ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
	)	
TRW, Inc.	)	ASBCA No. 51172
	)	
Under Contract No. F30602-88-C-0058	)	

APPEARANCES FOR THE APPELLANT: John W. Chierichella, Esq.
Douglas E. Perry, Esq.
Anne B. Perry, Esq.
Fried, Frank, Harris, Shriver & Jacobson
Washington, DC

APPEARANCES FOR THE GOVERNMENT: Thomas B. Pender, Esq.
Chief Trial Attorney
Arthur M. Taylor, Esq.
Carol L. Matsunaga, Esq.
Trial Attorneys
Defense Contract Management Agency
Carson, CA

OPINION BY ADMINISTRATIVE JUDGE JAMES
ON APPELLANT' S MOTION FOR PARTIAL SUMMARY JUDGMENT

TRW submitted a "non-monetary" claim with respect to the allowability, *inter alia*, of its "Solar Array" project costs in its fiscal years 1990, 1991 and 1992 under the captioned contract. That claim was appealed on the basis of its deemed denial in ASBCA No. 51172. In September 2000, TRW moved for partial summary judgment, contending that it had properly charged certain Solar Array costs as depreciation on "capital" under FAR 31.205-25. Respondent replied to the motion, arguing that such costs were independent research and development (IR&D) costs under FAR 31.205-18.

STATEMENT OF FACTS (SOF) FOR THE PURPOSES OF THE MOTION

1. On 8 July 1988, the Air Force awarded Contract No. F30602-88-C-0058 (contract 58) to TRW, Inc. Contract 58 included line items 1 and 2 for "Radiation-Hardened 32 Bit Processor" on a fixed-price basis, and option line items 3 and 4 for microcircuit development models on a cost-reimbursement basis, subject to the FAR 52.216-7 ALLOWABLE COST AND PAYMENT (APR 1984) clause. (R4, tab 1 at 2-4, 23)

2. The FAR 52.216-7 ALLOWABLE COST AND PAYMENT (APR 1984) clause provided that the Government was to reimburse the contractor in amounts the contracting officer

(CO) determined were allowable in accordance with the cost principles prescribed by FAR Subpart 31.2 in effect on the date of contract award, final indirect cost rates and the appropriate bases were to be established by the procedures set forth in FAR Subpart 42.7, and failure of the parties to agree on a final annual indirect cost rate was a dispute within the meaning of the contract's Disputes clause (R4, tab 1).

3. On 23 January 1990, the CO issued unilateral Modification No. P00006 to contract 58, exercising the Government's option for line items 3 and 4 (R4, tab 938).

4. TRW designated contract 58's line items 3 and 4 as "Subsales Number 56589" and recorded costs for Subsales No. 56589 in 1990, 1991 and 1992 (R4, tabs 939-42).

5. On 8 July 1988, the pertinent FAR cost principles provided:

> **31.205-11 Depreciation.**
>
> . . . .
>
> (c) Normal depreciation on a contractor's plant, equipment, and other capital facilities is an allowable contract cost, if the contractor is able to demonstrate that it is reasonable and allocable . . . .
>
> . . . .
>
> **31.205-18 Independent research and development and bid and proposal costs.**
>
> (a) *Definitions*.
>
> . . . .
>
> "Development," as used in this subsection, means the systematic use, under whatever name, of scientific and technical knowledge in the design, development, test, or evaluation of a potential new product or service (or of an improvement in an existing product or service) for the purpose of meeting specific performance requirements or objectives. Development includes the functions of design engineering, prototyping, and engineering testing. Development excludes: . . . (2) development effort for manufacturing or production materials, systems, processes, methods, equipment, tools, and techniques not intended for sale.

"Independent research and development (IR&D)" means a contractor's IR&D cost that is not sponsored by, or required in performance of, a contract or grant and that consists of projects falling within the four following areas: (1) basic research, (2) applied research, (3) development, and (4) systems and other concept formulation studies. . . .

. . . .

