that despite repeated requests for such test records, the VA failed to provide test results – with some few exceptions to be discussed in other of the sub-claims. In each of these shut down periods, we will apply this criteria to determine Appellant's entitlement to an equitable adjustment.

April 1-2, 1996 Stop Work Order

Despite stopping work because of low manometer readings, the Government never provided the tape of that reading to the Contractor. The Contract required the VA to perform pre-abatement area sampling for ambient air fiber counts. If it did so, it never communicated the results to the Appellant, as was also required by the Contract. The best evidence of the stairwell conditions is the result of the April 3 area tests conducted by the KEM technicians for NSC. The results indicated asbestos fiber levels below the action threshold. This portion of the Appeal is *SUSTAINED*.

The Contractor has claimed that a total of 816 hours were wasted in attempting to comply with unsupported orders of the VPIH. The Board's independent examination of the payroll reports reveal that on April 1, 1996 the second shift (approximately 453 man hours) was unable to work. We will allow this number of hours. NSC's Daily Logs for April 2 show little productive work done from 1230 hours through the end of the shift at 1700 hours, although some workers were able to do some work on the First Floor. Considering the wasted time in the afternoon, together with the time to decontaminate and unsuit from one containment area to another and then to resuit, the Board, on a jury verdict basis, will allow 300 of the 456 hours claimed for April 2, 1996. Thus, the total of labor hours lost is 753 hours.

April 13, 1996 Stop Work Order

Even though HUB's IH Deal observed loose asbestos fireproofing being dropped to the floor, and that *amended* water was not being used, he failed to produce any test results to justify his order to shut down. On the other hand, NSC provided two sets of personnel sample results, one set from morning sampling and the other from afternoon sampling. All results were below the 0.5

f/cc (*or greater* when wet methods were used) action threshold. The *record* does not justify issuing the stop work order. This portion of the Appeal is *SUSTAINED*.

The NSC Logs show that the first shift on April 13, 1996 worked until stopped by the HUB technician at 1515 hours and was performing productive work until the shift ended at 1715. However, because of the stop work order, the second shift (266 man hours) was unable to gain access to the Second Floor as scheduled. The total of labor hours lost is 266 hours.

April 16-19, 1996 Stop Work Order

As with the other sub-claims, the Government's failure to produce the results of its manometer readings or of its air sampling allegedly showing fiber counts inside containment above the action level of 0.5 f/c, does not persuade the Board that its actions were justified. This contrasts with the personnel sampling test results produced by NSC for all four days in question, none of which showed fiber concentrations of 0.5 f/cc or higher. This part of the Appeal is *SUSTAINED*.

The Contractor has claimed a total of 1,893 lost or unproductive man hours associated with this four day period. The Board's independent examination of the payroll reports and the NSC and KEM Logs, reveals that: On April 16, the NSC crew worked from 0700 until some time prior to 1430. From that time until the end of the shift, the crew cleaned up so that KEM could enter containment and run samples. It appears that the Contractor was unable to continue with its planned abatement activities for approximately 3.5 hours. The Logs indicate that the evening shift reported to the site and was fully employed for the duration. Utilizing the reliable average crew size and the payroll reports, the Board finds that the Appellant lost 123 labor hours (3.5 x 35) on the April 16 day shift.

On April 17, according to the Logs, NSC's crew worked from 0700 until stopped by the VPIH at 1030. The evening shift worked productively on the

Second Floor. We calculate that the Contractor was only able to perform four hours of productive work during the first shift, leaving six hours wasted. The Appellant is entitled to be compensated for 210 labor hours (6 x 35).

While Logs for the day shift on April 18 show work proceeding as planned, the NSC reported gross removal to be “winding down.” With nothing indicating a stoppage by HUB personnel, the Board cannot conclude that the meetings between NSC and VA/HUB personnel for the remainder of that day were due to unsupported Government VA actions. According to the Logs however, the bulk of evening shift work, from 2100 to 0530, was unproductive due to being stopped at 2100 by the VPIH. The Appellant is allowed to recover for those 228 (6.5 x 35) unproductive hours.

The KEM Logs for April 19 show NSC personnel meeting with Caddell and VA representatives between 0700 and 1000 hours, after which five workers entered containment to clean the blocked drains noted by the VPIH. The Logs show the second shift fully engaged in productive work on the Second Floor. The Board finds that the full first shift was unproductive because of the HUB actions of the preceding evening. We will allow recovery for all wasted man hours during that shift (10 x 35 = 350), but will subtract for the seven hours spent by five workers (35 hours) cleaning the clogged drains justifiably cited by the VPIH. The Appellant can recover for 315 (350 - 35) unproductive labor hours. The total of lost or unproductive labor hours awarded Appellant for the period of April 16-19, 1996 is thus 876 hours (123 + 210 + 228 + 315).

Having examined all of the certified payroll reports involved in these sub-claims, the Board finds that the “unproductive” (also termed “wasted”) labor hours are those that, due to Government actions or inaction, were paid by NSC to its workers for periods when no substantive work could be accomplished. Because the shifts were so large, the cost impact was great unless it was possible

to divert some or all workers to another floor. Even where this could be done, substantial time was lost in progressing the workers through the lengthy decontamination process on one floor, only to have them re-suit and then take the steps necessary to enter containment on the floor to which diverted. All of these factors were considered in our calculation of the amount of unproductive wages and costs that NSC was required to pay.

Calculation of Quantum

In addition to the composite labor rates and labor burden, the consumables, equipment rentals and air monitoring costs are considered reasonable and supported by credible evidence. In our calculation of the equitable adjustment due Appellant in connection with Sub-claims 1, 2 and 3, the Board will apply the percentages for overhead and profit set forth in the Contract's SUPPLEMENTAL CHANGES clause, VAAR 852.236-88 (a), (JUN 1987):

(1) Additional Labor Total: 387 hrs. @ \$11.21	\$ 8,441.00
(2) Additional Labor Total: 266 hrs. @ \$12.37	3,290.00
(3) Additional Labor Total: 876 hrs. @ \$14.16	12,404.00
Consumables: 1529 hrs. @ \$4.00	6,116.00
Labor Burden: 21% of labor (\$24,135)	5,068.00
Air-Monitoring: 12 shifts @ \$300.00	3,600.00
Rentals: 4 days @ \$500.0	<u>2,000.00</u>
Subtotal:	\$40,919.00
Overhead @ 10% of \$20,000	2,000.00
Overhead @ 7.5% of \$20,919	<u>1,569.00</u>
Subtotal:	\$44,488.00
Profit @ 10% of \$20,000	2,000.00
Profit @ 7.5% of \$24,488	<u>1,837.00</u>
Subtotal:	\$48,325.00
Bond @ 1%	<u>483.00</u>
Total Equitable Adjustment:	\$48,808.00

CLAIM CATEGORY 2: SECOND FLOOR RECONTAINMENT & STANDARD OPERATING PROCEDURE FOR CLEANING AND DEMOLITION OF INTERIOR WALLS

FINDINGS OF FACT

Paragraph 1.13.A of Specification Section 01569 deals with the necessity for pre-approved STANDARD OPERATING PROCEDURES:

Contractors shall have established a (sic) standard operating procedures (SOP) in printed form and loose-leaf folder consisting of simplified text, diagrams, sketches and pictures that establish and explain clearly the ways and procedures to be followed during all phases of work by his employees. The SOP must be modified as necessary to address any specific requirements of the project and must be submitted for review and approval prior to the start of any abatement work. The minimum topics and areas to be covered by the SOP, which must meet the requirements of this specification and the specific requirements of this project and as called for in the asbestos removal drawings, are as follows:

The above-quoted paragraph is followed by nineteen listed topics. Of these topics, four list the removal, enclosure, encapsulation and disposal of ACM. (R4, tab 4, pg. 01569-67)

A series of nineteen notes on Contract Drawing No. 3-AR-1A pertains specifically to WORK OF ASBESTOS REMOVAL AND DEMOLITION, GROUND, FIRST AND SECOND FLOORS. Note 5 reads, *inter alia*, as follows:

The following materials are assumed to be contaminated internally and externally with asbestos-containing fireproofing, and may be disposed of as non-asbestos construction waste only if decontaminated by opening the cavities and vacuuming with HEPA-filtered vacuum cleaners and adequately protecting them against further contamination during the asbestos removal work; otherwise remove as asbestos materials. (1) Debris of walls. (2) Wooden structures.

(R4, tab 5)

On December 5, 1995, Richard Potter, representing the VA's A/E consultant, ATC Environmental, met with Mike Lane and Brian Messisco of NSC. Among the matters discussed was the proposed SOP for dealing with interior walls identified in the Contract as ACM. The A/E's December 6 memorandum to the SRE reported, at paragraph 6:

Cleaning of Interior Walls: NSC proposed to dismantle interior walls with cap before asbestos project, to the extent possible, and remove as non-asbestos-contaminated waste. Specification calls for all interior walls to be assumed contaminated unless cleaned. Discussion of opening up and checking walls was made. Proposal to cut walls below ceiling and remove, so as to avoid disturbing asbestos-containing fireproofing made. Suggestion is to open all walls to check on interior contamination and HEPA-filtered vacuum clean interior and wipe interior before removal.

Action: NSC will propose procedure for discussion and eventual presentation for review and approval. NSC will coordinate with Potter of ATC to outline possible acceptable procedure.

(R4, tab 66, pg. 4)

Among the topics covered in NSC's proposed SOP for this project was a procedure for cleaning interior walls. In response to the critical comments of the A/E's Mr. Potter, NSC, on December 21, 1995, forwarded revised SOPs through Caddell to the VA. The revised SOP for "Cleaning of Interior Walls" was approved by the SRE, based on the A/E's recommendation. It reads as follows:

1. NSC will utilize a sawzall or similar tool to cut a runner approximately one foot above floor level to determine the extent of asbestos contamination in the interstitial spaces of the interior walls.
2. The runner will be approximately one foot in width the entire length of the wall.

3. A visual inspection by the CPIH and VPIH will be performed to determine if each individual wall is handled and disposed of as asbestos containing material (ACM).
4. Contaminated walls will be left in place and demolished under full containment and negative air conditions.
5. Walls inspected and certified as non contaminated will be wet-wiped and wrapped in two layers of 6 mil polyethylene sheeting prior to implementing gross removal procedures.
6. After ceiling is removed, non-contaminated walls with top cap will be wrapped in two layers of 6 mil polyethylene sheeting over top of wall. Any walls absent top caps will either be sealed by constructing a top cap on top of wall and wrapped in poly; or demolished as ACM.
7. The remaining non-contaminated walls will be demolished and disposed of as construction waste after the containment has passed final clearance air sampling.

