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# **Contracting in the National Interest: Establishing the Legal Framework for the Interaction of Science, Government, and Industry at a Nuclear Weapons Laboratory**

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Prepared by  
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The cover photo shows the Administration Building, built in 1949 as part of a major construction campaign launched by Paul J. Larsen, Director of the Sandia Branch Laboratory.

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## **Abstract**

Sandia National Laboratories, the nation's nuclear ordnance laboratory, is operated on a no-profit, no-fee basis by AT&T Technologies, Inc. as a prime contractor for the Department of Energy. This unique arrangement began in 1949 when President Harry Truman personally requested that AT&T assume management of the nuclear weapons laboratory as a service in the national interest. The story of how this unusual relationship came about makes for an interesting chapter in the annals of US legal and institutional history. This report describes the historical background, political negotiations, and prime contract provisos that established the legal framework for the Labs.



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THE WHITE HOUSE  
WASHINGTON

May 13, 1949

Dear Mr. Wilson:

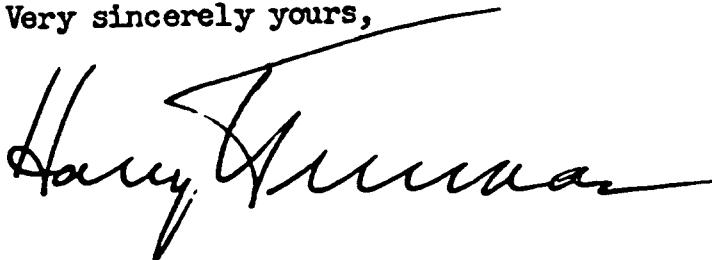
I am informed that the Atomic Energy Commission intends to ask that the Bell Telephone Laboratories accept under contract the direction of the Sandia Laboratory at Albuquerque, New Mexico.

This operation, which is a vital segment of the atomic weapons program, is of extreme importance and urgency in the national defense, and should have the best possible technical direction.

I hope that after you have heard more in detail from the Atomic Energy Commission, your organization will find it possible to undertake this task. In my opinion you have here an opportunity to render an exceptional service in the national interest.

I am writing a similar note direct to Dr. O. E. Buckley.

Very sincerely yours,

A handwritten signature in cursive script, appearing to read "Harry Truman". The signature is written in dark ink and is positioned below the typed name.

Mr. Leroy A. Wilson,  
President,  
American Telephone and Telegraph Company,  
195 Broadway,  
New York 7, N. Y.

# **Contracting in the National Interest: Establishing the Legal Framework for the Interaction of Science, Government, and Industry at a Nuclear Weapons Laboratory**

## **Introduction**

In that first decade following World War II, the President of the United States and the Atomic Energy Commission (AEC) faced what they perceived as an increasingly ominous threat to the national security of the United States. Several significant events—from the Berlin Crisis to the detonation of the first Soviet atomic device in 1949—coalesced to convince policy planners that staying ahead of the Russians meant staying ahead in the arms race. In the interim, there was legitimate concern about the status of the US stockpile.<sup>1</sup>

A series of visits to the nation's weapons laboratories during 1946 and 1947 brought government officials to Sandia Base on the desert outskirts of Albuquerque, New Mexico. There, in 1945, Los Alamos Scientific Laboratory had established a small assembly and production operation. "Z Division," as the contingent was known, began the job of assembling and producing components and case parts for the first atomic bombs. The facility was far from impressive.<sup>2</sup>

Overall, according to AEC Chairman David E. Lilienthal: "The result of these inspections was a shock. The substantial stockpile of atom bombs we and the top military assumed was there, in readiness, did not exist."<sup>3</sup>

The most basic problem, as Lilienthal and the commissioners acknowledged, was to redesign the bomb into a genuine field weapon. What they needed, Lilienthal said, was "not something that could be done in a laboratory alone, but in a production center, with . . . factory management." They realized,

too, the need for technical experience in dealing with weapons systems and weapon development; what they envisioned was a "team working together as a unit."<sup>4</sup>

At the Sandia facility, the Commission had the semblance of a team, and one with assembly expertise; Z-Division personnel had the technical experience, but they lacked an effective organizational structure and a functioning production center. To meet these deficiencies, the AEC took a series of major steps involving the interaction of science, government, and industry. First, however, much high-level negotiating had to take place as a prelude to establishing the legal framework for operations.

## **President Truman Intercedes**

On April 1, 1948, in an attempt to solve organizational problems, Z Division was declared a separate branch of Los Alamos.<sup>5</sup> The University of California, which managed the Los Alamos Laboratory, had never been pleased with the de facto, but informal, extension of its contract to manage the ordnance facility at Sandia Base. The reorganization, therefore, provided the opportune time for the University to formally request release from its management responsibilities. An academic institution, the Board of Regents claimed, should not be associated with ordnance activities during peacetime.<sup>6</sup>

Scientists making up the Technical Board at Los Alamos also favored breaking ties with Sandia, maintaining that the operation would be strengthened by bringing to it "engineering and . . . commercial administration which the University is . . . not equipped to provide."<sup>7</sup> A study conducted by Mervin Kelly, Executive Vice President of Bell Telephone Laboratories, at the request of the AEC and the Military Establishment, substantiated these opinions. Although various firms were considered, Lilienthal as spokesman for the AEC and representatives of the Military, on May 10, 1949, recommended that American Telephone and Telegraph (the Bell System) assume the task.<sup>8</sup> AT&T—with its strong manufacturing arm, Western Electric, and the research orientation of Bell Telephone Laboratories—they felt would provide the right industrial combination for the management of a Laboratory of vital interest to the national defense.

It was decided also that Lilienthal should enlist the aid of President Harry Truman. "After careful consideration," Lilienthal wrote the President, "we believe it would be most valuable in approaching that organization [Bell Telephone Laboratories] and its parent organization, the American Telephone and Telegraph Company, if you would indicate a personal interest in the matter."<sup>9</sup> Attached to the memo were drafts of letters for the President to consider. All were similar in content, but the one Truman selected was well-phrased, succinct, and to-the-point.

The President acted quickly. In letters dated May 13, 1949, he informed AT&T President, Leroy Wilson, and Bell Telephone President, Oliver E. Buckley, that the AEC planned to ask the Bell System to accept direction of the Sandia Laboratory at Albuquerque, New Mexico. At stake was not only the successful operation of a small ordnance and assembly facility located in the Southwestern outback, but also the growth and reliability of the nation's nuclear stockpile.