31.205-25 Manufacturing and production engineering [M&PE] costs.

(a) The costs of manufacturing and production engineering effort as described in (1) through (4) below are all allowable:

(1) Developing and deploying new or improved materials, systems, processes, methods, equipment, tools and techniques that are or are expected to be used in producing products or services;

. . . .

(b) This cost principle does not cover:

(1) Basic and applied research effort (as defined in 31.205-18(a)) related to new technology, materials, systems, processes, methods, equipment, tools and techniques. Such technical effort is governed by 31.205-18, Independent research and development costs; and

(2) Development effort for manufacturing or production materials, systems, processes, methods, equipment, tools and techniques that are intended for sale is also governed by 31.205-18.

(c) Where manufacturing or production development costs are capitalized or required to be capitalized under the contractor's capitalization policies, allowable cost will be determined in accordance with the requirements of 31.205-11, Depreciation.

6. A solar array is deployed in space, as a component of an operational spacecraft, to help provide power to the spacecraft and consists of panels covered with solar cells that generate electrical power by converting sunlight into electrical energy. Multiple solar array panels may be integrated to form a solar array "wing." (Kurland decl. ¶ 3)

7. In June 1990 TRW began to develop a solar array design under IR&D project No. 90363518 (R4, tab 19 at 12). In August 1990 the solar array was not an element of TRW's "Universal Test Bed" (UTB) project (R4, tab 16 at 8, tab 17 at 2). In October 1990: (a) TRW internally suggested reviewing the funding of prototype solar array panel wing fabrication under the UTB program (R4, tab 18 at 2), and (b) TRW's goals were to develop a prototype solar array design, test and evaluate materials, and release prototype engineering drawings in 1990, and to fabricate, assemble, and test a prototype solar array wing so as to demonstrate its design feasibility in 1991 (R4, tab 19 at 1, 3, 13-15).

8. On 26 November 1990, TRW stated internally that it needed $1 to $1.5 million of added IR&D funds to fabricate and test a prototype solar array wing in 1991-92, and that once it had a tested prototype design, it could "develop a solar array subsystem product line for . . . sale" (R4, tab 20 at 2-3).

9. On 30 January 1991, TRW planned to fabricate and test a 3-panel prototype solar array wing structure by the spring of 1992 to validate the design concept, and stated internally: "The design is supposed to be compatible with the UTB spacecraft bus geometry" (R4, tab 22 at 3).

10. On or about 8 February 1991, TRW approved internal "IR&D/Capital Costing Groundrules" for the solar array project, redesignated No. 91363518, in which eight activities, including fabrication, assembly and testing of the first solar array prototype panel, were classified as IR&D for an estimated $835,000, and the two following activities were classified as "capital" for $400,000:

> design, development & fabrication of tooling, fixtures, etc. for any hardware whether for fabrication/assembly . . . or testing of the hardware . . . .
>
> fabrication, assembly and testing of the 2nd & 3rd solar array prototype panels, including materials, fab/assembly, test plans, testing, sustaining engineering . . . .

(R4, tab 23 at 1, 4-5, 7-8)

11. In 1991 TRW decided to invest a combination of IR&D and capital funds to fabricate a solar array tool that had two purposes: (i) to serve as a scalable simulator design tool that could be used to test the form, fit, and function of solar arrays or solar array

components that might be developed or adapted for use on a variety of different spacecraft, and (ii) to work in conjunction with the UTB to test the form, fit, and function of different spacecraft components (Kurland decl. ¶ 4). The solar array wing was to be attached to the UTB bus structure for testing the performance characteristics and compatibility of solar array subsystems and components TRW was developing (Hand-Arevalo decl., ex. 2 at 48, 74-75, 81, 189).