(R4, tabs 9, 10, 11; tr. I/258-62)

Mr. Perotka testified that this SOP was consistent with Note 5 on Contract Drawing 3-AR-1A. The Contractor would “open up the bottom of the wall to see if anything had fallen through” Any gross debris that you see laying down there, you vacuum out.” NSC had based its bid on this type of procedure as it was reflected in the subsequently approved SOP. This procedure had been used satisfactorily on other abatement projects. Those interior walls with pre-existing top caps were to be considered non-ACM. (Tr. I/251, 262-64; R4 Supp., tab 502)

On the Second Floor of the hospital, the vast majority of uncapped interior partitions were hollow, containing vertical studs covered with plaster dry-wall material, with masonry (block) or terra cotta walls only in the kitchen areas. Prior to any asbestos removal, the walls were wrapped in plastic sheeting to avoid contamination. According to Mr. Perotka, the inspection of the uncapped

interior walls for ACM took place after gross removal (by scraping) of the fireproofing from the deck slab above. After the Contractor cleaned up the fireproofing material, the walls were then cut 12" from the bottom as detailed in the SOP. Once a wall was opened, NSC personnel used a HEPA vacuum to remove any "gross debris" until there was none visible. In addition to inspecting the walls from the near-bottom openings, the Contractor personnel would also climb ladders and look into the uncapped walls from above the ceiling. If warranted, the HEPA vacuum would be inserted from above to clean the interiors of the walls. Mr. Perotka was asked how he could be sure that the walls were "clean and free from any ACM." He responded that "We couldn't be totally sure that they were free or clean - completely free of asbestos. We, you know, ran vacuum cleaners down there, did the best we could." (Tr. II/173, 215-17; tr. I/262-64; tr. II/217)

The Asbestos Abatement Specification deals first with actual removal of the ACM. This is followed by procedures to follow for post-abatement decontamination of the particular area and clearance to remove the containment and begin general demolition. After decontamination and a first cleaning, followed by pre-clearance sampling (with results showing consistent values below 0.01 f/cc), the CPIH notifies the SRE that it is ready for the first visual inspection by the VPIH. In this inspection, the VPIH is to visually examine all structures and surfaces for evidence of asbestos contamination. If further cleaning is required, he will advise the SRE accordingly, and the Contractor will be informed. If the second cleaning, followed by a second visual inspection, still fails, a final cleaning and visual inspection will be done until no visible signs of contamination remain. (R4, tab 4, pgs. 01569-108 to 112).

Upon notification by the Contractor's CPIH that the Second Floor containment was clean and ready for inspection, HUB personnel performed first,

second and third “final” inspections of the area. All three times (4/30/96, 5/1/96, and 5/2/96), HUB personnel found visible debris on surfaces of walls, ducts and beams, and within wall penetrations and cavities. Each time, the CPIH had indicated that the area had been cleaned. The Contractor was particularly resistant to opening pipe chases (for asbestos identification) that the drawings identified as part of the abatement project. (Tr. IV/32-33; R4, tab 20)

Finally, on the evening of Friday, May 3, 1996, having been notified by the Contractor that the Second Floor had been fully cleaned, VPIH Marko performed a final visual inspection that NSC passed. The VPIH then ran clearance samples, receiving favorable results the next morning – a Saturday. On that same day, VPIH Marko furnished these favorable test results to NSC. With the containment removed, NSC immediately began to demolish the interior walls. VPIH Marko testified that he returned to the job site on Monday, May 6, 1996 and, upon entering the work area to see how work was progressing, he observed large clumps of material that he recognized as asbestos lying inside a partially demolished sheetrock wall. This material was “primarily on the black iron that ran through the middle of the wall. There [were] several large pieces that were laying [sic] there in the tracks.” (Tr. IV/37-38; R4, tab 20)

Becoming alarmed that this presented a hazardous situation for the workers, the VPIH notified NSC’s foreman, Romero Sanchez, that there was a health hazard to the Contractor’s workers, none of whom was wearing any respiratory protection. These workers were busily demolishing the walls with sledgehammers while completely unprotected. Neither the CPIH (Chuck Koch) nor his assistant (Walter House) was on site that day, precluding any technical discussion. VPIH Marko went to the SRE’s trailer where he obtained a camera, some air sampling pumps and bulk sample bags. Upon his return to the job site, he advised Mr. Romero to stop the job and start cleaning up any asbestos that

was encountered. The VPIH submitted bulk samples from the debris piles for lab analysis. He testified as follows:

I could have taken thousands of samples there that day. There was that much debris still in the walls. I started running fiber samples. They were coming back with really high fiber counts. I went over to Caddell's trailer and I told them - because I knew that they had some of their crafts people up there too - that I think they were getting exposed to asbestos and they needed to really back off and reassess the situation. It was getting very dangerous at that point; and I think they took my advice and they were a bit confused because NSC was reluctant to really acknowledge that there still was asbestos there; that they were reluctant to even bring a HEPA vacuum up there and start HEPA vacuuming any of it up. They continued to demolish the walls; many workers just put the respirators through their belt and just dragged them there and if I showed up they'd put them on.

(Tr. IV/39-40)

VPIH Marko and his assistant, IH Deal, took bulk samples from the Second Floor piles of interior wall debris on May 6 and again on May 9. The samples were then submitted to HUB for testing. All four samples from May 6, as well as six samples taken May 9, contained 50-55% amosite asbestos. These bulk samples were taken from interior wall debris piles at random locations throughout the Second floor. (R4 Supp., tab 509, pgs. 10-12, 25, 26)

With respect to wall demolition on the Second Floor, IH Deal saw what he considered to be asbestos in the block wall rubble. He described the conditions that he observed upon entering containment with VPIH Marko as follows:

[W]e went inside the area. I could pick out at random any pile of debris, scoop it up in my hands and pick out chunks of asbestos. Now that's a severe contamination. And we ran air samples - - of course the first thing the Contractor said, it wasn't asbestos. Well, we had it analyzed - - it was. We had samples collected, we had air samples analyzed under TEM, transmission electron microscopy. Everything came back saying it was a hazard.

(Tr. IV/142-43)

In a memorandum to Mike Lane dated May 7, 1996, Gary Thibodeaux related that at 4:00 pm on that date there was a visual inspection by VPIH Marko of the southwest corner of the Second Floor containment. Relative to the SOP, Mr. Thibodeaux wrote as follows:

The first thing I saw was that (2) NSC employees were actually standing in a wall. They had knocked a 4' high hole and were literally in the wall with only the waist down visible. Scott [the VPIH] was standing on the top step of a ladder peering down through the wall looking at our workers.

* * * *

I immediately got into a discussion with Scott over what our scope of work was here. We had submitted [an] SOP which was accepted and made a part of the contract which said that we would demo 12" up from the bottom of the wall and clean exposed interior. We were also to knock 12" sq. holes in walls identified on drawings to inspect for the presence of ACM and clean what we could reach. He had us knocking larger holes and cleaning interior walls.

(R4, tab 14)

Mr. Thibodeaux testified that VPIH Marko secured a ladder and climbed to the top of one of the uncapped walls. VPIH Marko pulled out a clump of material that looked to be ACM from the ceiling insulation, asking that Thibodeaux examine it while holding it close to his face for identification. Mr. Thibodeaux interpreted the SOP to only require that the Contractor knock the twelve-inch hole in the bottom of the interior walls to inspect for and to remove any fireproofing material that may have fallen from the ceiling into hollow tops of the walls. Because the SOP only called for a hole at the bottom of the walls, it was his opinion that the Contractor was not required to remove any ACM that was lodged at the tops of those walls. The witness showed surprise when, at the hearing he was shown the language of Note 5 of Contract Drawing 3-AR-1A, stating that he had not previously seen the language (calling for decontamination

of the interiors of the walls). After reading Note 5, he was initially of the opinion that the SOP was inadequate to assure that the wall interiors could be entirely cleaned of asbestos. On redirect examination, however, Mr. Thibodeaux appeared to revise his opinion somewhat. (Tr. I/201, 227, 236-39)

When SRE Crabtree received the Thibodeaux memo through Caddell, he requested VPIH Marko's response to the allegations. VPIH Marko's memo detailed the fact that the CPIH had certified the Second Floor containment as ready for visual inspection on April 30, 1996. Thereafter, on three successive visual inspections, HUB personnel observed the same types of excess visible debris on structures and ducts, despite previous inspections revealing the same types of conditions. Finally, the fourth visual inspection passed. VPIH Marko attributed much of the problem to NSC's failure to open and clean all of the pipe chases. In his response to the Contractor, SRE Crabtree expressed his opinion that "Mr. Thibodeaux misinterpreted as arrogance the frustration the VPIH was experiencing at continually finding the same things wrong during the inspections." (R4, tab 24)

In a letter of May 10, 1996 to Caddell concerning the contamination problem on the Second Floor, SRE Crabtree confirmed a May 9 conversation with Mr. Perotka as follows:

The results of two (2) air samples taken at the second floor on May 7 and 8, 1996, and analyzed via Transmission Electron Microscopy (TEM) indicate 0.9072 and 0.3564 asbestos structures per cubic centimeter respectively (copy of TEM reports attached).

The results of four (4) bulk samples collected from the second floor area on May 6, 1996, indicate the material tested is composed of 50-55% amosite asbestos (copy of test report attached).

Based on the above, the undersigned instructed Mr. Perotka to do the following:

Stop removal of demolition debris from the second floor containment area.

Do not remove any demolition debris which came from the second floor area from the Medical Center.

Anyone entering the second floor containment area is to be wearing a PAPR.

All critical barriers on the second floor are to be maintained. It had been noted that floor drains were unsealed, the barrier at one of the elevators had been removed and the emergency decon unit at the south end of the containment was not intact.

Get the second floor containment area back under negative pressure conditions.

After having given these specific instructions, the SRE concluded his letter to NSC as follows:

Additional bulk samples of material located in the piles of debris still inside the second floor containment area were taken on May 9, 1996. We will advise you of the results of the sample tests when they are received.

Assuming the bulk samples taken on 5/9/96 continue to show that asbestos materials are present in the debris piles and in light of the TEM air sample results, you are to advise this office as to what actions NSC will take to correct this serious problem.

Your immediate attention to the above is required.