Truman made a strong case for the government position: "This operation," he said,

*which is a vital segment of the Atomic Weapons program, is of extreme importance and urgency in the national defense, and should have the best technical direction.*

*I hope that after you have heard more in detail from the Atomic Energy Commission, your organization will find it possible to undertake this task.*

He then added a sentence that could not help but appeal to AT&T's patriotism:

*"In my opinion," he said, "you have here an opportunity to render an exceptional service in the national interest."<sup>10</sup>*

Four days later, Wilson replied. He promised to give the matter "prompt and sympathetic consideration," although he had not yet heard from the Atomic Energy Commission, nor did he know the "details of the problem." Buckley also responded positively and promptly. As a member of the General Advisory Committee of the AEC, he was well aware of the circumstances leading to the request for changeover. He promised to give "full consideration and weight to the importance and urgency of the project in light of the situation as I have come to understand it."<sup>11</sup>

On Memorial Day, May 30, 1949, Lilienthal, Carroll Wilson, and Director of the Division of Military Application (DMA), General James McCormack, met the AT&T President at his home to discuss the matter further. At this meeting, Wilson expressed concern about the pending antitrust suit against AT&T, which had been filed January 14, 1949, under the Sherman Antitrust Act.



**In a 1949 letter, President Harry Truman (right) informed Leroy Wilson, President of AT&T, that the AEC planned to ask the Bell System to assume responsibility for managing the Sandia Laboratory. (Photo courtesy Harry S. Truman Library)**



**Wilson (left), concerned with antitrust litigation against AT&T, agreed to accept the assignment, in the national interest, but insisted that management of the Sandia operation should be on a no-profit, no-fee basis. On July 1, 1949, Wilson formally accepted the contract on behalf of the Bell System for operation of Sandia. (Photo courtesy AT&T/Bell Laboratories)**

How could one reconcile being asked to do the job suggested when the Justice Department was trying to break up the very combination that made it so suitable for the task? There was a certain logic in the AT&T position. Wilson wanted assurance that the Bell System's acceptance of the charge would not add fuel to the fire and be held against them. His point was well taken.<sup>12</sup> The matter would have to be resolved.

In the discussion that followed, the question of fee was also an issue. There were overtones of the "Merchants of Death" stigma. Like DuPont, AT&T *could* suffer from adverse publicity if the Bell System reaped a profit from a weapons operation. The situation, after all, was reminiscent of the circumstances that led to charges against DuPont in the 1920s and motivated passage of the first War Powers Act of December 1941.<sup>13</sup>

AT&T, as Wilson pointed out, was already heavily committed to defense work and really did not relish another great load. The Bell System would accept the assignment, in the national interest, but management of the Sandia operation, at Wilson's insistence, would be on a no-profit, no-fee basis.

The following day, McCormack reported the results of the meeting to the Santa Fe Operations Office of the AEC. "I visited with Wilson and Buckley of AT&T yesterday," he wrote, "and they are prepared to take the Sandia job, providing the Commission can establish the position relative to pending antitrust action by the Department of Justice." He indicated that he was preparing a written outline of the formal proposal and a description of scope of work as a first step in clarifying "this governmental issue."<sup>14</sup>

On the afternoon of June 6, 1949, Joseph Volpe, Jr. and Bennett Boskey, General Counsel for the AEC, met with Peyton Ford, Assistant to Attorney General Tom Clark, and Herbert Bergson, Assistant Attorney General in charge of the Antitrust Division of the Justice Department. Among the problems

related to the changeover, the matter of the pending antitrust proceedings was high on the agenda. The discussion ended with Ford and Bergson in agreement: "There was no reason, from an antitrust standpoint, why the Commission should not go ahead promptly with its plans to obtain as the Sandia Laboratory contractor, a unit or combination of units within the AT&T System."<sup>15</sup>

One week later, McCormack met with Wilson and Buckley at headquarters in New York. Wilson appeared to be pleased when he heard of the actions taken regarding the antitrust suit, but he had other concerns. He wanted the record to show that AT&T had not sought management of the Sandia Laboratory, rather that the *government* solicited AT&T for the job. He also requested a statement for stockholders explaining to them the reasons for the undertaking. He was especially concerned that AT&T might be accused of devising the Sandia contract as "a wedge" in the pending antitrust action. "He is most anxious . . .," McCormack reported, "that the AT&T case . . . stand on its overall merits, which he believes to be conclusive without regard to the particular application of the integrated resources of AT&T to the operation of the Sandia Laboratory."<sup>16</sup>

Wilson added that he would like the issue carried one step further than the formal record. President Truman, he felt, should be made *personally* aware of Wilson's concerns and of the Commission's reasons for its proposal to AT&T. This would prevent the President from being surprised by a question or a comment from a newspaper reporter. If uninformed, the President's response could prove detrimental to AT&T, particularly in view of judicial scrutiny.<sup>17</sup>

As Wilson requested, Lilienthal, representing the AEC, met with President Truman to discuss AT&T's management of the Sandia operation. A memo for record in Wilson's files indicates that the AT&T chief was indeed given certain assurances.

Lilienthal, according to Wilson,

pointed out my personal concern . . . and also told the President of his discussions with the Attorney General [Tom Clark]. The President stated, according to Mr. Lilienthal, that he appreciated why we had been concerned but felt that both we and the atomic group should have no concern about the problem. Mr. Lilienthal did not say, but he indicated in an indirect way, that *there is no program by the Department of Justice to press the Western suit*. Again, in inference and not without words, there was a feeling that the Bell System could carry on just as we were without further attack. While these were only inferentially indicated, Lilienthal closed by being extremely complimentary about the people in the Bell System with whom he had talked on this subject and about our prompt and sympathetic response, stating that the nation would be far stronger a year from now because of the steps which had been taken.<sup>18</sup>

Provided with assurances and having lessened the potential of disadvantages for AT&T, Leroy Wilson on July 1, 1949, formally accepted the contract for operation of the Sandia Laboratory. In his letter of understanding and confirmation, he explained for the record the Bell System's rationale for accepting the task and his position on the antitrust suit. "The Bell System," he said, "has always stood ready to do its part in the national defense by undertaking work for which it is particularly fitted." He agreed that the Bell System and its methods of operation gave them the special qualifications required. "For these reasons," he stated, "we are willing to undertake the project."<sup>19</sup>

It has been suggested that the Bell System's major motive in assuming responsibility for the management of Sandia was to obtain a favorable position in the antitrust litigation.<sup>20</sup> As numerous references to the issue indicate, Wilson did seek early assurance that the government would not use the existence of an AEC/AT&T contract to establish its case in court. Wilson obviously viewed his efforts on AT&T's behalf as a leadership obligation. Yet, there were other determining factors, for example, the System's long history of service in the public interest. Management of the nation's ordnance lab certainly fell into that category as Truman had clearly stated. Furthermore, much as AT&T has downplayed its contribution to US defense efforts, a study of its activities during wartime, reveals the System's major involvement.<sup>21</sup> And, finally, there was also common logic in the official AT&T position on the antitrust suit as it related to the government's request to manage Sandia.

The suit did have its ironic aspects. Wilson, in his letter of confirmation iterated concerns voiced earlier to Lilienthal and McCormack: "The antitrust suit brought by the Department of Justice last January," he pointed out, "seeks to terminate the very same Western Electric—Bell Laboratories—Bell System relationship which gives our organization the unique qualifications to which you refer." A contract with Western Electric to operate Sandia would not change Western's relationship with Bell Laboratories. "[Western] and the Bell Laboratories," he added, "would indeed work as one, as they do now in Bell System affairs, and the effectiveness of their work would depend, as we have explained to you that it always has, upon their close connection as units of the Bell System."<sup>22</sup> In essence, the antitrust suit could destroy the very combination that made the Bell System the best qualified for the management job. There was a definite validity in the AT&T argument.

If indeed AT&T officials truly expected the Justice Department to lay aside its suit against them as a tradeoff for accepting management of Sandia Laboratory, they were to be woefully disappointed. Even AT&T's request for a postponement of prosecution of the suit would be denied, although a de facto postponement until 1951 did occur. Through the years, the Department of Defense would become AT&T's ally in the ensuing antitrust battles.

After extensive legal wrangling, AT&T in 1956 would be forced into signing a Consent Decree imposing strict regulatory measures. Once again, however, the Bell System would retain Western Electric, despite the Justice Department's desire to have the manufacturing company broken up into three independent and competing firms. Then, in 1979, Microwave Communications, Inc. (MCI) won a \$600 million award that would have been tripled, according to antitrust law, if the courts had not reversed their decision. Thus, by the late 1970s, MCI's competitive crusade was gaining ground in the courts, thereby paving the way for dissolution of the Bell System.<sup>23</sup>

In 1949, however, the Bell System reacted according to its fundamental legacy of meeting the national need, and divestiture was postponed. By accepting management of Sandia Laboratory, AT&T, because of the nature of its contract, had little to gain except governmental good will. Sandia, on the other hand, after the inevitable period of adjustment, would thrive under Bell System leadership and expertise. And in the broader view, the entire nation would profit from a drastically improved defense posture. Although critics would view the AEC-AT&T association as the epitome of the controversial "military-industrial complex," others would consider the Bell System affiliation as "a leading national defense asset."<sup>24</sup> But how did this marriage of the military, engineering, science, and industry come about?

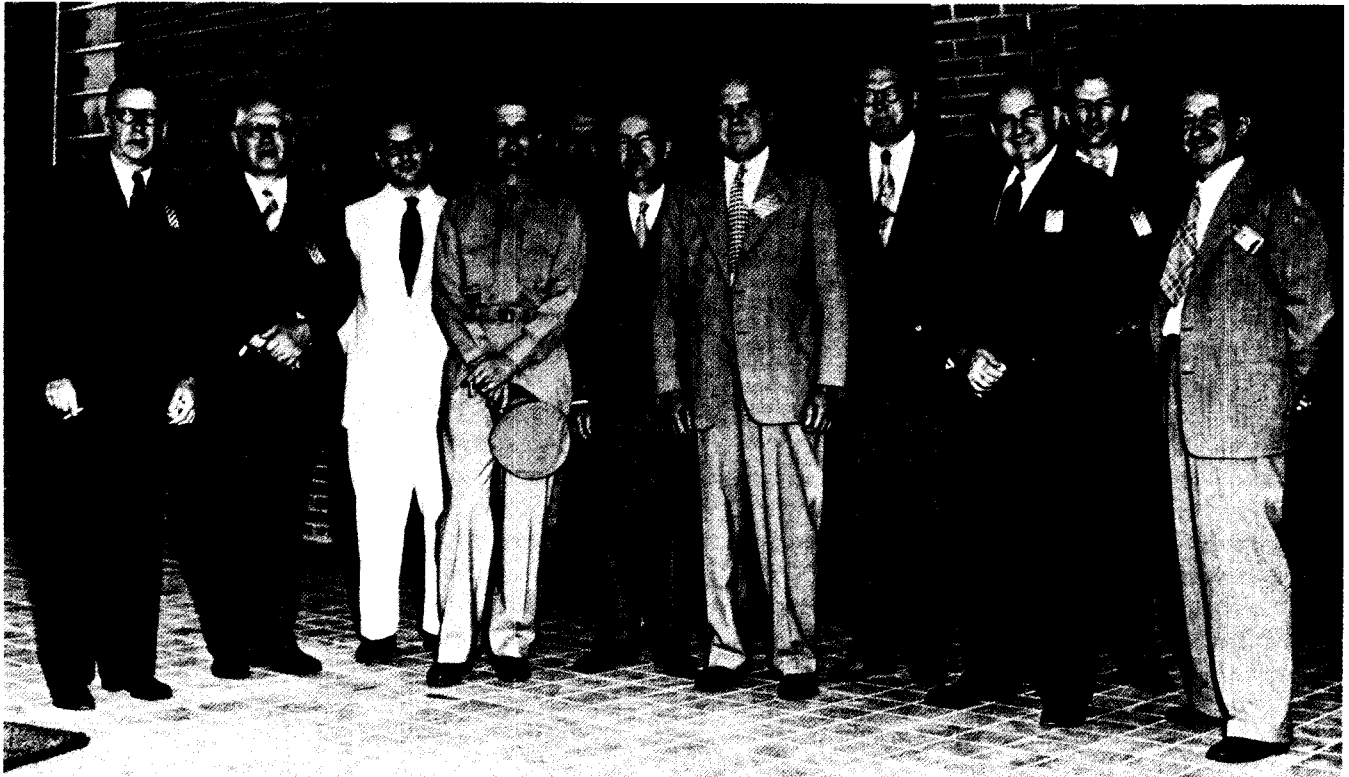
### **Laying the Legal Groundwork**

The nation learned of plans for the transfer on July 12, 1949. A New York *Times* article, based upon an AEC announcement

from Washington, succinctly explained a part of the rationale for transfer, namely, the growth of Sandia Laboratory which, according to the announcement, "has been the result of the Commission's effort to integrate research, development, and production activities in accordance with the best academic and industrial practice and with the most competent available supervision in each technical area."<sup>25</sup> What the press release did not mention, however, was that the change in management also signified the Commission's recognition of Sandia as the hub of the developing defense complex and the overriding desire of the AEC to ensure the continued mobilization of science in the name of national readiness.

As a preliminary step, the AEC dispatched a special team of officials from Western, Bell, and the AEC to Sandia to initiate the transfer.<sup>26</sup> Lilienthal, in a letter to Senator Brien McMahon, explained that the group would be studying requirements of the project and "laying the groundwork for early consummation of a contract for operation of the Laboratory." This task force would be involved in the first of a series of negotiations in which government and corporation, in the words of author John Brooks, "played a game of cat and mouse."<sup>27</sup>

The representatives flew to Albuquerque on a Special Mission aircraft. A photograph published in the Albuquerque papers on July 14, 1949, showed those present for the AEC to be General McCormack; Colonel R. T. Coiner, Deputy Director DMA; Bennett Boskey of the AEC's legal staff; Richard Smith, AEC Procurement, New York Operations Office; and George P. Kraker of the Sandia Operations Office. Representing Western Electric was Stanley Bracken, President; Frederick R. Lack, Vice-President Radio Division; and George A. Landry, Manager of the Operations Division. Kelly, Executive Vice-President, headed the Bell Lab group. He was accompanied by Donald A. Quarles, Vice-President in charge of staff and all government-sponsored research in the Bell Laboratories. P. J. Larsen, Director of the Sandia Laboratory, hosted the gathering.



On July 14, 1949 Mervin J. Kelly, Bell Telephone Laboratories; George A. Landry, Sandia Corporation; Bennett Boskey, AEC's General Counsel office in Washington; General James McCormack, Division of Military Application (DMA); Colonel R. T. Coiner, DMA; Donald A. Quarles, Bell Telephone Laboratories; Stanley Bracken, Western Electric Company; Paul J. Larsen, Sandia Laboratory (while under University of California); Fred Lack, Western Electric Company; Richard Smith, AEC Procurement, New York Operations Office; George P. Kraker, AEC, Albuquerque participated in negotiations leading to the changeover in management of Sandia Laboratory from the University of California to the Bell System.

A few days later, Los Alamos Director Norris Bradbury gave University of California Regent Robert Underhill a brief summary of the visit. "One thing seems clear from the discussions here," he wrote, "The boys have had their marching orders from President Leroy Wilson of the American Telephone and Telegraph Company to take on this project and make a success of it. Probably within the next two or three weeks, a contract will be drawn up between Western Electric and the AEC." <sup>28</sup>

Shortly after the conclusion of business at Sandia, Bennett Boskey began work on the first draft of a contract with Western Electric. On August 4, 1949, Fred Lack met with General McCormack in Washington. McCormack recalled that "Boskey walked in with a fat contract draft." Lack was not pleased; he thought the contract should be

brief, perhaps not over a page. He said he would draft it himself "after [the] lawyers got through arguing." <sup>29</sup>

The issue of fee surfaced again. McCormack felt that a fee *should* be levied so the "AEC could criticize (the) operation and make AT&T pay for blunders." But Lack held firm to the AT&T position of "no-profit-no-fee." Lack also wanted "good industrial practices" inserted in the terminology rather than a specific cost section. He posited that AT&T, in exchange for no fee, should have the freedom to operate within these broad limits. Sandia's general counsel, Kimball Prince, explained the terminology saying that it would "assure the flexibility deemed necessary to accomplish the tasks in a new frontier of science, as well as provide a criterion against which Sandia's operations could be measured." <sup>30</sup>

A precedent for the no-fee, no-profit contract had been established by the AEC's contract for the operation of the Brookhaven National Laboratory with Associated Universities, Inc. Under the no-profit arrangement, the contractor was to be reimbursed for all costs and expenses, direct or indirect, resulting from work under the contract. Paragraph 3, Article IV of the contract proved to be significant in the negotiation of other contracts, including the one for Sandia. Thinking ahead, the Commission, in January of 1948, had proposed to use a provision similar to that specific paragraph in the drafting of other no-profit contracts for research and development work where reimbursement on an actual cost basis appeared to be advisable.<sup>31</sup>

Less similar in provision was the cost-plus-fixed-fee arrangement between General Electric and E. I. DuPont de Nemours to carry out a contract for certain production, research, construction, and maintenance services connected with the Commission's installations at Hanford, Washington, and Schenectady, New York.<sup>32</sup> The Western contract draft, as initially submitted by the AEC on August 2, was more similar to the one negotiated by the AEC with Bendix for operation of Project Royal. Like the Bendix contract, it contained a detailed "Cost of Work" clause and a fairly broad indemnity except for "willful misconduct or bad faith." Lack, however, advised the AEC that the Bendix-style contract was unacceptable—largely because of the detail.

The rather general requirement that the Corporation should be run on the basis of "good industrial practice," was duly passed on to Western and became the central theme of the contract, as originally signed. Later, this phrase was changed to adopt "Western practices" as the criteria.<sup>33</sup>

Norris Bradbury had his own suggestions regarding the transfer.<sup>34</sup> His comments, along with others, were discussed in a series of meetings that took negotiators from high-rise offices in New York to the mountains of Los Alamos, New Mexico, and on to Bendix, Kansas City. In addition to contract particulars, the division of responsibilities and procedures for review and handling of

production schedules and procurement policies had to be established. At a conference held in Captain Tyler's office on August 29th in Los Alamos, Tyler of the AEC, Underhill for the University of California, and Lack for Western Electric drew up and signed the formal "Takeover Agreement." At this meeting, plans were made to effect the smooth transition to industrial management. The representatives wanted to ensure that the current operations of the Sandia project were not unduly disturbed.<sup>35</sup>

On Wednesday, September 14th, Western Electric submitted to the Commission an alternate draft of the proposed contract. The general formula was considered acceptable; however, during subsequent meetings, the draft underwent considerable revisions until a final discussion was held in Washington on September 29th. On this same date, Western Electric executives H. C. Beal, Vice-President Manufacturing; Fred R. Lack, Vice-President Radio Division; and Walter L. Brown, Vice-President and General Counsel, signed the Certificate of Incorporation creating Sandia. The new organization's broadly stated purpose was:

to engage in any kind of research and development, and any kind of manufacturing, production and procurement to the extent that lawfully may be done . . .<sup>36</sup>

The contract was partially executed by the AEC in Washington on the afternoon of October 4, 1949. The Certificate of Incorporation was filed in the state of Delaware the following day. And on the 6th, the contract was transmitted to New York, where it would be signed by Sandia and Western Electric at the first meeting of the Board of Directors.

Just before incorporation, it was learned that a New Mexico concern owned by John H. Hall and Robert S. Poage held the name "Sandia." When apprised of the situation by Western's attorney, Hall and Poage graciously agreed to change the name of their company so that it would be available for Sandia's use. Legal expenses and filing fees were paid for by the Corporation.<sup>37</sup>

The Corporation's first Board of Directors, comprised of Beal, Lack, Brown, and Landry, all of Western Electric, held their initial meeting at AT&T headquarters, 195 Broadway, New York City. With Beal acting as chairman, the Board elected George A. Landry President and Phillip D. Wesson, Secretary. The next order of business included approval of the form of stock certificates and the corporate seal.

Landry then presented Contract AT-(29-1)-789 between the AEC, acting on behalf of the United States of America, and Western Electric Company, Inc., relating to the operation of Sandia Laboratory. In the name of the Corporation, Landry formally endorsed the contract, thereby making Sandia Corporation a party to the agreement and "assuming all of the obligations therein

imposed upon it." It was further resolved that the president was authorized to enter into a contract in the name and on behalf of Sandia Corporation with Western Electric in the form set forth in Appendix A. Accordingly, Landry signed the document as signatory for Sandia and Fred R. Lack for Western Electric. The contract called for the operation of Sandia Laboratory until December 31, 1953.

To capitalize the new corporation, Western Electric paid \$1,000, the minimum required by the laws of Delaware and New Mexico, for 100 shares (the entire issue) of no-par-value stock of Sandia Corporation. Sandia then invested the money in Series F United States Savings Bonds.

On November 1, 1949, Sandia Corporation assumed active direction of the Laboratory.<sup>38</sup>



During the first meeting of Sandia's Board of Directors, Henry C. Beal (right) served as chairman. George A. Landry (left) was elected President of Sandia Corporation. Mervin J. Kelly (center), President of Bell Laboratories from 1941 through 1958, played a major role in Sandia's changeover from university to industrial management.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written.

Witnesses:

Richard I. Cooney  
Washington D.C.  
(Address)

UNITED STATES ATOMIC ENERGY COMMISSION

By Carroll L. Wilson  
General Manager

ATTEST:

William P. Franke  
Secretary

WESTERN ELECTRIC COMPANY, INCORPORATED

By F. H. Lach  
Vice President

Sandia Corporation hereby becomes a party to the above contract, assuming all of the obligations therein imposed upon it.

ATTEST:

P. D. Dawson  
Secretary

SANDIA CORPORATION

By George A. Landry  
President

Signatories of Contract AT-(29-1)-789

### Prime Contract Provisions

As formalized, the prime contract between the AEC and Western Electric was an unusual document. Not only did it employ the concept of no-profit, no-fee and the liberal parameters of "good industrial practice," but it was a tripartite agreement involving the AEC,

Western Electric, Sandia Corporation, and indirectly, Bell Telephone Laboratories. Since Western and AT&T shared ownership of Bell Labs, the signatories of the prime contract were necessarily the AEC and Western Electric. However, Sandia and the AEC fully



expected to benefit from the expertise of both concerns. As stipulated in the contract:

The government desires to utilize in the operation of the Sandia Laboratory of the Commission and related work, the management, engineering, scientific research and development, and manufacturing skills of Western and Bell Telephone Laboratories, Incorporated.<sup>39</sup>

In this manner the contract provided for the loan of management and technical personnel from the Bell System to Sandia. If, for example, Sandia needed a technical, financial, purchasing, or accounting expert, or a general manager for overall corporate administration, the Bell System would provide such abilities from any part of its nationwide operations until such time as those services were no longer needed. Not long after

Sandia came under AT&T management, it was recognized that full-time legal counsel would be necessary. Phillip Wesson assisted during the transition; then, in March 1950, Frank L. Dewey was transferred to Sandia from Western Electric to serve as the Corporation's first on-roll attorney.

Through the years, the roster of Bell System people at Sandia has varied. On November 1, 1949, when Sandia had 1742 employees, the number of Bell people transferred or loaned to Sandia stood at 14. By April 1953, the number was approximately 70, but in 1987 with Sandia rolls registering 8200, personnel affiliated with AT&T numbered 13.<sup>40</sup>

Bell Lab transfers, in 1949 as in 1987, were well represented in the upper echelons of management since Western has under its contract a broad trusteeship over Sandia. Seven of Sandia's presidents have come from Bell, with only two, George Landry and Siegmund P. "Monk" Schwartz, coming from Western Electric.<sup>41</sup>

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written.

ATTEST:

Phillip Wesson

SANDIA CORPORATION

By

George A. Landry

ATTEST:

William H. ...

WESTERN ELECTRIC COMPANY, INCORPORATED

By

T. Rack

APPENDIX A to Contract AT-(29-1)-789  
Signatories of the Contract Between Sandia Corporation and Western Electric



On February 21, 1950, the Sandia Board of Directors was increased by two members. The newly expanded Board included (L-R) Walter L. Brown, Frederick R. Lack, Donald A. Quarles, Henry C. Beal, George A. Landry, and Stanley Bracken.

In addition to specifying provisions for the sharing of professional and scientific expertise, the Western-AEC contract also provided for broad indemnification, one of the most carefully analyzed topics of discussion during contract negotiations. Admittedly, the work specified under the contract involved the potential of "unusual, unpredictable and abnormal risks"—a fact recognized by all parties. Section 6 of the Atomic Energy Act of 1946 authorized the Commission to produce atomic weapons. Moreover, Congress had passed the Act knowing that atomic weapons had been and were to be produced by contractors. Therefore, as Secretary Phillip D. Wesson explained to Brown: "The indemnity agreement is not technically an independent commitment, but . . . is . . . nothing more than a reasonable and necessary incidental feature of the basic relationship arising from the cost plus fee arrangement wherein the contractor in effect is an agency or instrumentality of the Government."<sup>42</sup> Since they would be acting, in effect, as an instrument of the government, Western, Sandia Corporation, and Bell Laboratories insisted upon an exemption from

liability and damages including the expense of litigation arising from injuries, deaths, or damages to property arising from or connected with the work.

To obtain such legal dispensation, Sumner T. Pike, acting chairman of the AEC, requested a ruling from the Honorable Lindsay C. Warren, Comptroller General of the United States.<sup>43</sup> Among the concerns discussed was the fear that indemnification might be limited by the amount of appropriations committed. As General Counsel for Western Electric, Walter Brown, explained: "The extent of the indemnity might be wholly inadequate for the sort of disaster that is possible."<sup>44</sup> It was ultimately concluded that the Commission would assume responsibility for any liabilities of the contractor to third parties for personal or property damage, even though that damage might be the result of negligence on the part of the contractor or its employees. It was apparent that such a provision would be necessary to induce a contractor to perform the work or carry out the mandate of the statute.

Among the precedents used in reaching this conclusion was a decision made April 19, 1943, involving a secret contract entered into in furtherance of the war effort. Contract B-33801, held not objectionable, included an indemnity provision substantially similar to that negotiated between Western and the AEC and Sandia Corporation.<sup>45</sup>

After careful perusal of the issue, the Honorable Lindsay C. Warren ruled that his office would not object to inclusion of the indemnity provision in question as contained in Article VI of the contract. Furthermore, it was recognized that the government's obligations would not be subject to the ten million dollar authorization limit specified in Article V, and that additional appropriations might be necessary to discharge obligations incurred.<sup>46</sup>

The Sandia contract contained other interesting aspects related either directly or indirectly to the Laboratory's mission and position as an instrument of the government. The responsibility for security, for example, was to rest with the Commission, due to the sensitive nature of atomic weapons. Sandia and Western, in accordance with the Commission's security regulations, agreed to safeguard restricted data, formerly restricted data, other types of classified matter, and protect against sabotage, espionage, and theft of documents and materials of intrinsic value.<sup>47</sup>

Still another provision required that "all drawings, designs, specifications, data, books of account, correspondence, and records and memoranda of every kind and description prepared by Sandia Corporation in connection with the performance of work should be preserved except as otherwise directed by the Commission." Furthermore, Sandia agreed to deliver these records to the Commission at its request.<sup>48</sup>

## **Contractual Modifications**

Again, because of the nature of Sandia's business, and because the government considers that inventions made by employees of government contractors are the result of federally funded research, the patent provision of the 1949 contract favored the government. Accordingly, the Commission retained the sole power to determine

whether or not and where a patent could be filed, as well as disposition of title rights to such inventions. Western also granted to the government an irrevocable, royalty-free, non-exclusive license for the entire term of its patents for use in Sandia Corporation products that utilized fissionable material or atomic energy in or with a military weapon. Similarly, the government granted AT&T a non-exclusive license to government-owned patents from Sandia.<sup>49</sup>

These patent provisions as agreed upon in the 1949 contract meant that if a Sandia employee, in the course of work, made or conceived an invention or discovery, the AEC would be furnished with the complete information thereon. The Commission would then determine whether or not a patent application should be filed. To effectuate such a contract provision, employees of Sandia would be required to sign patent agreements. If an individual wanted to obtain a patent in his or her own name, that person would be required to obtain a waiver from the government.

Because such patent provisions have favored the government and because of the basic no-profit, no-fee concept, AT&T has traditionally maintained an arms-length relationship toward Sandia. The 1949 contract, as noted, provided that AT&T would reap no benefit from sales or services, except for communications equipment. After almost four decades, effective with the October 1, 1983 contract, that limitation was deleted. AT&T can sell its products and services to Sandia. Thus, AT&T and Sandia can now do business, but only with government approval.<sup>50</sup>

This contractual modification, the most significant yet to occur, is largely the result of the 1984 divestiture of AT&T. With divestiture, AT&T's business broadened. For the first time, AT&T is showing interest in participating with Sandia in technology transfer. Changes in Congressional patent laws helped pave the way.<sup>51</sup>

In the early 1980s, for example, legislative initiatives were undertaken in Congress to enable contractors such as the University of California to share in the technology developed at the Laboratories. For Sandia, however, changes in national patent law and changes in the 1983 contract (freeing AT&T

from its self-imposed restrictions and allowing it to do business with Sandia) have made little impact. Nevertheless, the 1983 contractual modification does constitute the most significant change made during the Labs' forty-year existence and may have future ramifications for the Sandia-AT&T affiliation.<sup>52</sup>

One of the most difficult aspects of Sandia's legal situation for outsiders to comprehend is the fact that Sandia does not own land or property. Sandia headquarters in Albuquerque sits on a military reservation, and ownership of buildings and furnishings reside with the government. Sandia Corporation, in fact, has no assets other than the \$1000 paid-in capital necessary for incorporation in the state of Delaware.

The story is told that in 1979 a visiting United States Marshall on legal business with the Laboratory, was taken to the office of the Treasurer and shown a box. The box, he was told, contained the sum total of the Corporation's assets—a bond for \$1000. Looking around at the comfortable office, the man's face registered disbelief. Even after the Corporate attorney explained the situation, the Marshall found it difficult to comprehend.<sup>53</sup>

Today, the Laboratories' assets have increased, but not substantially. In addition to the \$1000 US Savings Bond (held in the Office of the Assistant Treasurer), there are three additional Series E bonds issued in the amounts of \$200, \$100, and \$25, which represent the accumulated interest on paid-in capital. Not to be overlooked is \$6.25 in cash.

The financial provisos of the Sandia contract contribute to its uniqueness. The contract provides "full cost reimbursement" for expenditures with a single, narrow exception. This single exception pertains to controlling corporate officers for whose "willful misconduct or bad faith" reimbursement can be withheld. In comparison, other government contractors have a long list of

exceptions. All financial obligations incurred by the Corporation are considered government obligations and Sandia, in fact, draws upon a government bank account.<sup>54</sup>

From the beginning, it was recognized that the effective operation of Sandia Corporation was all-important to the defense of the United States. Its administrative and legal position was unique; there was little precedent for operating guidelines and procedures. The 1949 contract, therefore, had to form the basis for a mature body of knowledge in administration and applicable legal principles that was not yet in the textbooks. Its effectiveness and workability has been shown not only by the test of time, but also by the fact that the contract has maintained a basic continuity. The original contract, as initially negotiated between Western Electric and the government is still in use as indicated by the last three digits of the contract—789. And the essence of the contract can still be distilled into two to three pages.

The appendices have been lengthened considerably, not because of AT&T changes or requests, but because of changing government requirements reflecting new socioeconomic concerns such as cost accounting standards, promotion of small businesses, and equal employment opportunity. But the basic concept of the contract remains the same. Neither has the operating arrangement changed; Sandia is still managed by Western Electric, now called AT&T Technologies, Incorporated.<sup>55</sup>

Credit for drafting such a viable document must go to those parties involved in the original contract negotiations, those individuals who forged legal tools out of raw facts to accomplish the necessary tasks. However, credit is also due negotiators of the contract renewals who have had the prudence to leave well enough alone.

## Endnotes

1. Herb York and G. Allen Greb in "Military Research and Development: A Postwar History," *Bulletin of the Atomic Scientists* (January 1977) 13, support the idea that major events taking place with the Soviet bloc "elicited long-lasting programmatic and organizational responses on the U. S. side." The authors contend, therefore, that the "so-called 'action-reaction cycle' has, on the largest scale at least, played a fundamental role in determining the course of events."

2. Sandia National Laboratories Archives, Albuquerque, New Mexico [hereinafter cited as SNL Archives], Memo for record, Subject: "Z Division — Ordnance Engineering," N. A., July 1945; Richard G. Hewlett and Francis Duncan, *Atomic Shield, 1947–1952*, 2 (University Park, 1969), 60-61.

3. SNL Archives, David E. Lillenthal, "The Kind of Nation We Want," *Colliers*, 14 June 1952, 49.

4. *Ibid.*

5. SNL Archives, Memo, Paul J. Larsen to All Concerned, Subject: "Z Organization," n.d.; US DOE Archives, Record Group 326, US Atomic Energy Commission, Collection: Secretariat, Box 1235, Folder 601 LASL, Germantown, Maryland; SNL Archives, "Sandia Branch of the Los Alamos Laboratory," Report by the Manager, Office of Santa Fe Directed Operations and the Chief of Engineering, 5 August 1948, 6.

6. As early as June 1947, R. M. Underhill, Chairman of the UC Board of Regents expressed these feelings explicitly to N. E. Bradbury, Director of the Los Alamos Lab: "This whole Sandia matter," Underhill said, "is one that seems to have gotten out of hand," explaining that the University could not "protect its or the government's interests at branch stations." SNL Archives, R. M. Underhill to Norris Bradbury, Berkeley, CA, 24 June 1947. See also SNL Archives, N. E. Bradbury to President Robert G. Sproul, University of California, Berkeley, 18 November 1948, 4 (copy).

7. SNL Archives, Bradbury to Sproul, *Ibid.*; SNL Archives, Robert M. Underhill to Carroll L. Tyler, Manager Santa Fe Operations, Los Alamos, New Mexico, 31 December 1948 (copy).

8. SNL Archives, File 322 Sandia, Mervin J. Kelly, Executive Vice President of Bell Telephone Laboratories to President Robert G. Sproul, University of California, Berkeley, 29 July 1949; US DOE Archives, Record Group 326, US Atomic Energy Commission, Collection: Secretariat, Box 4944, Folder 635.123, Sandia Branch LASL, Germantown, Maryland, "Administration of Sandia Laboratory—Report of Mr. Mervin J. Kelly" (Notes by the Secretary).

The agreement upon the Bell System as the managerial choice was reached at AEC Meeting 266. See SNL Archives, "Chronology of Events Leading to Execution of Contract With Western Electric for Operation of Sandia," AEC 199/6, and Memo, David E. Lillenthal to the President, AEC, Washington, DC, 13 May 1949, (copy).

9. Lillenthal to the President, *supra* note 8.

10. SNL Archives, Drafts, President Truman to Leroy Wilson and Truman to Dr. O. E. Buckley, Washington, DC, 13 May 1949 (copies). See also SNL Archives, "Prospective Change in the Management of Sandia Laboratory," AEC 199/3, 24 May 1949.

11. See SNL Archives, Wilson to Truman, Washington, DC, 17 May 1949 and Buckley to Truman, Washington, DC, 17 May 1949, AEC Files, Series 199, ALO, (copies).

12. SNL Archives, [McCormack] to AEC, SFO, Memo re: "Change of Laboratory"; SNL Archives, Leroy A. Wilson to David E. Lillenthal, New York, 1 July 1949 (copy).

13. SNL Archives, interview, Kimball Prince with James McCormack, noted in SNL "History of Formation," 7. See Section 201, First War Powers Act, and relative to it, House Report No. 1507, 77th Congress 1st Session as discussed in H. C. Anderson to Walter E. Brown, Re: Atomic Energy Commission Contracts, 7 September 1949.

David Lillenthal also recalled the conversation with Wilson as indicated in Lillenthal, "The Kind of Nation We Want," *Colliers*, 14 June 1952, 49.

The act resolved the issue by incorporating the cost-plus-fixed-fee concept, employed by DuPont when constructing the nuclear plants at Clinton (Oak Ridge), Tennessee, and Hanford, Washington.

14. SNL Archives, [McCormack] AEC, Washington to AEC, SFO, Memo re: "Change of Laboratory."

15. SNL Archives, "Chronology of Events Leading to Execution of Contract . . ."; SNL Archives, "Prospective Change in the Management of Sandia Laboratory," 15 June 1949, and SNL Archives, Memo, James McCormack to Carroll L. Wilson, Subject: "Sandia Laboratory Forms Attachment to AEC."

16. SNL Archives, Memo, James McCormack to Carroll L. Wilson, AEC, Washington, DC, 15 June 1949. The meeting took place on June 14, 1959.

17. *Ibid.*

18. SNL Archives, Memo for Record, Files of Leroy Wilson, AT&T, 15 August 1949, 4:50 p.m., (copy). The timing of these "implied" assurances from Tom Clark is interesting, considering that only a year earlier, the Attorney had been persuaded to sue to legally separate Western Electric from the Bell System.

19. SNL Archives, Leroy A. Wilson to David E. Lilienthal, New York, 1 July 1949.

20. *Ibid.*; John Brooks in *Telephone, The First Hundred Years* (New York, 1975), 234-38, discusses the negotiations between the government and AT&T in some detail [Hereinafter cited as Brooks, *Telephone*]. He questions the Bell System's motives in accepting the management responsibility and concludes also that both the antitrust suit and service in the national interest were factors in AT&T's decision.

21. Brooks, *Telephone*, 253-54, *supra* note 20.

22. SNL Archives, Wilson to Lilienthal, *supra* note 19.

23. The trial of the United States v. AT&T in March of 1981 motivated Bell System executives to choose an alternative that would circumvent the devastating results of a lengthy antitrust suit. At this point, faced with the possibility of "being gutted in the courts," AT&T, in December 1981, agreed to settle the case.

In a new consent decree, called the Modification of Final Judgment, AT&T agreed to divest. The decision was regarded as a favorable tradeoff. By cutting their losses short, AT&T kept Bell Telephone Laboratories and Western Electric within the fold. Without them, the Bell System would have lost control of its own technology.

Furthermore, as W. Brooke Tunstall, Corporate Vice-President, AT&T, wrote, the decision to divest was in keeping with a fundamental legacy of the Bell System, that is, "its consistent goal of complying with the desires of the public."

See W. Brooke Tunstall; *Disconnecting Parties, Managing the Bell System Break-Up: An Inside View* (New York, 1985), 12-13, and 17 for quote.

24. Brooks, *Telephone*, 238, *supra* note 20.

25. SNL Archives, "AT&T Subsidiaries to Operate AEC Sandia Laboratory," (USAEC press release) Washington, DC, 11 July 1949; "News Briefs for Western Electric Management," New York, 13 July 1949; "Private Firms to Run AEC Plant at Sandia," *New York Times*, 12 July 1949.

26. SNL Archives, David E. Lilienthal to Mr. Wilson, New York, 6 July 1949, re: arrangements for the trip; "Western Electric Heads Plan Lab Change," and "Western Electric, Bell Telephone Have Key Role at Sandia A-Base," miscellaneous clippings.

27. SNL Archives, David E. Lilienthal to Brien McMahon, Washington, DC, 8 July 1949, copy; Brooks, *Telephone*, 236, *supra* note 20.

28. SNL Archives, Photograph with caption, *Albuquerque Journal*, 14 July 1949, in Kimball Prince, "History of Formation," n.p., "Western Electric, Bell Telephone Have Key Role at Sandia A-Base," and "News Brief for Western Electric Management," New York, 13 July 1949; SNL Archives, Bradbury to Underhill, Los Alamos, NM, 18 July 1945.

29. SNL Archives, "Notes of Conference of Kimball Prince with General James McCormack and Mr. Carroll Wilson . . . at General McCormack's Office—MIT," 29 September 1959, Re: "Genesis of Sandia Corporation," 4.

30. *Ibid.* See also Kimball Prince, "Sandia Corporation, A Science-Industry- Government Approach to Management of a Special Project," *Federal Bar Journal*, 17 (1957), 433.

31. SNL Archives; Frank L. Yates, Acting Comptroller General of the United States to David Lilienthal, Washington, DC, 14 January 1948, 1-7 (copy); Prince, "History of Formation"; *supra* note 28.

32. *Ibid.*

33. SNL Archives, Prince, "History of Formation," 10. See also SNL Archives, "Contract AT-(29-1)-789 between United States Atomic Energy Commission and Western Electric Company, Incorporated (including as Appendix A, copy of Contract between Sandia Corporation and Western Electric Company, Incorporated dated October 6, 1949)," 11.

34. SNL Archives, Memo, Director, Los Alamos Scientific Laboratory to Distribution, Subject: "Comments and Suggestions on Transfer of the Sandia Laboratory from the University of California to a New Contractor," Los Alamos, 8 August 1949.

35. SNL Archives, Memo of Record giving "Schedule of Visit" [12 August 1949], Fred R. Lack to Distribution; "Takeover Agreement" including "Minutes of Conference," Los Alamos, New Mexico, 29 August 1949, signatories: C. L. Tyler, R. M. Underhill, Fred R. Lack.

36. SNL Archives, B. Edelman, Record of Conference, Subject: "Proposed Draft of Contract on Sandia Project," 16 September 1949, in Prince, "History of Formation"; Memo, P. D. Wesson to J. A. Dempsey, Subject: "Certificate of Incorporation," New York, 11 November 1949, 1.

37. SNL Archives, P. D. Wesson to John E. Hall, 19 September 1949, Albuquerque, New Mexico. For secondary coverage, see Brooks, *Telephone*, 236-37 and C. A. Warren, J. A. Hornbeck, and Morgan Sparks, "Special Projects—Sandia and Bellcom" in M. D. Fagen, ed., *A History of Engineering and Science in the Bell System—National Service in War and Peace (1925-1975)*, (Bell Labs, Inc., 1978) 655-56.

38. SNL Archives, "Unclassified Minutes of the First Meeting of the Board of Directors of Sandia Corporation," 6 October 1949, and Contract AT-(29-1)-789, 14, and Appendix A, 6.

39. Contract AT-(29-1)-789, 1, supra note 33.

40. SNL Archives, M. Calvin, "On-Roll Employees Who Have E Number Beginning with a 9," (Statistical Datasheet).

41. SNL Archives, "Ethos" interviews, October 1985; SNL Archives, interview, R. W. Henderson, Albuquerque, NM, 23 September 1986.

42. SNL Archives, Memo, P. D. Wesson to W. L. Brown, Subject: "Sandia Contract—Unlimited Indemnity Agreement," 26 September 1949.

43. SNL Archives, Sumner T. Pike to Lindsay C. Warren, Washington, DC, 30 October 1949.

44. SNL Archives, Walter L. Brown to H. C. Anderson, n.p., 21 July 1949.

45. SNL Archives, Pike to Warren, Washington, DC, 30 October 1949, discusses these precedents, supra note 43.

46. See also *Atomic Energy Act of 1946*, Public Law 585 [S1717] in *Laws of 79th Congress – 2nd Session*, 1 August, 722–741. SNL Archives, Memo, H. C. Anderson, Jr. to Walter L. Brown, Subject: "Atomic Energy Commission Contract," 7 September 1949. A statement issued by Lindsay C. Warren, Comptroller General to "The Chairman, Atomic Energy Commission," Washington, DC on 6 October 1949, acknowledged the position of Sandia as occupying a "central role in . . . research and development work, as well as production activities which relate directly to atomic weapons." Warren concluded by ruling that (Section 31a) of the Atomic Energy Act of 1946, 60 Statute 758 to negotiate contracts "in the interest of the common defense and security" essentially provided the basis for inclusion in the proposed contract of the indemnity provision. The same assumption of risk provision is now contained in Article V of the 1983 contract.

See Contract AT-(29-1)-789, Article V. Advances and Vouchering—and Article VI. Assumption of Risk by Government, 4-5 and 5-7, supra note 33 at 10.

47. Contract AT-(29-1)-789, Article XI. Security, 10, supra note 33.

48. Contract AT-(29-1)-789, XII. General, 12, Sec. 6, supra note 33.

49. Contract AT-(29-1)-789, X. Patents and Inventions, 8-9, Sec. 1, supra note 33.

50. See Contract DE-AC04-76DP00789 between United States Department of Energy and Western Electric Company, Incorporated, Mod. No. M086, 24 October 1983 (effective 1 October 1983) including as Appendix A the contract between Sandia Corporation and Western Electric Company, Incorporated, 24 October 1983 (effective 1 October 1983). See specifically Article IX, Sec. 1. Interviews, Larry Greher and Kurt Olsen, SNL, Albuquerque, NM, 7 October 1986.

51. Greher and Olsen, *ibid.*

52. "Patent Policy Changes Stimulating Commercial Application of Federal R&D," *Research Management*, May – June 1986; Greher and Olsen, *ibid.*

53. SNL Archives, interview, Leonard Jacobvitz, Albuquerque, NM, 1 October 1985.

54. Contract DE-AC04-76 DP00789, (1983) Article VI – Property, 9; Article III – Payment of Costs, 4-5; Article XX - Status and Authority of Sandia Corporation as an Agent of the DOE, 40–42, *supra* note 50.

55. Interview, Harold Folley, Albuquerque, NM, 20 November 1986; Interviews, Greher and Olsen, 7 October 1986, *supra* note 50.