12. On 27 February 1991, TRW internally suggested a "Capital Expenditure Appropriation" (CEA) with a $386,000 initial capital budget to fabricate a solar array prototype wing. That CEA stated:

> Objective
>
> The objective of the prototype wing is to develop and demonstrate a standard solar array design that will be scalable and adaptable to a variety of future space missions. As such, it will be used for all programs during design and for hardware testing and problem solving. Currently, TRW does not have a proven solar array design that will be compatible with our future spacecraft configuration and meet the schedule, weight and cost constraints imposed by those future missions. This prototype solar array, in conjunction with the . . . (UTB), will solve that problem.
>
> Strategy
>
> . . . In the near term [the solar array] will benefit us through capital development of recurring hardware components on the prototype solar array wing, thereby reducing IR&D-related costs . . . . In the long term, the solar array will serve as a future standard design . . . . The prototype solar array will be integrated to the UTB bus structure to support interface definition. It will be a key tool in continuous process improvement . . . . It could also be the basis of a solar array product line for sale to outside spacecraft programs . . . .
>
> . . . .
>
> The design, fabrication and testing of the first article [solar array panel] is being accomplished on IR&D Project 9136518 [sic]. Development of tooling and equipment and fabrication of the second . . . solar array panel is proposed as a capital investment.

. . . .

> The overall objective of this project is to demonstrate and qualify a prototype solar array wing . . . .

(R4, tab 27 at 3-4, 13-14; Kurland decl. ¶¶ 5-8) On 9 April 1991, TRW approved that CEA (R4, tab 28).

13. In late April 1991 TRW reexamined the earlier solar array cost accounting "guidelines" with a view to reclassify all wing assemblies (including panels, etc.) as capital expenses because IR&D funds would likely overrun, and the solar array wing was closely aligned with the UTB (R4, tabs 30-31; Kurland decl. ¶ 10; ex. G-1 at 92-94). On 22 April 1991, TRW opened capital job number 93JL-Z5 for $168,000 to fabricate the second solar array panel needed to perform "system-level" testing of solar wing components (R4, tab 29 at 1-2; ex. G-1 at 89).

14. On 21 May 1991, with respect to a $848,000 addition in capital funds for the solar array project CEA, TRW internally stated:

> Changes to the [original] guidelines with respect to the solar array now qualify the entire testbed wing structure to be a capital item rather than just one panel. In the original CEA, one panel and all tooling and fixtures were budgeted. In th[is] modification to the CEA, additional panel assemblies and deployment mechanisms are being fabricated, and the entire wing is being integrated and tested. The original objectives and reasons for investing the capital in the project remain unchanged . . . .

(R4, tab 33 at 3-4; Kurland decl. ¶¶ 11-13)

15. The 18 June 1991 internal memorandum of TRW divisional controller David Holloway summarized the changed solar array cost accounting guidelines:

> Subsequent to the initial CEA, and before any significant work was performed, it was decided to make the solar array a test bed integrated with the UTB . . . when it was realized that the solar array effort was closely coupled to the UTB efforts . . . .
>
> The fabrication effort on the initial [solar array] panel, originally classified as IR&D, should be capitalized. The effort is primarily an internal capital fabrication . . . . It is not part of

> capital design/development effort because fabrication and test (validation) requirements, methods, and processes are well understood and have been implemented many times on previous programs.

(Kurland decl. ¶ 16, ex. 3)

16. The 28 June 1991 internal memorandum of TRW's solar array project manager, Richard Kurland, stated:

> . . . Initially, only the second panel of a 2-panel wing was to be capitalized because the panel was considered duplicate hardware, whereas the rest of the wing hardware and design development were considered IR&D.
>
> Subsequently, before any significant hardware production had begun (other than to . . . procure some components and materials), it was decided to make the solar array a "test bed" integrated with the UTB. The initial production activities, hardware/materials procurement, subcontracts administration, and sustaining engineering activities that were charged to IR&D, will now be converted to capital.

(R4, tab 37) TRW followed the changed cost accounting guidelines in designing, developing, fabricating, assembling, and testing the solar array (Kurland decl. ¶ 21).