(R4, tab 15)

At this point, according to the testimony of CPIH Koch, there were approximately seventy-five piles of debris from plaster and cinder block walls throughout the Second Floor. At a meeting held with representatives of NSC, Caddell and the VA, Mr. Koch suggested spraying the piles with encapsulate, covering with poly plastic and having each pile removed by workers wearing

respirators – all without going back into containment. The VA was not persuaded that this proposal would provide adequate protection from the friable amosite asbestos. (Tr. III/213-17)

VPIH Marko submitted the two air samples of May 7 and 8, 1996, to Quantum Labs for TEM analysis. The samples were taken after the Second Floor containment had been removed and wall demolition had begun. The analysis of Sample #BF772 showed a total concentration of 0.356 asbestos structures per cubic centimeter (cc). The analysis of Sample #BF773 showed a total concentration of 0.907 asbestos structures per cc. For both samples, the Quantum analyst had commented “The Amosite asbestos concentration on the filter is sufficient to fail this sample.” With workers continuing to demolish walls without respirators and with anyone else coming into contact with this level of asbestos concentration at risk, the VPIH considered the situation adequate justification for ordering NSC to stop work and begin corrective action. (R4 Supp., tab 509, pgs. 8, 9; Tr. IV/33-37)

Mr. Koch admitted that he would be concerned that a TEM analysis of air samples showed .36 and .90 f/cc in an uncontrolled area. Mr. Kasher stated that although OSHA would not require respiratory protection where there was a reading of .90 structures per cc, he would not consider it safe for working an eight-hour shift without a respirator. (Tr. III/234; III/372)

In a second letter of May 10, 1996, SRE Crabtree furnished Caddell the test results of the May 9th bulk samples from the wall debris piles on the Second floor. Six samples, taken and analyzed by HUB Testing Laboratories, showed the debris materials to be between 50% and 55% Amosite asbestos. Mr. Crabtree concluded his letter as follows:

These additional test results confirm our concern that asbestos materials are present in the debris piles generated from the Second

floor demolition work. You are again directed to provide this office with the corrective actions NSC will take to rectify the problem.

(R4, tab 16)

The Contractor began putting the Second Floor back into containment on May 13, 1996, and completed the work of removing demolition debris on or about June 2, 1996. (R4 Supp., tabs 509, 512)

In a letter dated May 14, 1996 concerning wall demolition, NSC's Mr. Perotka advised Caddell's Project Manager, Holmes Gray as follows:

National Service Cleaning Corporation will be changing its SOP from demolishing 12" of the bottom of the wall to demolishing one side of the sheet rock walls insuring that the ACM debris has been removed. This section is found under Phase of Work in the SOP

Block Wall, all block walls will be demolished to a point where they can be adequately inspected.

If ACM is present the walls will be cleaned. This will be field verified by the CPIH and demolished after clearance. All other steps will be followed utilizing the S.O.P.

(R4, tab 19)

When initially cross-examined concerning the decision by NSC to change the wall SOP, Mr. Perotka testified as follows:

Q. All right, sir. Did this change come from the VA?

A. We had meetings with them about it.

Q. Did this change come from the VA?

A. I'm not sure.

(Tr. II/157)

The witness was then questioned regarding his letter to the SRE of May 14, 1996, in which he proposed the changes to the SOP. The exchange was as follows:

Q. Was this change directed by the VA?

A. It was influenced by the VA.

Q. Was this change directed by the VA?

A. In my opinion, yes.

Q. Who directed it?

A. It was do it this way or cease and stop work.

Q. Who directed it?

A. The VA. I mean it was a meeting we had.

The witness referred to a meeting between the VA and the Contractor where the problem of Second Floor contamination was discussed, stating that "we had to come up with a solution." (Tr. II/158)

When he was asked what NSC did after the SOP had been changed, Mr. Perotka testified that:

A. Regarding the debris on the Second Floor, we went back into containment, sealed up everything, and threw everything away as ACM.

Q. So you changed the SOP, the standard operating procedure?

A. Uh-huh.

Q. And this document [Perotka's May 14 letter], is it correct that NSC admitted their previous standard operating procedure was not effective?

A. That, given the visuals that we were getting, yes.

Q. All right, sir; and who proposed this new technique, or prepared the new standard operating procedure?

A. Myself and Mike Lane.

Q. Did the VA direct this change?

A. Like I said before, they influenced us.

(Tr. II/159-60)

Mr. Perotka testified with respect to his conversations with Mr. Crabtree after the Stop Work Order and prior to the SRE's May 10 letter:

Q. Okay. And did Mr. Crabtree - - - Did you have discussions, at least at that time, with Mr. Crabtree about what was going to be done after that?

A. I don't know if it was at that time. But I know I was there shortly after.

Q. What - - What was that discussion shortly after?

A. We had discussions on that method that was used up on the Second floor. It did not work, and that we'd have to come up with something that they would accept that would work.

Q. Well, did you have to come up with it, or was the VA or - - going to come up with it?

A. I think it was a - - more of we knew what they wanted, and so that's the approach we took.

Q. And let me direct you to the second page of Mr. Crabtree's [May 10, 1996] letter . . . what it says [in] the very last paragraph.

A. Okay. Where it says, after TEM results, 'You are to advise this office as to what action NSC will take to correct these - - this serious problem.'

Q. Is that the influence that the VA imposed on you at that time?

A. You - - I guess you could say.

(Tr. II/213-14)

In a letter dated May 14, 1996, NSC's Mike Lane advised Caddell's Holmes Gray of the need to change the SOP for wall demolition. He stated that:

Pursuant to [NSC] Standard Operating Procedure that was submitted and approved by the VA hospital, [NSC] was to demolish walls with a cap on top as non-ACM: if walls do not have a cap they are to be inspected by the CPIH by cutting 12" of the bottom of the wall away. The CPIH will mark all that are contaminated for disposal as ACM, the walls not marked to go out as non-ACM.

[NSC] followed this procedure during removal on the second floor, unfortunately, this procedure proved not to be totally effective in finding all the ACM material in the walls. After the work area had been cleared and [NSC] started demolition of the work area ACM materials were found in the demo debris. Air-tests were run by HUB Testing and [NSC] with the results being higher than the clean air samples.

[NSC] proposes to do the following items to prepare the second floor opening to the other trades on-site:

1. Seal off the work area and drains.
2. Establish negative pressure in the work area by installing 10 nam. (10 nam x 1800 CFM = 1800 CFM. Work area = 252,000 CFM/1800 CFM = 4 air changes per day.
3. Install manometers to show negative pressure.
4. Encapsulate all debris in the work area.

5. Large debris, metal, concrete and wood will be removed from the pile and disposed of as non-asbestos material. Remaining debris will be placed in asbestos bags and disposed of as ACM. During this process materials will be kept wet. (Large debris is defined as larger than your hand).
6. OSHA and area samples will be running during all operations on this floor.
7. Worker will double suit and use Decon [Decontamination] on first floor as a remote Decon (removing one suit before leaving the work area; putting on a new suit and then going to the remote shower). Debris will be brought out utilizing buggys. [B]efore leaving the work area buggys will be misted with water.
8. Workers will utilize PAPR respirators during the operation.
9. Once materials have been removed from the floor of the work area, [NSC] will continue demolition of the walls under negative pressure, disposing of large debris as non-ACM and all small loose debris as ACM material. All walls will be checked by [NSC's] CPIH for any hidden ACM material. (Large debris is defined as larger than your hand).
10. After visual inspection by [NSC's] CPIH, Hub Testing [the VPIH] will be requested to give the OK for the floor to be reopened to other trades.
11. The debris in the dumpster will be removed and washed then place in a new dumpster and dispose of as conventional waste. [NSC] will set up wash basins. Workers will wear suits and half-face respirators during this operation. This procedure was discussed with E. James Jackson of the E.P.D. and was approved.

(R4, tab 18)

The A/E, Richard Potter, was forwarded the Lane letter by the SRE. He responded in a letter of May 15, 1996. He advised the SRE, *inter alia*, as follows:

Items 2 and 3: I suggest there should be "to install sufficient HEPA filtered blower units to maintain continuous negative pressure on

the Second Floor as documented by a continuously reading manometer.” (At this time it is important to maintain negative pressure rather than a specific value for this cleanup.)

Item 4: NSC should be asked to explain Item 4. If it is to seal debris as asbestos-contaminated then the material should be removed as asbestos-contaminated. Rather it may be more important to keep the debris wet by misting.

Item 5: Large debris should be washed and a better definition is requested to ensure only non-porous material is included. Suggest the words of the specifications and drawings be used, where the alternative methods for treating the asbestos-contaminated structures are discussed.

Item 6: Suggest you also require samples to be taken on the Third and First Floors as well as outside the work area. If not possible to set up decontamination unit on the Second Floor, suggest you require, as a minimum, an airlock on Second Floor where workers discard their disposable coveralls, etc., and put on a clean suit (of a different color - say yellow) to proceed directly to the First Floor decontamination unit. Also the path should be isolated and marked and cleaned after each shift.

Item 7: NSC should set up an airlock for debris removal where bags and debris can be wetted down - hoses/ nozzles.

Item 9: NSC should assume all remaining materials (i.e., walls, etc. to be demolished) are contaminated, and treated accordingly following the specification. No materials should be considered non-ACM unless cleaned, tested and certified as such.

Item 10: Suggest a light wash down and cleaning of all surfaces left.

Item 11: For the presently filled dumpsters of debris - suggest NSC indicate where they are planned to be disposed off [sic] and contact landfill to determine if they can be disposed of directly as ACM. May need repacking in “bladder bags” or “whole -dumpster” containment.

Mr. Lane responded to the A/E's comments in a letter of April 15, 1996. He modified Item 2 to the following: "Establish negative pressure in the work area." Mr. Lane also changed his previous Items 4 and 5 as follows: "Debris will be double-bagged and disposed of as ACM. All block and concrete will be washed and encapsulated then disposed of as general debris." The balance of his April 14 proposal remained unchanged. (R4 Supp., tab 510, pgs. 20-21)

In a letter dated May 16, 1996, SRE Crabtree responded to the May 14 letter from NSC. He stated that:

This office takes exception that NSC followed the submitted Standard Operating Procedures during the demolition of the interior walls on the Second Floor. The demolition of interior walls began on Saturday, May 4, 1996, without the CPIH observing the demolition process or checking wall cavities for possible contamination. Notwithstanding the above, it is readily apparent from the elevated fiber counts noted from TEM samples and the results of bulk sample testing that the SOP is flawed and needs to be revised. The contract documents clearly state that all building structures, walls, floor coverings, fixtures, systems, equipment and services to be demolished are asbestos contaminated. If the procedures followed by NSC failed to locate and properly dispose of the asbestos containing and asbestos contaminated materials, it is NSC's responsibility to revise those procedures accordingly. Under no circumstances will the government consider additional compensation (whether it be in the form of additional money or additional time) to the contractor for his failure to meet the original contract requirements.

(R4, tab 22)

Mr. Lane testified that the VA overreacted in directing that all of the wall debris piles be removed as ACM. Notwithstanding the fact that several wall debris piles were shown to contain ACM, he stated that NSC should have been allowed to send properly protected workers to wet down and vacuum up each pile and double bag and dispose of the bag as contaminated material, instead of placing the area back in containment. He stated that this would be the "normal

procedure” for dealing with such a situation. He was not aware, however, of the extent of contaminated wall debris that was found. (Tr. III/64-65)

Mr. Lane was cross-examined with respect to his May 14 letter to Caddell revising the SOP:

Q. Are you saying that your original SOP was not effective in locating the ACM in the wall cavities?

A. It was - in the - we didn't find all the ACM in the walls, due to the fact that it wasn't in the bottom, as agreed to do it the first time.

* * * * *

Q. To the best of your knowledge, was your original SOP followed during the abatement of the second floor, up to the time of the May 2nd, 1996 visual clearance?

A. Yes ma'am, according to my knowledge, yes.

(Tr. III/121)

Mr. Lane testified that his letter to the SRE of May 14, 1996, proposing an SOP change, was written because “they were wanting us to at least take one side of all the walls down so they could look in all the - - inside of the whole wall.” He did not identify who “they” were, but presumably referred to the SRE and possibly the VIPH, although both have denied such specific direction and there is no corroboration for Mr. Lane’s statements in the correspondence, minutes of weekly abatement progress meetings (which minutes do not include Mr. Lane as an attendee), or in the testimony of Appellant’s other witnesses. Mr. Perotka’s testimony was far too vague and equivocal to persuade the Board that the revised SOP was somehow “forced” on the Contractor by the VA. With such an allegedly costly change in procedure, one would expect to see some written objection, together with proposals for a less costly alternative. There is nothing of that sort in the record. (Tr. III/67, 79; R4, tab 61)

By the time that Mr. Lane had received the SRE's May 16 response to his April 14 letter, NSC was under a great deal of pressure from Caddell to get the job moving forward. Caddell's Project Manager, Holmes Gray, was threatening to back-charge NSC for the delay costs of all the other subcontractors (in the thousands of dollars) as a result of their problems in gaining clearance to start construction on the Second Floor. (Tr. III/68)

SRE Crabtree testified that, in his view, the Contractor had conceded that the previously approved SOP was flawed by the language utilized in both the Lane and Perotka letters. SRE Crabtree admitted that he did direct the Contractor to fix the SOP. In his own words: "I notified [Caddell] of a problem with their SOP and asked them what they were going to do to fix that problem. But I did not instruct them on *how* to change their SOP." (Emphasis added) He did stress, however, that based on the Second floor levels of asbestos contamination found on May 6-9, 1996, he would not have allowed the Contractor to continue wall demolition on any of the three floors in accordance with the original SOP unless NSC had proven to him that it could be made to work. This, NSC did not attempt to do. Mr. Crabtree stressed that the Contract identified all walls, whether block or stud, as asbestos-contaminated. (Tr. IV/281, 219-20, 229-33)

VPIH Marko denied that he had demanded any change to the Contractor's SOP for interior wall demolition on the Second and Ground floors. He did not "dictate" either of NSC's two letters (5/14/96-Perotka and 5/14/96-Lane) in which NSC proposed to alter the originally approved SOP. Neither did he direct that one side of each wall be completely demolished in order to remove ACM. In his words, "[t]hat was NSC's doing and it was their decision on how to handle the ACM debris." When asked who specifically changed the SOP, he replied, "Mike Lane changed their SOP." The witness similarly denied that he had

“prepared, dictated, directed or influenced” the SOP as it pertained to wall demolition on the First and Ground Floors. (Tr. IV/43-55) We find there to be insufficient evidence to establish that any VA representative directed that one side (or both) of all interior walls be demolished as a part of a revised SOP. (Tr. IV/43-44)

The VPIH was questioned as to why he had passed the Second Floor on the final inspection prior to wall demolition. He testified that NSC was putting pressure on him to clear the area and was uncooperative in assisting him in identifying interior wall conditions. The pressure was intensified by NSC’s Mr. Lane and Mr. Thibodeaux at the third visual inspection. (Tr. IV/41)

In October of 1999, PCM’s Mr. Kasher prepared a “Case Review and Opinion” concerning these disputed claims. He was shown the two Asbestos Analysis Reports prepared by Quantum Laboratories from the air samples taken by HUB on May 9, 1996 (Sample Nos. BF772 & BF773), and to which the SRE referred when ordering the Contractor to recontain the Second Floor. He was critical of the use of transmission electron microscopy (TEM) to analyze the samples. He observed that the total concentration of 0.9072 (BF773) and 0.3564 (BF772) was expressed as asbestos *structures per cc* – not as *asbestos fibers/cc*, as referenced by the specification. He also noted that the sample volumes were recorded as 107.9 liters (BF773) and 126 liters (BF772). Mr. Kasher considered all of these factors to preclude reliable test data upon which to base a recontainment order. He explained that the wrong measurement methodology was used. The Contract calls for PCM – not TEM analysis; and of fibers – not structures. If TEM is to be used, then AHERA requires a minimum volume of 565 liters of air be sampled – far more than was collected on the samples analyzed by Quantum. (R4 Supp., tab 520)

With respect to the bulk samples taken and analyzed by HUB on May 6 and May 9, 1996, and upon which the SRE also relied in ordering recontainment, Mr. Kasher was equally critical. He stated that the Bulk Sample reports of May 6 and May 9, 1996 looked more like reports of analytical results, but without the actual analysis. In his opinion, the reported analysis of 50-55% Amosite asbestos could just as well be a "field guess." He testified that he would not consider such reports sufficient to shut down the work. (Tr. III/327)

When asked what else he would expect to see, the witness testified as follows:

A. I would expect a provision - - let me think about this. I would expect a provision in the contract that would define what you do if you find new asbestos-containing materials outside of containment. It is not uncommon, in significant renovation or demolition projects, that as the project goes on, inspectors miss stuff all the time. Let me clarify here. The AHERA inspector, when he does his inspection, it's rare they find everything. There's always something that's missed, whether it's the gasketing materials on ductwork, or joint compound or drywall. There's things that are missed by inspectors. So, oftentimes, the designer of a project will incorporate a section of the specifications that says if material is identified outside of the containment, this is the procedure - - its either the CPIH or the VPIH will collect a sample, and they'll send it out to a lab, you know, upon the approval of the Senior Resident Engineer, and go from there. But there is no such - there is nothing contractual here at all.

Q. Okay, go on, though, with what would be expected in the industry then. Let's say those samples came back and indicated the existence of asbestos. Would that be similar to these circumstances - a reason to throw the . . . floor back into containment?

A. (After reviewing the stop work specification section). Asbestos containing materials found outside of containment is not a reason to stop the [work]. In fact, if it was, I believe the rest of this building had asbestos in it. The building was full of asbestos. Maybe I shouldn't be so broad in my statement. There was other asbestos containing materials inside this building that were outside the

contractor's work area. The mere presence of asbestos outside the contractor's work area is in no way justification for a stop work order.

(Tr. III/328-29)

Mr. Potter, the A/E for this project, also prepared a "Review and Opinion" relative to this dispute, dated March 30, 2000. He took issue with Mr. Kasher over the VA's reliance on the TEM analysis of the two air samples taken on the Second Floor on May 7, 1996. He stressed that the air sampling and analysis performed by Quantum Labs was *not a clearance sample*, but rather, a sample to determine whether asbestos was present in debris and/or was airborne within the then-uncontained Second Floor area. For the latter purpose, TEM sampling and analysis is appropriate, because it differentiates between *asbestos* and other materials that would not be differentiated in a PCM analysis. For TEM sampling, the analysis results are expressed as asbestos structures, rather than fibers. With respect to the confusion between fibers and structures, Mr. Potter explained that structures can contain many fibers and so could be bigger than an individual fiber, so that an analysis expressed in structures/cc is actually a lower standard than an analysis expressed as fibers/cc. He concluded that the Contractor was not being held to a stricter standard. While the volume of air sampled was less than the minimum 565 liters called for by AHERA, this volume pertained to clearance samples, which were not what was being analyzed, as already explained. (R4, tab 62)

Mr. Potter reiterated in his testimony that structures contain at least one fiber and usually more. He stated that there is no known safe level for asbestos exposure. The clearance criteria of 0.01 f/cc was set because this approaches the limits of what easily can be quantified. The air sample showing a total concentration of .9 structures/cc was much higher than any acceptable level that he would be prepared to breathe. It was so high that, in his opinion, there was

no need to include blank samples to detect possible filter contamination, since any such contamination would be far below a reading of .9 structures/cc. He concluded that the SRE acted responsibly and within his discretion in ordering the Second Floor back into containment, in light of the presence of unacceptable amounts of asbestos in both the air samples and in the many piles of wall debris. (Tr. IV/316-18, 333-36; R4, tab 62)

With respect to the VA's order back into Second Floor containment and the revised SOP for wall abatement and demolition, there are seven sub-claims, designated as #4 through #9, and #11. Most of the seven sub-claims include labor inefficiencies of 40% of payroll for multiple shifts of workers who removed walls and ACM wall debris under negative pressure inside containment – rather than general demolition and removal of walls outside containment. The 40% factor is asserted as a reasonable approximation of the additional effort required to demolish structures while in respiratory protection gear. In addition, the sub-claims include costs of additional materials used to recontain the Second Floor as well as the “wasted” materials used to wrap the walls on the First and Ground Floors – some of which work was already performed prior to revision of the SOP. There are miscellaneous costs of equipment and supplies, as well as markups for overhead and profit. Altogether, these seven sub-claims total \$646,007. (R4 Supp., tabs 509-514, 516)

DISCUSSION

This Contract, on Note 5 of Drawing No. 3-AR-1, makes it clear that debris from wall demolition must be considered to be “contaminated internally and externally with asbestos containing fireproofing” *unless* the walls can be “decontaminated by opening the cavities and vacuuming with HEPA-filtered vacuum cleaners and adequately [protected] against further contamination

during asbestos removal work.” In order to effectuate this exception to the Contract requirements, the Contractor must demonstrate to the VA that it can, in fact, clean and protect these walls (both inside and outside) from further contamination so that they can be demolished outside of containment. If an SOP detailing the procedure to be followed is presented and approved, this allows the exception to demolishing and disposing of wall debris as ACM.

The essence of Appellant’s argument concerning the interior wall abatement and demolition SOP is that the VA, by ordering that it be revised, constructively changed the terms of the Contract. In order to determine whether the VA’s actions constituted such a change, it is necessary to first review the standards to be applied. Generally, when the Government informally orders a method of performance more stringent than that required by the contract, a constructive change can be found to have occurred. *Len Co. & Associates v. United States*, 385 F.2d 438, 443 (Ct. Cl. 1967); *Aydin Corp. v. Widnall*, 61 F.3d 1571, 1578 (Fed. Cir. 1995). Our Board stated that in order to recover under the Changes clause of the contract, on the basis of a directed or constructive change for work beyond that required by the contract, it must be clear that:

each of the other elements of the standard ‘Changes’ or ‘Extras’ clause has been present – the contracting officer has the contractual authority unilaterally to alter the contractor’s duties under the agreement; *the contractor’s performance requirements are enlarged; and the additional work is not volunteered but results from a direction of the Government’s officer.*

John R. Hundley, Inc., VABCA No. 3494 *et al*, 95-1 BCA ¶ 27,494 at 137,025, *citing Len*, at 443. (Emphasis added)

A decision by the Armed Services Board of Contract Appeals (ASBCA) gives insight into just how the Government, whether intentionally or not, can change a contractor’s reasonably anticipated performance methodology. There, the Appellant had bid expecting to use a compliant negative pressure glove bag

method for asbestos removal, but without the necessity for actually constructing a containment. This method was allowed by OSHA, whose relevant standards were incorporated in the contract by reference. Under OSHA, negative pressure glove bags were considered to be negative pressure enclosures. Through its interpretation of its own latently ambiguous specification calling for a “negative pressure enclosure,” the Government required construction of a negative pressure mini-containment in which glove bags were to be used. The ASBCA found that the Government had constructively changed the method of performance that the contractor had reasonably relied upon when submitting its bid. *Superior Abatement Services, Inc.*, ASBCA No. 4716 *et al.*, 96-1 BCA ¶ 28,228

In the *instant* appeal, the Appellant argues that the SRE changed its manner of cleaning, inspecting and demolishing the interior partition walls of the lower three floors of the hospital. The SRE expressed his belief that the SOP was not working and that NSC must “advise this office as to what action NSC will take to correct this serious problem.” He did testify that by his language he intended for the SOP to be revised. While the SRE admits to having directed NSC to alter its wall abatement and demolition SOP, he denies having dictated the methodology for the revised SOP that called for demolition of one complete side of every drywall partition and demolition of all block walls “to a point where they can be adequately inspected.” The Board has previously found that the record supports the SRE’s position in this regard.

Regarding removal of the wall debris, the record establishes that the presence of ACM in the wall debris throughout the Second floor was pervasive. On May 10, 1996, having received positive test reports on the six May 9 bulk samples (an earlier set of four positive results having been taken on May 6 and received on May 9), SRE Crabtree directed Caddell “to provide this office with the corrective actions NSC will take to rectify the problem.” The SRE testified

that he concluded that the SOP was not sufficient to avoid asbestos contamination when the interior walls were demolished subsequent to removal from containment. When we consider that two different sets of random bulk samples were taken three days apart and from widely dispersed Second Floor wall debris piles, and that all ten contained unacceptable quantities of amosite asbestos, this action taken by the SRE was a reasonable reaction to the situation.

It must be stressed that the SOP originally approved by the VA had not been pre-approved prior to Contract award, even if NSC had based its bid to Caddell on the expectation of utilizing that particular method of interior wall abatement and demolition. Paragraph 1.13.A of Specification Section 01569 states that: “[t]he SOP must be modified as necessary to address any specific requirements of the project and must be submitted for review and approval prior to the start of any abatement work.” The above-quoted specification presupposes that regardless of whether the subcontractor’s methods had worked on other projects, it nevertheless must be shown to be appropriate for abatement and demolition of the walls at this particular VA hospital building. The fact that the VA had earlier approved NSC’s post-award SOP did not negate this requirement. As we read this passage, if the approved SOP subsequently fails to actually “address any specific requirements of the project” (*e.g.*, eliminating contaminated wall debris), the SOP must be further modified to rectify the situation. There is no doubt that the original SOP, for whatever reason, failed to prevent asbestos contamination of the debris from general demolition of interior walls. Therefore, the SRE, acting reasonably under these circumstances, did not change the terms of the Contract. He merely required that the Contractor revise its SOP so that such contamination not reoccur on the Second Floor or the other two floors to be abated. This was necessary because the post-containment wall debris contamination found on the Second Floor was in conflict with the

exception to Drawing Note 5 that had been granted by the VA in approving the original SOP. Once that SOP was shown to be ineffective, it had to be revised before the exception could once again be granted by the VA. By calling for that revision, the SRE did not “enlarge” Appellant’s performance requirements. To the contrary, he simply enforced them.

The Contract made no distinction between block and stud walls. All were to be considered contaminated *unless opened and demonstrated to be clean*. The original SOP, consistent with the Contract, also made no distinction between the two types of interior walls. The comments made by the A/E in reviewing the original SOP proposal are consistent with the view of the Government that both types of walls were governed by the SOP. There is no indication that, at the time that SOP was proposed and adopted, the Appellant held a contrary position. The credible testimony of the HUB technicians (Marko and Deal) establishes that both the stud walls and the block walls were contaminated with Amosite asbestos.

There is no credible evidence of any attempt by the Contractor to explain to the VA how (or whether) the originally approved SOP could be made to work without the drastic action of removing an entire side of each wall. Note 5 of Drawing No. 3-AR-1 mentions wall decontamination “by opening the cavities,” followed by HEPA vacuuming. From this, Appellant seems to argue that the VA had somehow guaranteed that the wall opening process delineated in the original SOP would be workable. That argument lacks substance. The drawing note refrains from specifying the size, number and location of such openings to wall cavities. Those details are left to the Contractor. The one-foot high, linear opening at the base of each wall cavity, together with access from the cavities at the top of the uncapped walls, simply did not allow the walls to be *satisfactorily* cleaned of all asbestos. There was nothing to prevent NSC from proposing to cut

another linear opening, say at each wall's vertical half-way point, in order to access areas where the HEPA vacuuming wasn't reaching contaminated material. There is no evidence that the Contractor ever proposed such an SOP revision to the VA. For reasons known only to NSC, it voluntarily chose the extreme measure of tearing down the interior walls under full containment. We note that the record indicates that NSC was under considerable pressure from Caddell to do whatever it took to finish its demolition and cleanup activities to make the Second Floor available for Caddell's other trades.

Mr. Lane's testimony that industry custom would allow the continuation of wall demolition removal *without containment*, so long as the contaminated debris piles were each wetted and bagged, may be reasonable where there is *minor* asbestos contamination of a small percentage of debris piles. Where, as here, asbestos contamination was so widespread throughout the Second Floor, we will not substitute our judgment for the SRE's in ordering the Contractor back into containment. We are likewise unimpressed with Mr. Kasher's testimony that essentially second-guessed the VA's Second Floor recontainment order. Not only was there pervasive contamination of the debris piles, but some of the walls were yet to be demolished at the time. While the two air samples may not meet the proper standards for TEM sampling, we are satisfied that the bulk sampling results are accurate. In our view, the presence of Amosite asbestos throughout the debris was itself sufficient to justify recontainment of the Second Floor. Specification Section 01569, paragraph 1.7.2, is quite explicit in identifying the fireproofing material to be removed as containing up to 60% Amosite asbestos and "very friable." Being very friable, any disturbance of the debris piles in the process of removal without containment (and under negative air conditions) would pose too great a risk of release of the Amosite fibers into the air of an *uncontained* Second Floor. The Contractor neither challenged the

bulk sampling results at the time they were produced nor did it attempt to itself sample Second Floor debris. The fact that, after recontainment, the Contractor spent another several weeks removing demolition debris underscores the sheer impracticality of encapsulating each contaminated debris pile without recontainment, as suggested by Appellant's witnesses.

The Appellant points to the actions of the VPIH in originally clearing the Second Floor for removal of the containment. It is ultimately the responsibility of the Contractor to assure that the interior walls are free of contamination before removing containment barriers. The CPIH had advised the VPIH that the walls were clean and subsequent testing by the VPIH failed to disclose ACM on the walls. However, the VPIH could not be sure that all walls had been cleaned and inspected by the Contractor and was to some degree dependent on the Contractor's assurance that the walls were clean. By failing to comply with the Contractual requirement to demolish all contaminated walls while still in containment, Appellant, and not the VPIH, was the party responsible for the consequences - including the need to recontain the work area.

According to the record, there were walls still standing at the time that the VPIH told NSC's foreman to cease work in the contaminated condition that then prevailed on the Second Floor. Paragraph 4 of the originally-approved SOP stated that "Contaminated walls will be left in place and *demolished under full containment* and negative air conditions." (Emphasis added) In a working hospital, to allow asbestos-contaminated walls to be demolished outside of containment would be reckless in the extreme, as would having workers bagging and disturbing as many as seventy-five piles of asbestos-contaminated rubble.

The Appellant's expert, Mr. Kasher, attempted to raise doubts about the validity of the two Second Floor air samples analyzed by Quantum Labs. His position was that TEM air sampling/analysis was inappropriate for clearance

sampling. However, the VA's expert, Mr. Potter, explained that these were not clearance samples, and that TEM sampling and analysis would show whether or not the suspect airborne substance was actually asbestos. Actually, the record establishes that the VPIH had already done (PCM) clearance sampling prior to releasing the Second Floor from containment. Mr. Potter also explained that while the TEM analysis reported structures/cc rather than fibers/cc, this did not invalidate the result. Because structures have one or many fibers, an analysis that reports structures/cc would not overstate the degree of *asbestos fiber* contamination. Based on Mr. Potter's report and testimony, the Board has concluded that the air sampling results upon which the SRE in part cited to justify ordering Second Floor recontainment were valid.

Mr. Kasher also expressed the view that the Contract did not authorize the SRE to order the Second Floor back into containment because of the presence of asbestos in the rubble piles. He was in error. Consistent with the description of the amosite asbestos fireproofing as very "friable," Specification Section 01569, paragraph 1.1.2.B, requires that the "[p]reparation, demolition, *removal and disposal* [of ACM] be done "under full containment." (Emphasis added).

Mr. Kasher's opinion that the stop work order was unjustified is likewise unpersuasive. The VPIH observed the workers demolishing walls while wearing no respiratory protection whatsoever, despite his prior warning to the NSC foreman of the danger involved. Specification Section 01569, paragraphs 1.3.A, 1.3.B, justifies stopping work and initiating fiber reduction activities whenever there are excessive airborne fibers inside containment (0.5 f/cc) or outside containment (0.01 f/cc). The TEM analysis showed a sample with *at least* 0.9 f/cc (since structures contain fibers). Again, in light of the two sample readings, both of which exceeded the limit for areas outside containment, together with the extensive amounts of contaminated rubble piles, the only practical solution open

to the SRE was to stop the work until the Second Floor was recontained under negative air conditions to assure no further contamination of an uncontained Second Floor area. This was the responsible course of action.

Accordingly, that portion of this Appeal seeking costs associated with the seven sub-claims arising from the Second Floor recontainment order and the revisions to the SOP is *DENIED*.

CLAIM CATEGORY 3, EXCESSIVE INSPECTIONS

FINDINGS OF FACT

The Appellant asserts that with respect to both the First and Ground Floor inspections prior to clearance, the VA, through its VPIH, unreasonably prolonged the process by failing to remain in containment until the areas could be passed. The VA responds that on the early inspections that were discontinued, the amounts and degree of visible contamination were so pervasive that a complete recleaning by NCS was warranted before it requested another full inspection.

Sub-claim 10, The First Floor

Specification Section 01569, Paragraph 3.7.7.A, VPIH FIRST VISUAL INSPECTION, reads as follows:

A. The VPIH will perform the full visual inspection for the complete visual removal of all asbestos-containing material, asbestos-contaminated material, asbestos-contaminated elements and all other materials specified to be removed from the work area. The VPIH will advise the Resident Engineer of the acceptability of the work area or may request that further cleaning be required. The VPIH, on the instruction of the Resident Engineer, may take air samples to obtain a better understanding of the thoroughness and completeness of the abatement and the readiness of the work area for encapsulation.

Specification Section 01569, Part 3.8, FINAL INSPECTION AND TESTING, reads, *inter alia*, as follows:

3.8.1 GENERAL

A. Notify Resident Engineer, 12 hours in advance for the performance of the final visual inspection and testing. The final visual inspection and testing will be performed by the VPIH starting as soon after the conclusion of the final cleaning as the contractor agrees, provided sufficient notice is given and a full staff is available for the work.

3.8.2 FINAL INSPECTION

A. Final inspection will include the entire work area, the personnel decontamination facilities, all polyethylene sheeting, and all seals over doorways and other openings. If any debris, residue on surfaces, dust or other matter is detected, dust samples may be collected and analyzed at the discretion of the VPIH to confirm visual finding. When the area is visually clean the final testing will commence.

B. The contractor's foremen responsible for the individual areas and a cleaning crew shall accompany the VPIH on this visual inspection. The VPIH may request additional cleaning before accepting any area and the foreman and cleaning crew will immediately correct any deficiencies. In the event that the VPIH determines that the amount of cleaning necessary to correct deficiencies is such that too much time will be required to achieve an acceptable condition, the inspection will be terminated and the VPIH will provide a written request for further cleaning in the area. Following this further cleaning, the inspection will be rescheduled and shall include the whole work space.

3.8.3 FINAL TESTING

A. After a satisfactory final visual inspection by the VPIH, the VPIH will undertake the final air testing. Air samples will be taken and analyzed in accordance with the procedures for PCM specified elsewhere in this section. At the discretion of the Resident Engineer, TEM analysis may be employed if PCM clearance levels are found to be unobtainable. TEM analysis will be done in accordance with the AHERA procedures. If release criteria are not met, the contractor shall repeat final cleaning and continue decontamination procedure

from that point. Additional inspection and testing will be at the expense of the contractor.

(R4, tab 4, Section 01569, pgs. 109-111)

In the HUB Daily Log for July 30, 1996, VPIH Marko made the following relevant entry:

HUB personnel conducted a visual inspection of the 1st Floor on 7/29/96 from approximately 1930 to 2030. Numerous walls in area #1 were not adequately demolished for us to conduct a thorough visual inspection (some were not opened at all). Also, every door frame inspected had visible debris on top. Walls (both plaster and cinder block) that were open were briefly inspected and visible ACM was readily identified within the wall cavities. I asked the NSC supervisors if Areas #2 and #3 were similar in the extent of wall demolition and cleanup of the cavities, and they indicated they were similar. Therefore, it was readily apparent that the request for visual inspection was premature, and that further wall demolition and cleanup was required. Therefore, HUB personnel ceased the inspection without inspecting the other surfaces.

(R4 Supp., tab 515, pg. 2)

The KEM Log for July 29, 1996 (prepared by CPIH House) recorded that at 2000 hours, NSC was bagging out of Area #1 of the First Floor; that the HUB inspectors had finished their visual inspection and wanted more work on the walls and above the door seals; and, that demolition of walls continued from 2200 until bag out and moving off-site at 0500 hours. (R4 Supp., tab 515, pg. 9)

The KEM Logs report the daily chronology of activities on the First Floor. On July 30, at 1900 hours, CPIH House met with HUB's IH Deal to discuss progress, and NSC bagged out until 0310. On July 31, CPIH House met with IH Deal and another IH from HUB. From 2000 hours until 0500, NSC was bagging out and fine cleaning. KEM took clearance samples from various areas of the First Floor. On August 1, KEM was still running clearance samples on the Second Floor, while the NSC had crews working also on the Ground Floor. On

August 2, the Contractor had met with the HUB inspectors at 2130, after beginning the second shift. NSC was working on both floors, but was bagging out from Area #3 of the Second Floor. On August 3, on the evening shift, starting at 2000 hours, the NSC crew was beginning demolition of walls and bagging out from Areas 1 and 3. Samples were taken at 0500. On August 4, NSC's evening crew was divided between work on the Ground and First Floors. On the First Floor, demolition and bagging out continued. On August 5, demolition, bagging out and fine cleaning continued until a visual inspection was performed by KEM at 0430. On August 6, the evening crew was fine cleaning the First Floor. CPIH House noted that between 2100 and 0100 hours, "HUB [VPIH Marko]" performed a visual inspection of areas 1 and 3 of the First Floor, and noted that there were "a couple of problems to be corrected." Thereafter, until 0500, the NSC crew continued bagging out and fine cleaning on the First Floor. VPIH Marko recorded the following note in the HUB Daily Log of August 6: "First Floor - NSC instructed to remove all walls that have exposed cracks, crevices, or openings that would allow ACM to fall within the wall cavities." (R4 Supp., tab 515, pgs. 10-17, 3)

On August 7, NSC's day shift worked on the two floors. From 0730 until 1700, the First Floor crew continued bagging out and fine cleaning. The evening crew worked on both floors, bagging out and fine cleaning the First Floor. On August 8, NSC's day shift was split between the two floors. They were fine cleaning the First Floor. During the evening shift, at 2000 hours, KEM began running First Floor clearance samples. By a Final Visual Inspection Form dated August 8, KEM's CPIH House reported his final visual inspection of the First Floor. He stated that the inspection met VA specifications and that laboratory analysis of the PCM air clearance samples showed favorable results "attached." results. At 2000 hours the VPIH was requested to conduct his final visual

inspection. The clearance protocol agreed upon by CPIH House and VPIH Marko called for three samples per area (nine total), 2,500 to 3,000 liters (of air) per sample, non-aggressive testing, and a clearance level of 0.010 f/cc. Eight of the nine area air samples were all below 0.010 f/cc, with Sample A-1358 from the main hall in Area 1 reading 0.010 f/cc. (R4 Supp., tab 515, pgs. 18-21, 6-8)

On August 9, NSC's day crew worked on the Roof and Ground Floor. They did no work on the First Floor. On the evening shift, while most work was done on the Ground Floor, a crew was bagging out from Area 1 on the First Floor. On August 10, both shifts were split working on both floors. On the First Floor, the day shift was fine cleaning /detailing, and continued doing so during the evening shift. CPIH House noted that "HUB started a visual today but aborted." There is no KEM log for August 11. On August 12, some of the day crew was demolishing on the Ground Floor while the rest were continuing to fine clean/detail on the First Floor. The evening crew demolished on the Ground Floor, while bagging out and fine cleaning the First Floor. At 0215, KEM began clearance sampling on the First Floor and delivered the samples to the lab for RUSH analysis at 0535. On August 13, NSC was working on both floors. On the First Floor, between 1335 and 1600 hours, KEM and NSC personnel (with HUB standing by) performed a visual inspection of the First Floor, finding that "a couple of items need [to be] addressed in Areas 1 and 3," with Area 2 looking good. Some further fine cleaning was done until the shift ended at 1700. The evening crew continued fine cleaning/detailing on the First Floor. On the HUB Daily Log for August 13, VPIH Marko reported that he was awaiting the Subcontractor's clearance sampling results, with cleaning having been done and Mr. Perotka having addressed the issues pointed out at their meeting. He expected a request for a HUB visual inspection that night. (R4 Supp., tab 515, pgs. 21-29, 4)

On August 14, at 0810, the HUB personnel entered First Floor containment for a visual inspection. At 0930, HUB ended the inspection, stating that the area was still too contaminated. Thereafter, NSC continued to fine clean. That evening, the HUB team returned to the First Floor and at 1900 began a visual of Area 3 with a KEM employee (CPIH House) in attendance. HUB's VPIH Marko discontinued the visual at 1930 hours. Mr. Marko recorded his observations made during HUB's August 14 (morning) visual inspection. On his list of 12 items, he reported that the Contractor was still cleaning the ceiling pan lip, there was still fireproofing on the black iron in the wall cavities and that despite wet wiping, there was still fireproofing on some of the beams and on some of the surfaces below beams. He also observed that some of the electrical outlets and switches were "still dirty." Because he ended the inspection at that point, he noted his intention to check the other items (such as door frames, thermal pipe system, etc.) later. (R4 Supp., tab 515, pgs. 30-31, 5)

On August 15, at 1100 hours, CPIH House reported: "NSC personnel along w/KEM are inspecting 1st floor areas / finding very little ACM." Thereafter, they met in the SRE's trailer to discuss options for closing out abatement on the First Floor and planned on running screen samples and final air samples. The evening crew worked only on the Ground and Third Floors. On August 16, NSC's day shift worked only on the Ground Floor, demolishing walls and conducting air tests. The evening crew performed housekeeping chores on the Ground Floor and at 2200 some NSC personnel were "reincapsulating on the 1st floor." There are no KEM Logs for August 17. On August 18, at 2000, CPIH House reported that HUB was running clearance samples on the First Floor. (R4 Supp., tab 515, pgs. 32-36)

The NSC foremen kept Daily Operational Logs. They generally were consistent with the KEM Logs regarding cleaning by NSC and inspections by

HUB. The following Logs are cited only because they add information not recorded on the KEM Logs. On July 30, the foreman reported that between 0830m and 0900, VPIH Marko came to Caddell's office and showed Jim Eldridge wall pictures taken during the visual inspection. The VPIH also had a picture "with about a quarter-size piece of debris and said that it's everywhere on the walls." On August 2, from 2030 to 2130 hours, VPIH Marko and his HUB team conducted a visual inspection of floor, deck, walls, etc., in one of the three sections of the First Floor. After an hour they left, stating that it would be a "waste of time" to inspect the other two areas. On August 3, at 0630, the foreman was informed by NSC's night shift supervisor that HUB did not pass the First Floor visual. He conveyed to the foreman what HUB expected to be done in the way of cleaning. On August 11, from 1500 until 1700, HUB visually inspected the First Floor. VPIH Marko advised that the visual did not pass, and that NSC had to do more cleaning in all three areas of the floor. On August 15, HUB spent more than eight hours, from 1900 to 0400, performing a visual inspection of the First Floor. As a result, HUB's IH Deal passed the First Floor. (R4 Supp., tab 515, pgs. 39, 46, 47, 63, 73, 94)

While neither CPIH House nor the foremen were called as witnesses, Mr. Perotka testified concerning the events surrounding visual testing on the First Floor. He stated that at the time of HUB's first visual inspection (July 29, 1996), NSC had completed its removal work on the First Floor and KEM had run PCM sampling with readings below 0.01 f/cc. At that point, NSC had scraped all fireproofing, scraped the deck and wet-wiped all additional interior areas, including pipes, and all mechanical, plumbing and electrical apparatus, including the remaining sides of the demolished interior walls. After scraping the deck, NSC then brushed or steel woolled the beams and came back with

power washers (low pressure binks), and washed the deck down and brought “everything down to the floor.” (Tr. II/67-69)

Mr. Perotka was present during HUB’s first visual inspection of the First Floor. He testified as follows:

A. They went in, found a few areas that they said it all needed to be re-cleaned.

Q. And what happened then?

A. So we went back in, looked at it and re-cleaned it.

Q. All right. Did they stay in while you re-cleaned it?

A. No.

Q. Why not?

A. They thought it was too dirty.

Q. What - - had you looked at the site?

A. I’d been in, yes.

Q. And it was too dirty?

A. I figured - - I thought it was up to speed.

Q. Why do you say it was up to speed?

A. I felt that we had done everything that we needed to do to clean it out. I didn’t see any gross debris anywhere.

Q. Did you inspect all the corners and pipes - - and whatever pipes were there in the doorways?

A. I walked the area. I didn’t inspect every nook and cranny, but I walked the area.

Q. Okay. And the degree of cleaning that had been done on this floor, was it your experience that that was the same level of cleaning that had been permissible on other jobs that you'd done?

A. The degree of cleanliness was the same as the Second Floor, when they passed the Second Floor.

Q. Okay. All right.

A. But as far as the First Floor, we had taken out the cavities, so there was no question that there was anything else in the walls.

Q. So your employees then did - then did the cleaning?

A. Yeah, we went back in after it was failed. We - - we walked the whole area, we wet wiped again, and . . . and HEPA vac'd.

Q. Did they do it under your direction?

A. Yes.

Q. So you walked the floor with them?

A. Me and my supervisors, yes.

Q. All right. And how long did that process take to do the re-cleaning?

A. I think we just spent another day or so in there.

Q. From your observation, did the area need re-cleaning?

A. I didn't think so. I didn't think - - I think if we got in there and did a visual, if he [the VPIH] found something and we took care of it - - we'd just take care of it and move on.

(Tr. II/73-76)

Mr. Kasher testified that it is normal practice for the owner's CIH to remain within the containment area and to do a full inspection, and to point out

to the contractor's cleaning crew problems that can immediately be dealt with. In his professional opinion, VPIH Marko acted unreasonably and in violation of the contract provisions calling for a "full inspection" by the VPIH on the first visual inspection after having been notified by the CPIH that the area was cleaned and ready for inspection. He concluded that VPIH Marko had unnecessarily prolonged the inspection process by not having the HUB team remain within the containment when HUB found visual evidence of contamination. (Tr. III/334-43)

VPIH Marko was asked his opinion why NSC repeatedly failed the visual inspections on the First Floor. He testified as follows:

A. Because we kept finding visible debris on many surfaces when we went in there. They had used power washers to remove a lot of the asbestos off the beams. It was quick and easy way to get it off the beams, but it created such a large problem in spraying asbestos material and splattering that downward and on different surfaces and into cracks and crevices and it really made a mess and I don't think they bought themselves any productivity in using those power washers because it just made their clean-up so difficult and our inspection process so difficult because there was so much debris still remaining on all the surfaces. We kept going in there, we'd show them, we'd go to different areas, we'd show them some more. We'd stay in there for an hour, an hour and a half. We kept finding the same material throughout the location and we asked them to "please clean this up and call us back when you've cleaned it all up. You guys understand what we're looking for," and they just kept calling us back in the next day; minimal cleaning had taken place between each inspection.

Q. Are we talking about little dime-sized or pea-sized pieces that you really have to crawl around on your hands and knees to find? Describe to me what you're talking about when you keep having to go back and back on visuals.

A. Well, for instance, you would go up to a beam and start looking at the beam and there would be pea-sized pieces to larger pieces. Then you would go down into an area that was a crack or crevice

where power washing had blown debris down in there and you could scoop out a handful of debris in those areas; and you could find that as a trend throughout the whole area. You would go around, look in several areas and you would find the same level of cleanliness; and the contract was very specific. It said all visible ACM needed to be removed. They understand that, we understood that and yet, there was such a reluctance from them to go in and clean it up and get on with it.

Q. Is it true that every time you found some debris, you immediately left the site?

A. No, we would stay in the area, inspect it, inspect up different areas and get just a general impression of the overall cleanliness of the entire containment. Usually we went in with two to three inspectors; we split up and did different areas. We'd go off for an hour, inspect all surfaces within each area that we were assigned. We'd come back. We'd conference. We were all finding the same type of problems throughout the containment. It was apparent they weren't done cleaning the areas.

(Tr. IV/56-58)

HUB's IH Deal, who had worked with and been supervised by VPIH Marko, was involved with the visual inspections on the Second and First Floors. With respect to the conditions that he repeatedly observed after NSC had requested visual inspections on the First Floor, he testified as follows:

A. Okay. The area was not clean. We were finding not just - - I mean we had - - the specifications and general standards [are], look for visible debris. We were finding chunks of debris. It was - - there was not just little dusting. We were finding sizes big as a golf ball, even bigger in various areas.

It was - - I do not believe that the situation - - that the area could have been inspected by any qualified industrial hygienist at the time, before we went in. So the area, even though it did have the - - we did have some air samples that were presented to us, so their - - their air wasn't that bad. But . . . we went in and we would point

out - - we would point out - - we would go through and say, inspect ten or fifteen beams, and all 10 or 15 of them were - - out of say 10, 9 would be dirty, you need to re-clean the beams.

And afterwards, they would clean just those ten that we inspected. And then we'd go back in the next day or the day after, same thing. They would inspect - - they would clean what specifically we told them we found was dirty. They wouldn't - - you know, if something is ubiquitous throughout the area . . . there's not a whole lot [of] point in inspecting every single one of them, if you've got 500 beams. If you inspect 10 [and] 9 of them are dirty, you can assume that probably a very large percentage of the rest, about 450 of the 500 are going to be dirty.

So we never just walked in and found just one thing. We always walked in and checked several different areas. There [were] groups of us going in. Yeah, it was - - I mean it was not an over-inspection by any means. We went in and . . . the debris that we found during our inspections would have, without a doubt, posed [a] significant health threat to construction workers coming back into the area and hospital staff, if the area was not cleaned before they reoccupied. There is no doubt in my mind that would have occurred.

(Tr. IV/152-54)

Sub-claim 12 – The Ground Floor

On October 17, 1996, NSC notified the VA that the Ground Floor was cleaned and ready for a visual inspection. HUB personnel reported that they were concerned over high fiber counts inside containment. They took air samples and based on their concern over the results, shut down the work after the end of NSC's October 17 evening shift. The Government failed to submit the air test reports on which the VPIH based his shut down order of October 17, 1996. The NSC Logs and certified payroll reports indicate that NSC did not again perform any productive work, other than custodial and security tasks, until HUB's first visual inspection on October 21, 1996. According to the payroll reports, a total of 179 worker hours were charged to NSC over this three-day

period. The composite basic hourly labor rate for this period of time has been calculated by NSC at \$13.33, and is reflective of the several different pay rates for particular levels of experience and supervision. (R4 Supp., tab 517)

The HUB inspectors conducted their first visual inspection of the Ground Floor on October 21, 1996. On the HUB Daily Log, VPIH Marko recorded the inspectors' observations and conclusions:

The inspection commenced in Area #1. The first room inspected revealed debris was still present on the beams, conduits, pipes, ducts, walls, beam columns and on the floor. In addition, a HUB inspector located a large sum of fireproofing [that] still remained in the wall and where beams meet the wall. The inspection of other rooms throughout the Area #1 revealed similar accumulation of visible debris remained. Also, equipment (contaminated) was still present in the containment.

NSC supervisors Gerardo Vasquez, Pablo Cardena, and Ramiro Sanchez were present and shown the debris on the surfaces that we inspected. HUB asked NSC supervisors to continue to clean all these surfaces throughout the entire containment before requesting another inspection.

(R4 Supp., tab 517, pg. 9c)

At NSC's request, the HUB inspectors returned for a second inspection of the Ground Floor on October 23, 1996. In his report to SRE Crabtree, VPIH Marko related, *inter alia*, the following:

As requested by NSC and their CPIH, HUB Testing Laboratory personnel conducted a second final visual inspection of the Ground Floor containment on October 23, 1996. The inspection began in the southeast corner of Area #3. HUB personnel immediately began to identify visible debris on the on the beams, conduits, ducts, pipes, tracks in the floor, lips on the ceiling deck, beam columns and sprinkler heads. As the inspection continued, similar debris was identified on these surfaces in adjoining areas.

NSC supervisors Gerardo Vasquez, Pablo Cardena, Ramiro Sanchez, and KEM IH Walt House were present during the inspection. As

debris was identified by HUB personnel, NSC supervisors and Mr. House were arguing that the material was not asbestos or denying that they could visually see the same debris. [None of these named individuals testified]. They contended that the area was clean. I then presented a page from NSC's procedure manual (attached) that defines their standard regarding cleaning and encapsulation. At this moment, Gerardo Vasquez became irate and began to utter profane language, make obscene statements, and attack our professionalism. Based on these statements, HUB personnel unanimously determined that the inspection should not proceed under these conditions, and the inspection was terminated.

All HUB personnel agreed that additional cleaning was required before an additional inspection could be requested. It was also our belief that the remaining debris identified during the inspection of Area #3 was of similar accumulation as noted during our inspection of Area #1 two days earlier. Therefore, no apparent progress had been made in cleaning the containment between visual inspections. I informed [CPIH] House that additional cleaning was required, and to submit a notification to [SRE Crabtree] for the next visual inspection.

(R4 Supp., tab 517, pgs. 9e, 9f)

Because of the continuing dispute between NSC and the VA over the level of cleanliness and the necessity for repeat inspections, NSC contacted the Environmental Protection Division of the Georgia Department of Natural Resources (DNR). The Contractor asked that an inspector visit the hospital to conduct an independent investigation of the abatement procedures and conditions on the job site. After following the proper procedures, NSC arranged for the DNR inspection. Mr. Tony Dunn, an Environmental Specialist II, was qualified and experienced in inspecting for asbestos and lead contamination. He came to the site, donned the proper protective clothing and respirator, and entered the Ground Floor containment area to perform a full inspection of the project. He was inside for almost one hour. He observed NSC workers misting the area, watched for improper removal of asbestos, looked for any asbestos

debris and checked the functioning of the negative air pressure apparatus. He saw nothing untoward. He looked in crevices and cracks but could find no evidence of asbestos debris. He then wet wiped an area and had the sample later analyzed. The lab determined that there was no evidence of asbestos on the sample. His testimony conformed with his February 5, 1997 Trip Report. (Exh. A-1; R4 Supp., tab 517, pg. 66; tr. I/170-82)

The Project Daily Logs, kept by the NSC shift supervisors, provide a contemporaneous record of job progress. On October 25, 1996, NSC requested another inspection by HUB. Thereafter, the HUB inspector(s) made several more inspections of the First Floor, each time discontinuing because they considered the area too dirty to continue. HUB performed visuals on October 28 (failed), October 31, and November 1-6. Finally, after several meetings between NSC, Caddell and SRE Crabtree, and numerous complaints over the slow progress of the HUB inspectors, including observations that they sometimes repeated inspections of areas they had previously inspected, the Ground Floor was passed on November 7, 1996. (R4 Supp., tab 517, pgs. 66-109)

The Board's examination of NSC's certified payroll reports for the period of October 25 through November 7, 1996 establishes that a total of 1,844 labor hours were expended by NSC workers in cleaning and standing by while HUB continued its inspections of the Ground Floor. The wage rates paid the several categories of workers support the composite hourly wage rate of \$13.33 calculated by NSC. (R4 Supp., tab 517, pgs. 1, 189-203)

VPIH Marko was asked his opinion why NSC failed the visual inspections on the Ground Floor. He testified as follows:

A. Again, we'd go into the areas and find visible debris on beams, on floors, cracks, crevices, any of the remaining polyethylene, on any of the remaining wall surfaces, on any of their equipment.

[There was an objection from Appellant's Counsel over the use by the witness of the term "we." VPIH Marko stated that there was a team of HUB inspectors, to which he referred, but that he was only testifying concerning his *personal* observations.]

Q. When you found this asbestos on the Ground Floor, what type was found?

A. It was amosite asbestos. . . . [T]here shouldn't be any doubt that what we're seeing, what we've been seeing for the last ten, eleven months that looks like fireproofing is fireproofing, whether its wet, whether its dry.

(Tr. IV/61-62)

The Contract, Specification Section 01569, paragraph 1.1.2.B, clearly identifies fireproofing as asbestos-containing material. Paragraph 1.7.2.D notes that the fireproofing material contains "up to 60% amosite asbestos and is very friable." (R4, tab 4, pgs. 4, 38)

DISCUSSION

Sub-claim 10, The First Floor

Based on the record in this appeal, the Board concludes that the Government's repeated refusals to pass the First Floor visual inspections were justified. It makes little difference whether the concurrent air samples taken inside the containment showed safe levels of asbestos fibers according to the Contract. The inspections were for *visible* asbestos contamination. The visible remnants of fireproofing material were described by the Contract as "very friable" amosite asbestos. If this material was overlooked or left in place and later disturbed, the fibers would then release into the air. That could create, as IH Deal so emphatically stated, a "significant health threat" both to construction workers and hospital personnel. When the HUB team repeatedly found areas

within both floors that contained pervasive visible asbestos-contaminated debris on the beams, in the walls and crevices, and on other surfaces and equipment, it was justified in terminating each inspection until the Contractor made a more thorough effort to clean the areas. Both VPIH Marko and IH Deal offered persuasive testimony of the asbestos-contaminated conditions repeatedly found on re-inspection of the First Floor.

The Appellant points to paragraph 3.8.1.B of the specification dealing with the FINAL INSPECTION, which allows the VPIH to terminate the inspection if he determines that “the amount of cleaning necessary to correct deficiencies is such that too much time will be required to achieve an acceptable condition.” Because the provision dealing with VPIH FIRST VISUAL TESTING, paragraph 3.7.7.A, lacks such language, Mr. Kasher stated that the HUB team could not contractually terminate a first visual inspection in the same manner and for the same reasons, without first conducting a “full inspection” of the entire First Floor. While the latter provision is silent with respect to terminating a first visual inspection, it does state that the VPIH “may request that further cleaning be required.” We do note the difference in the language of the two clauses, but we consider it to be a distinction without much difference. What it means to us is that if further *minor* cleaning is necessary, then the Government’s inspection crew remains within the containment, pointing out the suspect area(s) to the Contractor, and available to continue the inspection as soon as this minor amount of effort is expended. While we agree that it would be inherently unreasonable to terminate *any such inspection* without giving a contractor the opportunity to clean up isolated areas of minimal visual contamination, it would defy reason to have the inspectors remain in the containment when the visual evidence of asbestos contamination is as extensive as testified to by both Mr. Marko and Mr. Deal. As Mr. Marko testified, HUB would terminate an inspection only after a representative

inspection disclosed that the contamination was widespread throughout the First Floor, or in one or more of the three areas being inspected. Moreover, logic dictates that if the VA's inspectors were required to remain inside containment until there were no visible signs of asbestos contamination, no matter how long that might take, there would be little or no need for any final inspection, as is specifically provided for by the terms of the Contract. The lack of resolve by the Contractor in cleaning and preparing the First Floor for inspection/re-inspection by the HUB team justified terminations of the several attempted visual inspections on the First Floor before the successful inspection of August 15, 1996.

The Appellant has taken exception to VPIH Marko's instruction to demolish all of the interior block walls. The VPIH credibly testified to NSC's power washing of the fireproofing material from the ceiling slab and beams, and the resultant embedment of amosite residue in the many cracks and crevices of these walls. At that point, the Contractor's own failure to properly clean such walls led the VPIH to the reasonable position that the walls would have to be disposed of as ACM.

In addition to the assertion that the several repeat inspections were excessive and unwarranted, we need look no further than CPIH House's entry in the KEM Log for August 15, 1996, where he noted that there was "very little ACM" found in the inspection of the First Floor. The Specification, Section 01569, paragraph 3.7.7.A, requires "the complete visual removal" of *all* asbestos-containing material as well as *all* asbestos-contaminated material - not all but a "very little" bit of ACM. It is noteworthy that the Second Floor was passed on the evening of August 15, 1996 on the day that "very little ACM" was reported on the KEM Log. At the point that the cleaning was adequately performed by NSC, the HUB inspector thoroughly inspected and then passed the floor.

As its claim for damages resulting from the alleged improper inspection actions by the Government's inspectors, NSC asserts that its two shifts of between 30 and 40 workers were essentially idled or non-productive during the two-plus weeks of the ongoing inspection and re-cleaning process. Our review of the Logs indicates that on most of the days that these workers were not cleaning the First floor for yet another inspection, they were doing productive work on the Ground Floor, engaging in containment preparation and demolition that was originally scheduled to be done subsequent to clearance of the First Floor. While this inspection process was lengthy, the actual cost impact on NSC appears to have been far less than claimed. This portion of the appeal, Sub-claim 10, is *DENIED*.

Sub-claim 12, The Ground Floor

The Government has an implied duty to cooperate with its contractors. *George A. Fuller CO. v. United States*, 69 F. Supp. 409 (Ct. Cl. 1947); *Celeron Gathering Corporation v. United States*, 34 Fed. Cl. 745, 753 (1996); *Better Health Ambulance Service*, VABCA No. 5475, 00-1 BCA ¶ 31,435 at 154,790. A failure to extend reasonable cooperation to its contractor during the inspection process of a construction contract has been held to constitute a breach of that implied duty. *G.W. Galloway Co.*, ASBCA No. 16656, 73-2 BCA ¶ 10,270; *Murdoch Construction Co.*, IBCA No. 1050-12-74, 77-2 BCA ¶ 12,728. The net result is that the contractor is entitled to an equitable adjustment for what amounts to a constructive change to the contract.

While the record indicates that the duration of the First Floor inspection process conducted by HUB on behalf of the VA was justified, we are not convinced that such was the case with the inspection of the Ground Floor. When NSC notified the VA on October 17, 1996, that it was ready to have the Ground

Floor inspected, the VPIH stated his concern with high fiber counts, ultimately shutting down the work until October 21, when HUB conducted its first inspection. As with the April 1996 shut down orders, the Government has failed to offer any test reports from October 17-20 into evidence, and cannot meet its burden of persuasion that the shut down order was justified.

The testimony of VPIH Marko persuades the Board that the initial Ground Floor inspection of October 21, 1996, was justifiably terminated due to the pervasive presence of ACM. We are likewise not persuaded that the Ground Floor had been sufficiently cleaned by NSC to have passed the second inspection of October 23, 1996. However, by the time of Mr. Dunn's inspection of the premises on October 25, 1996, his testimony convinces the Board that NSC's cleaning crews had achieved a sufficient level of cleanliness to allow a full and detailed visual inspection by HUB, with NSC personnel available to clean any miscellaneous debris pointed out by the HUB inspectors. Based on Mr. Dunn's testimony, the Ground Floor had been sufficiently cleaned to have passed a reasonable visual inspection. We conclude that the time spent inspecting and cleaning on and after October 25, 1966 was unnecessary, and that HUB could have conducted a thorough inspection of the entire Ground Floor on or before that date.

The Board has determined that the three-day shut down on October 18-20 resulted in NSC's payment of wasted wages for 179 labor hours. During the period from October 25 through November 7, 1996, when the floor was finally passed, 1,844 labor hours were unnecessarily expended by NSC in attempting to satisfy the HUB inspectors. These two figures total 2,023 labor hours, for which Appellant is entitled to be equitably compensated. This portion of the Appeal, Sub-claim 12, is *SUSTAINED*

Calculation of Quantum

The composite labor rate of \$13.33 and 21% labor burden, consumables, equipment rentals and air monitoring costs are considered reasonable and supported by credible evidence. The Board will apply the percentages for overhead and profit set forth in the Contract's SUPPLEMENTAL CHANGES clause, VAAR 852.236-88 (a), (JUN 1987):

Wasted Labor Hours: 2023 hrs. @ \$13.33	\$ 26,967.00
Consumables: 2023 hrs. @ \$4.00	8,092.00
Labor Burden: 21% of labor (\$26,967)	5,663.00
Air-Monitoring: 34 shifts @ \$300.00	10,200.00
Rentals: 17 days @ \$500.00	<u>8,500.00</u>
Subtotal:	\$ 59,422.00
Overhead @ 10% of \$20,000	2,000.00
Overhead @ 7.5% of \$30,000	2,200.00
Overhead @ 5% of \$9,422	<u>471.00</u>
Subtotal:	\$ 64,093.00
Profit @ 10% of \$20,000	2,000.00
Profit @ 7.5% of \$30,000	2,200.00
Profit @ 5% of \$14,093	<u>705.00</u>
Subtotal:	\$ 68,998.00
Bond @ 1%	<u>690.00</u>
Total Equitable Adjustment:	\$ 69,688.00

DECISION

For the foregoing reasons, the appeal of Caddell Construction Company under Contract V101BC-0130, is *SUSTAINED* in the amount of \$48,808.00 attributable to the unsupported April stop work orders, and \$69,688.00 attributable to the unreasonably protracted Ground Floor inspection. The Appellant is thus entitled to a total equitable adjustment of **\$118,496.00** plus interest from the date the CO received the claim of June 23, 1997, in accordance with the *Contract Disputes Act*. In all other respects, the Appeal is *DENIED*.

DATE: **May 12, 2003**

JAMES K. ROBINSON
Administrative Judge
Panel Chairman

We Concur:

RICHARD W. KREMPASKY
Administrative Judge

PATRICIA J. SHERIDAN
Administrative Judge