17. With respect to the solar array design, Mr. Kurland used the terms "testbed," "prototype," "generic" and "standard" interchangeably in 1990-1991 (ex. G-1 at 21, 100, 108-13).

18. TRW's 15 February 1992 IR&D technical plan, which was submitted to the administrative contracting officer (ACO) and to Defense Contract Audit Agency (DCAA) personnel, described TRW's 1991 solar array work, included $700,000 IR&D funded design studies, baseline design selection, detail production drawing completion for a two-panel testbed wing, and material tests, and "$900,000 capital testbed program" with testbed wing materials procured, wing subassemblies fabricated, and test fixtures designed and fabricated for panel and wing qualification testing (R4, tab 45 at 1, 3, 5; Kurland decl. ¶ 24a; Hand-Arevalo decl. ex. 1 at 10-11, 15, 101-02, ex. 3 at 5, 59-63). The ACO and DCAA did not review, verify or confirm TRW's solar array cost classifications in 1991 and 1992 (ex. G-3, ¶¶ 8-9; ex. G-9 ¶¶ 7-8).

19. On 6 October 1992, TRW's "Advanced Systems Division" proposed a solar array system to TRW's "Federal Systems Division" for the price of $6,575,300 under

NASA's "AFAX-I" spacecraft program, and stated that TRW was "committed to maintaining solar array systems as a distinct product line" (R4, tab 52 at 2-3).

20. TRW's 23 November 1992 supplement to the solar array CEA added $705,000 but made no accounting change (R4, tab 54 at 1-2; Kurland decl. ¶ 22).

21. TRW's 15 March 1993 IR&D technical plan described TRW's 1990-1992 solar array work: "Under a $1,500,000 capital testbed program major components/ subassemblies and test fixtures were fabricated to support the demonstration of a two-panel testbed wing" (R4, tab 57 at 3; Kurland decl. ¶ 24c).

22. TRW terminated the solar array project in April 1994 (Kurland decl. ¶ 2).

23. "[T]he solar array tool (a) was not "flightworthy" because it was not designed to fly in space and could not fly in space and (b) was not intended for sale and was never offered for sale" (Kurland decl. ¶ 28). TRW never entered into the business of selling, and never sold, the solar array (Kurland decl. ¶ 29).

24. TRW depreciated the solar array capitalized assets "using the sum-of-the-years-digits . . . half-year convention over a five-year period" beginning in June 1992. "Solar Array depreciation expenses were charged as an indirect expense of TRW's Government contracts under Engineering Pool 01 beginning in 1992 and continuing through the end of 1999." (Grossenbacher decl. ¶¶ 7, 9, 11)

25. TRW submitted to the ACO its final indirect rate proposals for its 1990, 1991 and 1992 cost accounting periods, the Defense Contract Audit Agency (DCAA) audited those proposals, and the parties engaged in negotiations to establish final indirect rates for each of those periods (compl. & answer ¶ 11).

26. The parties' 31 March 1997 "Addendum to Final Rate Agreement for Years Ended 1990, 1991 and 1992" recited that the ACO had made no final determination of the allowability or allocability of certain costs that were the subject of pending litigation (which included the solar array costs), such costs were "provisionally allowed," but the Government reserved the right to make a final determination of their allowability and allocability (compl. & answer ¶¶ 15-16).

27. TRW's 18 September 1997 "non-monetary" claim under contract 58 alleged that TRW properly treated the costs of fabricating electrical and structural components for the "Solar Array Test Bed" as depreciation of capital "in accordance with CAS 404, FAR 31.205-11, FAR 31.205-25(c), and Financial Accounting Standard No. 1 [and] No. 2" for its 1990, 1991 and 1992 cost accounting periods (R4, tab 14 at 1-2, 37-43). TRW's 1991 cost accounting period corresponded essentially to calendar year 1991 (R4, tab 2 at 4). The record does not define TRW's 1990 and 1992 accounting periods.

28. On 25 November 1997, TRW filed an appeal from the "deemed denial" of its 18 September 1997 claim. The appeal was docketed as ASBCA No. 51172.

POSITIONS OF THE PARTIES

TRW argues that (1) whether "developmental effort is classified as IR&D or M&PE depends on the primary purpose of the activity," (2) in accordance with FAR 31.204(c), it properly apportioned solar array design and environmental testing costs as IR&D under FAR 31.205-18(a), and "fabrication, assembly and certain other testing costs of the articles to be incorporated in the testbed as capital" under FAR 31.205-25(c) because "the purpose of the project evolve[d] to encompass efforts that are appropriately accounted for as capital"; and (3) respondent is estopped to disallow such costs (app. reply br. at 18-19, 29).

Respondent disputes the propriety of TRW's 1991 accounting change to reclassify the solar array "testbed" "wing" or "tool" costs as capital costs subject to depreciation on the grounds that TRW's objective or purpose of incurring such costs in 1991-92 was no different than its initial 1990 objective or purpose of the solar array project, and that throughout the period 1990-1992 TRW contemplated the development of the solar array as a "product" for "sale," pointing to TRW's 6 October 1992 proposal to sell a "solar array system" for $6,575,300 under the NASA "AFAX-I" spacecraft program (SOF ¶ 19).

We note that based on the declaration that TRW depreciated the capitalized solar array assets beginning in June 1992, charges in 1990-91 may not be in issue. We do not address this possibility further for purposes of the present opinion.

DECISION

Summary judgment is appropriate when there is no genuine issue of material fact and the movant is entitled to judgment as a matter of law. *See U.S. Ecology, Inc. v. United States*, 245 F.3d 1352, 1355 (Fed. Cir. 2001); FED. R. CIV. P. 56(c). The Board has recited facts from the appeal record (SOF ¶¶ 1-4) to establish that TRW incurred costs under contract 58 subject to its claim. Although the parties differ about the conclusions to be drawn from the historical or narrative facts, it does not appear that they genuinely dispute the material facts in SOF ¶¶ 5-28. Accordingly, this motion presents solely issues of law, which are appropriate for summary judgment. *See Motorola, Inc.*, ASBCA No. 51789, 01-1 BCA ¶ 31,233 at 154,152 (disputed interpretation of regulatory provisions resolvable by summary judgment).

The FAR 31.205-18(a) and 31.205-25 cost principles in effect on 8 July 1988 set forth criteria for classifying IR&D and M&PE costs. The parties agree that the "areas" of "(1) basic research," "(2) applied research," and "(4) systems and other concept formulation studies" in the FAR 31.205-18 definition of "IR&D," are not applicable to the

disputed solar array costs; only the IR&D area "(3) development" is in issue. "Development" *includes* design engineering, prototyping and engineering testing functions, but *excludes* "development effort for manufacturing or production materials, . . . equipment, tools . . . not intended for sale." M&PE *includes* the effort of "developing and deploying new or improved materials, . . . equipment, tools . . . that are or are expected to be used in producing products or services" but *excludes* "development effort for manufacturing or production materials, . . . equipment, tools . . . that are intended for sale." (SOF ¶ 5)

TRW's purposes in 1990 were to develop a prototype solar array design and to test a prototype wing to demonstrate the feasibility of the design (SOF ¶ 7). TRW described such efforts as IR&D (SOF ¶ 8). The parties do not genuinely dispute the propriety of such classification. In October 1990 TRW considered funding a prototype wing under the UTB program, and in January 1991 TRW said that the solar array design was "supposed to be compatible with the UTB spacecraft bus geometry" (SOF ¶¶ 7, 9). On 8 February 1991, TRW changed its accounting rules to classify as "IR&D" the fabrication, assembly and testing of the first solar array prototype panel, and to classify as "capital" the (1) design, development and fabrication of tooling and fixtures for fabrication, assembly and testing of solar array hardware, and (2) fabrication, assembly and testing of the second and third solar array prototype panels (SOF ¶ 10). In February 1991 the solar array "wing" or "tool" was to work in conjunction with, and be attached to, the UTB bus structure (SOF ¶¶ 11, 12). In April-May 1991 TRW again changed its accounting guide lines for the solar array, to re-classify "the entire testbed wing structure [as] a capital item rather than just one panel." TRW's 1990-91 "overall objective" for the solar array project remained unchanged (SOF ¶¶ 7, 12).

TRW's explanations for this second accounting change varied: late April 1991 – IR&D funds would likely overrun and the solar array wing was closely aligned with the UTB (SOF ¶ 13); 18 June 1991 – subsequent to the initial CEA (of 27 February 1991) – TRW decided to integrate the solar array test bed with the UTB because their efforts were "closely coupled" (SOF ¶ 15); 28 June 1991 – only the second solar array panel was capitalized on 27 February 1991 because it was regarded as "duplicate hardware" with respect to the first panel, whose design and development TRW classified as IR&D, but subsequently TRW decided to make the solar array a test bed integrated with the UTB, and so re-classified production activities previously classified as IR&D as "capital" (SOF ¶ 16).

TRW's 1991 explanations of its accounting changes do not adhere fully to the facts, since TRW desired to integrate the solar array with the UTB from October 1990, not after the proposed 27 February 1991 CEA, and, more importantly, those explanations do not address the FAR criteria for allowability of M&PE capital costs: "[t]he costs of . . . [d]eveloping and deploying new or improved . . . equipment, tools . . . that are or are expected to be used in producing products . . . ." that are not "intended for sale" (SOF ¶ 5).

It is undisputed that TRW never intended to market or sell a solar array "tool," or "testbed." But in November 1990 TRW contemplated that it could "develop a solar array subsystem product line . . . for sale" (SOF ¶ 8) and on 6 October 1992 proposed a solar array system for the price of $6,575,300 under NASA's "AFAX-I" spacecraft program and said that it was "committed to maintaining solar array systems as a distinct product line" (SOF ¶ 19).

TRW also argues that respondent is estopped to disallow the disputed solar array costs because the ACO and DCAA knew of and approved TRW's cost classifications of IR&D and capital depreciation. A party asserting an estoppel must establish the following four elements:

> (1) The party to be estopped must know the facts; (2) he must intend that his conduct shall be acted on or must so act that the party asserting the estoppel has a right to believe it is so intended; (3) the latter must be ignorant of the true facts; and (4) he must rely on the former's conduct to his injury.

Emeco Industries, Inc. v. United States, 485 F.2d 652, 657, 202 Ct. Cl. 1006, 1015 (1973). The ACO and DCAA received and may have known of TRW's 1991-92 solar array cost charges to IR&D and to capital depreciation. However, the ACO and DCAA did not review, verify or confirm TRW's solar array cost classifications in 1991 and 1992 (SOF ¶ 18). The record contains no proof that the ACO or any DCAA auditor approved or agreed with such solar array cost classifications and charges for 1991 and 1992, or acted so as to give TRW the right to believe the ACO or DCAA auditor so intended. Furthermore, TRW later submitted its final indirect rate proposals for 1991 and 1992 to the ACO, DCAA audited such proposed rates, the parties engaged in negotiations to establish such final rates, and their 31 March 1997 Addendum stated that the ACO had made no final determination of the allowability or allocability of certain costs, including the solar array costs which are the subject of the present motion (SOF ¶¶ 25-27). Thus, the record at a minimum does not establish elements (1) and (2) of an equitable estoppel.

We hold that TRW has not carried its burden of showing that it is entitled to judgment, as a matter of law, that the solar array costs in question may properly be classified as M&PE capital costs. We deny TRW's motion for partial summary judgment.

Dated: 10 July 2002

DAVID W. JAMES, JR.
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

MARK N. STEMPLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 51172, Appeal of TRW, Inc., rendered in conformance with the Board's Charter.

Dated:

EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals