Office of Dispute Resolution for Acquisition
Federal Aviation Administration
Washington, D.C.

FINDINGS AND RECOMMENDATIONS

Matter: Contract Dispute of Martin Resnik Construction Company
Under Contract No. DTFA05-97-C-50842

Docket: 99-ODRA-00111

Appearances:

For Martin Resnik Construction Company: R. Patrick McCullough, Esq. and
William D.Wheelock, Esq.
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La Jolla, California

For the FAA Eastern Region: Brendan A. Kelly, Esq.
Office of Regional Counsel

I. Introduction

Martin Resnik Construction Company ("MRCC") submitted to the FAA Office of Dispute Resolution for Acquisition ("ODRA") a contract dispute under Contract No. DTFA05-97-C-50842 (the "Contract"), a construction contract it had with the FAA Eastern Region (the "Region" or the "Government") for the Airport Surveillance Radar ("ASR-9") facility at the Ronald Reagan Washington National Airport, Washington, D.C. (hereinafter "National Airport"). The total amount claimed was restated several times in different forms. As currently revised, without interest, the total amount still involved in MRCC's claim is $291,764.31. (Certain items of claim and counterclaim, including MRCC's claim relating to the contract balance, credits asserted by the Region under unilateral Modification No. 7, and other credits asserted by letter to MRCC dated September 21, 1999 – Trial Exhibit 1 – were resolved by negotiation on September 23, 1999). The Region has asserted a counterclaim for $111,500 in liquidated damages -- representing 223 calendar days at $500 per day. A hearing was conducted by the ODRA under its default adjudicative process on September 22, 23 and 24, 1999. For the reasons set forth below, the ODRA finds the Region entitled to 23 days' worth of liquidated damages – or a total of $11,500 – and that MRCC is entitled to a contract time extension of 188 days, together with an equitable adjustment of its contract, net of such liquidated damages, in the amount of $136,201.61, plus applicable interest.

II. Findings of Fact

1. The Region issued a Request for Offer ("RFO") on April 15, 1997 for the construction of an ASR-9 facility (hereinafter the "ASR-9 Project") at National Airport. The ASR-9 Project was to include, *inter alia*, site preparation work, excavation and pile driving, the construction of a new concrete masonry building to house an engine generator ("E/G") room and an equipment room, and external concrete pads for an electrical load bank, an above ground fuel tank, various electrical transformers, and an uninterruptible power supply ("UPS") system. The new concrete masonry building was to include a heating, ventilation and air conditioning ("HVAC") system that, as initially designed, was to consist of eight wall-mounted Bard HVAC units. In addition, the Contract work was to include the construction of a tower foundation, the transportation of previously used tower steel being stored at an FAA site in Suitland, Maryland, which steel was to be provided as Government-furnished material ("GFM"), and the erection with that steel of a 57-foot high ASR-9 tower.

2. In terms of electrical work, the RFO contemplated one of two options -- either a dual duct bank system or a single duct bank system, and prospective bidders were asked to submit proposals on the two options. The dual duct banks were to run in parallel to one another for a distance of over 3,000 LF from a new 300 kva transformer to be provided by the contractor -- which was to be mounted on a pad outside the new concrete building -- to a point of connection with commercial electrical power. The Contract drawings called for the new power lines to run from the duct banks through a new ASR-9 switchgear and to proceed to the commercial power connection to be made at power manhole 148 ("PMH-148"), a buried manhole in the area of the TV900 Electrical Shop. (Hearing Transcript ("Tr."), Silva Testimony, page 689; Trial Exhibit 11; Contract Drawing AEA D-33797, Sheet 5 of 26, TV900 Enlarged Plan). The Contract called for the contractor to notify the Metropolitan Washington Airport Authority ("MWAA") at least 5 days in advance of any splicing at PMH-148. (Contract Drawing AEA D-33797, Sheet 4 of 26, Note 6).

3. On May 16, 1997, the Region's Contracting Officer for the ASR-9 Project, Ms. Carol Tringali, issued a Notice of Award to MRCC, awarding MRCC the Contract in the amount of $976,772.00. The Contract was awarded on the basis of MRCC's proposal on the single duct bank option. (Tr., Tringali Testimony, pp. 887-888). On June 2, 1997, Ms. Maria Gallo, another Contracting Officer for the Region, in the absence of Ms. Tringali, conducted a Pre-Construction Conference with MRCC and Government representatives in attendance. (Tr., Henn Testimony, p. 798). Among the items discussed at that conference were the requirements relating to shop drawings and other submittals. *Id.*; *See* DF No. 1, Contract Section 1-5.5, Submittals. Also discussed at the Pre-Construction Conference was the possibility of partial work shutdowns being caused by the use of the existing ASR-7 radar facility at National Airport. At the Conference, MRCC was advised that the ASR-7 facility -- which was across the street from the new ASR-9 site at National Airport -- would be activated in one of two circumstances:

(1) adverse weather conditions -- when, presumably, additional radar surveillance of the Washington metropolitan area's airspace would be needed; and (2) situations when the surveillance radar system at Andrews Air Force Base was shut down for some reason. Tr., Henn Testimony, p. 799. MRCC was advised at the Pre-Construction Conference that, once the ASR-7 radar was activated, all work 17 feet or more above the ground would have to cease. This was because of the danger

of irradiation. *Id.*, p. 799. Essentially, this meant that, once the radar was activated, no work on the upper portions of the tower would be permitted. However, work elsewhere at the ASR-9 Project site could continue. Tr., Silva Testimony, pp.712-714. With regard to these radar shutdowns, there was no warning in the RFO or Contract concerning them, and there is no evidence in the record that MRCC had taken the possibility of such shutdowns into account in pricing the Contract. *Id.;* Dispute File ("DF") No. 1, Solicitation & Contract.

4. By letter dated June 5, 1997, the Region issued to MRCC a Notice to Proceed, calling for Contract work to commence on June 9, 1997 and to be complete within 150 calendar days thereafter, *i.e.*, on or before November 5, 1997. Joint Pre-Hearing Submission, Statement of Undisputed Facts ("SUF") ¶¶A.1 and A.2.

5. Prior to the ODRA's adjudication of the MRCC contract dispute, a total of 7 modifications of the Contract had been issued by the Region -- 5 bilateral modifications and 2 unilateral modifications. The parties have stipulated the following as to those modifications:

? "Modification No. 1 increased the contract amount by $962.00. No time extension was granted.

? Modification No. 2 increased the contract by $4,786.76. The contract performance time was extended by one (1) calendar day.

? Modification No. 3 increased the contract by $8,830.00. The contract performance time was extended by four (4) calendar days.

? Modification No. 4 increased the contract by $4,030.00. No time extension was granted.

? Unilateral Modification No. 5 increased the contract by $30,000.00. No time extension was granted.

? Modification No. 6 increased the contract by $21,692.91. The contract performance time was extended by thirteen (13) calendar days.

? Unilateral Modification No. 7 decreased the contract by $18,349.67. No time extension was granted."

SUF, ¶¶A.3-A.9. As modified, the Contract called for Contract completion on or before November 25, 1997. (Tr., Scozzafava Testimony, p.574). As explained below, for a variety of reasons, actual completion of the Contract did not occur until June 23, 1998.

Early Project Activities

6. Shortly after receiving its Notice of Award, MRCC, pursuant to the requirements of the Contract, submitted to the Region a project performance schedule dated May 30, 1997. The Region's original Project Manager for the ASR-9 Project,

Mr. Joseph Henn, approved that schedule (hereinafter the "As Planned Schedule") "as noted," with the following two notes:

"1. Schedule shall reflect the actual start and completion dates given at the preconstruction meeting.

2. An updated progress schedule be submitted to the Contracting Officer once a month."

DF No. 8, Tab 8-1.

7. The early activities indicated on the As Planned Schedule -- those to be initiated during the month of June 1997 -- included Mobilization, Site Layout, Tower Steel GFM Inventory, Site Work, Lead Paint Abatement of the GFM Tower Steel, Prime Painting of the Tower Steel, forming and pouring of the Tower Foundation, Pile Driving, Rough Electrical, and Building Foundations. *Id.; See* Expert Report of Management Counseling Corporation dated June 9, 1999 ("MCC Report"), Diagram #1 at page 6. Of these activities, the record reflects no significant delays associated with the Mobilization, Site Layout, and Site Work. With the other activities, however, MRCC encountered substantial delays in their commencement and/or completion. Some of these delays the contractor would attribute to the Government, and there is a difference of opinion as to their origin. Others clearly are attributable to MRCC itself.

Tower Steel Erection

8. Major delays were encountered on the ASR-9 Project relating to the GFM tower steel. According to the As Planned Construction Schedule, the "GFM Inventory" of the tower steel was to be performed during the period approximately June 12-15, 1997. MCC Report, Diagram #1, p. 6. Although MRCC commenced the inventory as scheduled on June 12, 1997, unanticipated problems with the steel delayed inventory completion. First, MRCC discovered that some of the steel stored at the Suitland site belonged to a second previously used Government tower. More specifically, the 57-foot tower to be erected at National Airport was to consist of one 17-foot section and four 10-foot sections. What MRCC found at Suitland was steel for these five tower sections plus steel for a second 17-foot section. (Tr., Henn Testimony, p. 800).

9. In order to commence with lead paint abatement for the used steel, it was necessary for MRCC to know which of the steel pieces belonged to the extra 17-foot tower section, *i.e.*, which pieces would not require lead paint abatement. Mr. Henn, whose office was in the Regional Headquarters at JFK International Airport outside New York City, traveled to Washington on June 17, 1997, and, with Mr. Alex Silva, the FAA's Resident Engineer for the ASR-9 Project, visited the Suitland site to examine the tower steel. On that occasion, both individuals testified that they were able to identify the steel relating to the extra 17 foot section and that they marked the steel pieces in question with spray paint, so that MRCC would know which steel was not intended for the ASR-9 Project. (*Id.*, pp. 800-801*;* Tr., Silva Testimony, p. 640; Tr., Ronholm Testimony, pp. 63-64; DF No. 10, Ronholm Diary, p. 9). On that occasion, MRCC's Project Manager and Superintendent, Mr. Craig Ronholm, who was present along with Mr. Paul Geary, another MRCC employee, brought to the attention of Messrs. Henn and Silva certain of the used steel grating (for tower platforms, stair treads, etc.) that had been torch cut during the disassembly process (since it

had been welded rather than bolted to the tower structure). Mr. Ronholm also pointed out that certain steel pieces -- particularly the railings -- were not completely disassembled, but rather were left bolted to other tower pieces. Both Mr. Silva and Mr. Henn testified that approximately 20% of the steel was found bolted together. Tr., Silva Testimony, pp. 645, 649; Tr., Henn Testimony, pp. 801-802. Mr. Ronholm expressed concern that the condition of the grating steel would require extensive repair and that the FAA's failure to have disassembled the tower completely might result in additional work for MRCC. (DF No. 10, Ronholm Diary, p. 9).

10. Mr. Ronholm's diary entry for June 17, 1997, also indicates that he discussed the "bent" condition of some of the steel with the Region's Mr. Henn on that date and that Mr. Henn acknowledged that the condition of the steel would pose problems during the erection process: "Joe says there will be problems down the way as I point out the mistakes that were made w/ the tower disassembly -- *i.e.*, bolts that remain -- pieces that were cut -- ***pieces that were bent***. He acknowledges this and states that any extra work that comes up due to these flaws, ect. [sic] should be brought to the RE's attn and we will deal with it as a change order -- and MRCC will be compensated." (DF No. 10, Ronholm Diary, p. 9, emphasis added). With respect to GFM tower steel, the Contract Specification stated that it had been "carefully checked" and was believed to be "accurately fabricated" and indicated that, while "minor corrections" -- such as the "moderate use of drift pins or moderate cutting, reaming or chipping" -- would have to be done by the contractor at its own expense and "at no additional cost to the Government," correction of "other errors" would be done subject to the direction of the Resident Engineer. *See* DF No.1, Contract Specification Section 13-3.5.1. It would have been reasonable for MRCC to presume that such other correction would be compensated by means of a contract modification. Indeed, Mr. Ronholm testified that, during their joint visit to the Suitland site on June 17, 1997, Mr. Henn told him to "make these pieces that you have work," promising that "any extra time . . . that you encounter with this we'll compensate you later." Tr., Ronholm Testimony, p. 100. In his testimony, Mr. Henn did acknowledge a June 17, 1997 promise to Mr. Ronholm to "consider" possible extra compensation for MRCC working with the used steel, but implied that the promise was limited to the condition of the grating that they found had been torch cut. (Tr., Henn Testimony, pp. 806-808). Mr. Silva's testimony was simply that he had advised Mr. Ronholm to note as part of the inventory any steel that was either missing or too damaged to be usable, so that the Region could promptly order replacement steel. (Tr., Silva Testimony, p. 653). However, when pressed, Mr. Silva did not definitively refute Mr. Ronholm's testimony, but indicated that the issue of "bent" or "warped" steel may not have been raised until later, during actual tower erection, that the focus at the time of the steel inventory was the torch cut grating:

> MR. WALTERS: Did you ever, at Suitland or anywhere, tell him to make bent pieces work?
>
> A: If they are workable, if you could use them, use them. I mean, the thing is, I think what we have to clarify is "bent." What is bent and what is warped? See, that is why I think this whole thing is all –
>
> MR. WALTERS: Well, did you tell him to make the [warped] pieces work?
>
> A: If they were, I don't. I really don't recall. It has been two years. I don't recall. I know that this went on for awhile, while they were erecting this. At the time of the inventory, the only concern at this time was with the gra[t]ing.

That was the concern at this point.

MR. WALTERS: At July 9th?

A: Yeah, he was concerned that some of the gra[t]ing wasn't going to be able to be used because of the way it was damaged.

MR. WALTERS: It was [torch] cut?

A: Right. That was his concern here. But, there was no talk about bent steel or anything like that. There was no mention. That then came up during construction, while they were erecting it.

MR. WALTERS: And they found, in fact, that it was warped?

THE WITNESS: They found, well, yeah.

[BY MR. WHEELOCK]: Or bent, depending on whose language we are using.

A: Yeah.

Tr., Silva Testimony, pp. 743-745.

11. The GFM steel inventory was performed by Mr. Geary, a college educated individual whom Mr. Ronholm had hired at the recommendation of a friend. Mr. Ronholm intended to utilize Mr. Geary to "man the gate" and to take care of "administrative" matters at the site. Tr., Ronholm Testimony, pp. 150-151; DF No. 10, Ronholm Diary, p. 5: "Meet @ gate at 9:00 [A.M.] w/ Paul Geary, possible gate/labor guy. Agree to start @ $17.50/hr." Although conceding that no special educational or experiential background was needed for Mr. Geary to count steel pieces, Mr. Henn noted that tower erection experience would be needed to evaluate whether pieces of the GFM steel were damaged beyond repair or were not usable for the project. (Tr., Henn Testimony, pp. 810-811). Mr. Henn, who had had prior experience with several FAA tower construction projects, including ones where used steel was employed, indicated that, normally, it is the tower erection subcontractor that performs this type of steel inventory. (Tr., Henn Testimony, p. 811). According to Mr. Ronholm's Diary, MRCC's tower erection subcontractor, Chesapeake Tower, Inc. ("Chesapeake"), did not even submit a tower erection bid to MRCC until June 25, 1997. There is no indication in the record that Chesapeake had visited Suitland to inspect the condition of the steel before tendering that bid. Mr. Geary completed the tower steel inventory on the morning of June 26, 1997. (DF No. 10, Ronholm Diary, pp. 16-17).

12. It also appears from the Ronholm Diary that the fact that certain steel was not fully disassembled may have slowed the inventory process, because piece numbers were being obscured where steel was bolted together (*Id.*, p.11). MRCC submitted the written inventory to the Government by letter dated June 26, 1997 (DF No. 3, Tab 3-4). Although the letter listed missing steel and complained about the "storage conditions of the tower pieces" and specifically of the Government's failure to disassemble steel pieces, there was no specific mention of either "bent" or "damaged" steel in that letter. By letter

dated June 27, 1997 (DF No.3, Tab 3-5), Ms. Carol Tringali, the Region's Contracting Officer ("CO") for the ASR-9 Project, forwarded a "Transmittal" dated June 27, 1997, from Mr. Silva to Mr. Ronholm which confirmed that "damaged grating ***and steel sections*** will be handled in the field on a case by case basis between the Martin Resnik Super and the FAA Resident Engineer" and which advised Mr. Ronholm that MRCC could use the extra 17 foot tower section for spare parts for the ASR-9 Project. *Id.,* June 27, 1997 Transmittal (emphasis added). From these communications, it was reasonable for MRCC to conclude that the Region did *not* want MRCC to note the "bent" and "damaged" steel on its inventory list, and that it was *not* the Government's intention to augment its order of replacement steel for missing pieces so as to include replacements for the "bent" and "damaged" pieces. Instead, what the Region was indicating was that MRCC should try to make the used steel work and that any difficulties with that steel would be resolved in the field by means of possible change order.

13. The June 27, 1997 Silva Transmittal's reference to "***steel sections***" is consistent with Mr. Ronholm's recollection of what was told to him on June 17, 1997 by Messrs. Silva and Henn at the Suitland site -- *i.e.*, that MRCC should simply take the GFM steel -- including the additional steel from the extra 17-foot section -- and "make the tower work . . . even though they [*i.e.*, the steel pieces] were bent and . . . damaged." Tr., Ronholm Testimony, p. 100. Mr. Ronholm recounted the substance of that June 17 conversation in the following manner in his diary entry regarding a September 4, 1997 meeting held at the ASR-9 site with the Contracting Officer and Resident Engineer:

> In a meeting w/ Carol Tringali & Alex Silva, we go over the steel issue -- Joe Hen & Alex told myself & Paul Geary @ the Suitland site [on June 17, 1997] ***to try & make the peices [sic] work*** -- What did not work they would replace!! They made it seem that they had a speedy source for parts, and in good faith, I rejected very little bent steel. In this [September 4, 1997] meeting, they tell me any bent pieces all going to be replaced @ our expense. This is unacceptable -- If this were the case, I would have rejected the entire tower outright. They could have ordered a new one. Now they expect us to provide any peices [sic] that don't fit -- when they requested we try and make it work -- This might not even be an issue according to Alex -- who suddenly can't remember saying such a thing. However, he told me this in front of Paul Geary, my employee -- as did Joe Hen [sic] the same. I am appalled. I also remind them that we never accepted the grating. They were told from the get go that the grating would not work. Now I suppose that will be ours to replace too. Not so, as we specifically mention[ed] this in a letter to them. We'll see what happens --

DF No. 10, Ronholm Diary, pp. 76-77 (emphasis added). Mr. Ronholm's understanding of what MRCC was expected to do with the used tower steel -- both the torch cut grating and any bent steel -- is similarly reflected in the August 20, 1997 Letter of Transmittal he sent to Mr. Silva as the "Tower Erection Submittal." That document states, among other things,: ***"Where ever [sic] possible damaged pieces will be made to work."*** DF No. 3, Tab 3-8.

14. By Transmittal dated July 3, 1997, Mr. Silva directed Mr. Ronholm to eliminate from the June 26, 1997 GFM steel inventory certain items which, by the terms of the Contract, were the responsibility of the contractor to furnish (Wave guide supports, U-bolts, Toe boards, lightning protection steel, and A1 anchor bolts) and to re-submit a revised inventory list. (DF No. 3, Tab 3-6). MRCC submitted such a revised list by Memo from Mr. Ronholm to Mr. Silva dated July 9, 1997. (DF No. 3, Tab 3-7). As with the earlier inventory list, the revised list contained no specific reference to "bent" or "damaged" steel, but

merely noted the missing steel that had to be replaced by the Government.

15. On or about July 8, 1997, just prior to MRCC's submission of its revised GFM tower steel inventory, Mr. Henn, without advance notice to MRCC and without its knowledge or prior permission (Tr., Ronholm Testimony, p. 73), removed certain of the previously inventoried GFM tower steel from the Suitland site in order to satisfy the Government's more immediate need for such steel on another surveillance radar project in West Virginia. This removal was done outside the presence of any MRCC representative. No listing of the steel was made as it was being removed, and there was no written agreement between the Region and MRCC designating the steel pieces being removed. Mr. Henn testified that when he removed the steel from the Suitland site, he used a list of needed steel provided by FAA personnel at the West Virginia project. That list, he said, he also used when placing the order with the Government's steel fabrication firm, Northeastern Manufacturing, in order to replace the steel he had taken. (Tr., Henn Testimony, pp. 812-814). The West Virginia list was never made part of the Dispute File in this case or offered into evidence by the Government at the hearing. Accordingly, it is unclear from the record exactly what steel Mr. Henn claims to have taken. After removing the steel, Mr. Henn did notify MRCC's Mr. Ronholm of its removal and did promise to replace it. *See* DF No. 10, Ronholm Diary, p. 24 (July 8, 1997): "Joe Hen [sic] shows up. He has taken some steel from the Suitland site. Will give it back later." In any event, although the July 9, 1997 MRCC Memo containing the revised tower steel inventory notes that some steel had been removed by Mr. Henn, the inventory's listing of missing steel does not include as "missing" the pieces that Mr. Henn had taken. DF No. 3, Tab 3-7; Tr., Ronholm Testimony, p. 81. This is understandable, since MRCC did not know precisely which parts were taken for the West Virginia project and thus could not list them as "missing".

16. Following the inventory of tower steel, the next steps in the tower erection process were to be lead paint abatement (removal of lead based paint from the used steel pieces down to bare metal -- *see* DF No. 1, Solicitation Amendment No. 4, p. 2) overlapped by the application of prime paint to the GFM tower steel. The MRCC As Planned Schedule of May 30, 1997 called for abatement to take place during the period June 13-22, 1997 and for prime painting to be accomplished during the period June 18-25, 1997. DF No. 8, Tab 8-1; MCC Report, Diagram #1, p. 6. Actual abatement work did not commence until August 4, 1997, and prime painting, begun on August 8, 1997, was not completed until August 26, 1997. Trial Exhibit 7. MRCC could not explain why the Government should be held responsible for the nearly one-month delay from July 9, 1997 (completion of revised inventory list) until August 4, 1997 in the commencement of lead abatement. DF No. 9, Silva Job Diary, August 4, 1997; Tr., Ronholm Testimony, pp. 154-155. Indeed, Mr. Resnik conceded that the delay may be attributable to MRCC's lead abatement subcontractor backing out of the ASR-9 Project, thus forcing MRCC to find a replacement subcontractor. Tr., Resnik Testimony, pp. 245, 405; *see also* Tr., Ronholm Testimony, pp. 149-150.

17. Other than its consultant's As-Built Schedule indicating the occurrence of 3 rain days during the period in question, MRCC has offered no explanation for the additional time taken to apply primer paint -- which took a total of 18 days rather than the 7 days initially scheduled. *See* Trial Exhibit 7. Mr. Henn provided unchallenged testimony that the lead abatement was

not delayed by the fact that certain steel was bolted together, since the bolted steel -- primarily stairway sections and the like -- was never painted, did not require lead paint abatement, and did not require either priming or painting to be used for the ASR-9 Project tower. Tr., Henn Testimony, p. 802. Accordingly, the ODRA does not find the delay associated with the priming operation to be attributable to the Government.

18. It may well have been that MRCC made no effort to speed the prime painting process, because other delays being experienced at the ASR-9 Project site relating to antecedent tower-related work rendered the need for tower steel at the site less urgent. Prior to erecting any tower steel, MRCC was required to complete a number of activities. First, there were steel piles to be driven, on which the four reinforced concrete tower foundation piers were to rest. *See* DF No. 1, Contract Specification, Section 2-10, pp. 24-31; Drawing AEA-D 33797, Sheet 12 of 26. According to the As-Planned Schedule, pile driving at the ASR-9 site was to occur concurrently with prime painting of the GFM steel at Suitland, from June 18 until June 25, 1997. *See* MCC Report, Diagram #1, p. 6. The two activities would take place at two separate locations, and there is no indication that those activities were in any way dependent upon one another. The As-Built Schedule provided by MRCC's construction and scheduling consultant, Mr. Mark A. Johnson, a schedule which he testified he developed based on records of the ASR-9 Project, indicates that pile driving actually took place from July 7-15, 1997. Trial Exhibit 7. The only pile driving related delays that MRCC's consultant appears to attribute to the Government were those associated with two radar shutdowns: (1) between June 27, 1997 and July 3, 1997; and (2) on July 9, 1997. *Compare* Trial Exhibit 7, As-Built Schedule, Sheet 4 of 13 (which lists the radar shutdowns) *with* Trial Exhibit 6, As-Built But For Owner Delay Schedule, Sheet 2 of 7 (which excludes them as "owner delays"). The ODRA does not agree with Mr. Johnson's assessment of blame for the pile driving delay. Neither radar shutdown would have impacted the pile driving operation had MRCC performed pile driving in accordance with its As-Planned Schedule, *i.e.*, completing that activity on or before June 25, 1997.

19. The As-Built Schedule and Ronholm Diary both indicate that, from June 12, 1997 through June 26, 1997, MRCC was coordinating with its pile driving subcontractor, MidLantic and obtaining approval of the pile driving shop drawing submittals (which the Region approved promptly -- within one week after their June 19, 1997 submittal). Trial Exhibit 7, Sheet 4 of 13. There is no reason why such preparatory activity could not have been accomplished by MRCC so as to allow pile driving to commence as scheduled on June 18, 1997. In this regard, Mr. Henn testified, it is not uncommon for contractors to prepare and provide the Government with submittals for early construction activities immediately after contract award and even before the pre-construction conference is conducted. Tr., Henn Testimony, p. 797. There was no showing by MRCC that the Contract in any way precluded such early submittals. In this case, the unchallenged testimony from Government witnesses was that MRCC was consistently late in terms of shop drawing submittals, that the Government continually complained to MRCC about its failures in this regard, and that MRCC had not even submitted the shop drawing submittal schedule -- required within 10 calendar days of the Notice of Award -- until August 1997. (DF No.1, Contract SCR-25; Tr., Scozzafava Testimony, p. 559; Silva Testimony, pp. 633-639; *see also* DF No. 10, Ronhom Diary, page 32: "Speak w/ Martin [Resnik] & Ruan [Lance -- MRCC's Project Engineer and Estimator] about Alex [Silva] and how we are being put in a difficult position w/ regards [sic]

to his constant demand for shop drawings, ect."). Thus, in terms of the 20-day pile driving completion delay (from June 25, 1997 through July 15, 1997), the ODRA finds all of that delay attributable to MRCC.

20. Immediately on the heels of pile driving was the forming and pouring of the reinforced concrete tower piers. There, too, a problem developed which must be attributed to MRCC. According to the As-Planned Schedule, work on Tower Foundations was to occur from June 18, 1997 through July 12, 1997. (Presumably, during the first week of that 24-day period -- June 18, 1997 through June 25, 1997, while pile driving was to take place -- it was intended that MRCC would be building pier formwork and tying together the reinforcement steel that would be placed prior to the concrete pours for the 4 piers.) The As-Built Schedule indicates that the actual work to set the forms and reinforcement steel ("rebar"), pour the concrete and then strip the formwork all took place during the 19 day period, July 23, 1997 through August 11, 1997. Comparing Mr. Johnson's As-Built Schedule against his As-Built But For Owner Delay Schedule, it appears that the only tower pier construction delay that Mr. Johnson would attribute to the Government relates to a 9 day delay from July 16 to July 25, 1997. This was the period MRCC took to respond to the Government's requirement that, in addition to the tower pier concrete submittal, shop drawings also be submitted for the rebar and associated hooks. Neither Mr. Johnson nor any other MRCC witness offered testimony in this regard.

21. As to whether shop drawings were needed for the reinforcement steel and hooks in this case, although the Contract drawings provided certain construction details for those items -- *see* DF No. 1, Drawing AEA-D 33797, Sheet 12 of 26 -- the drawings did not indicate everything in terms of installation details. Contract Specification Section 3-2 likewise leaves some room for interpretation and the need for the contractor's further definition when it comes to determining how specifically the pier reinforcement steel was to be assembled and tied together. For example, Specification Section 3-2.1.1, Accessories, speaks of the various rebar accessories (spacers, chairs, wire ties, etc.) being "sized to provide required concrete coverage." Because the piers in question were to support a rather massive 57-foot tower structure to be erected at a heavily used airport, it was not unreasonable for the Region to insist that additional shop drawing information be provided for those items that related to the reinforcement of the piers. In any event, as with the piling submittals, there was no reason why MRCC could not have begun the shop drawing submittal process for pier concrete and such associated rebar items immediately after Contract award in mid-May 1997 and thus have averted any delays in connection with those submittals. Accordingly, the ODRA does not agree with Mr. Johnson that such delays should be attributed to the Government.

22. Although not reflected in Mr. Johnson's schedule analysis, the only delay associated with the tower foundation piers that was discussed during the hearing in this case was admittedly contractor-caused -- more specifically, delay created when it was discovered that McDonnell Construction, MRCC's concrete subcontractor, had poured those piers with a finish elevation 2 inches above that specified. In this regard, MRCC's Mr. Ronholm stated that there was a delay of several days to tower erection created by this error on the part of McDonnell, while it was being decided how the error would be remedied. Ultimately, Mr. Ronholm testified, the resolution was to lower the elevation of lightning rod tops by 2 inches, so as not exceed a

specified height regulation. Tr., Ronholm Testimony, pp. 89-92.

23. On August 26, 1997, after this concrete pier problem was resolved and after MRCC completed prime painting of the GFM steel, MRCC delivered a portion of that steel to the ASR-9 Project site at National Airport. DF No. 9, Silva Job Diary, August 26, 1997. On August 28, 1997, Mr. Silva's job diary reflects that MRCC's tower erection subcontractor, Chesapeake, with 4 ironworkers, began erecting the base legs of the tower. DF No. 9, Silva Job Diaries, August 28, 1997.

24. Two problems emerged on this first day of actual tower erection. First, MRCC discovered that the tower drawings the Government had provided for re-assembly of the used tower were inadequate in terms of showing "where things go." In this regard, Mr. Ronholm states in his diary for August 28, 1997 that he contacted "Tina" at Northeastern Manufacturing, the Government's tower steel fabricator, who advised him that her plans were no different than the ones he had. DF No. 10, p. 71. Second, MRCC learned from Tina that the Region's order for the replacement steel had been received late. This occurred, because Northeastern's quotation had been sent, per the Government's instructions, to what turned out to be an incorrect fax number. As a result, as of August 28, 1997, it was unclear when the missing steel pieces would be provided to the site:

> Alex has repeatedly said that these parts would be in next week, *i.e.*, two weeks ago they were due. They are still not in and from what I can determine from Tina, they are not coming until 2 more weeks. With respects [sic] to this issue we will need something in writing from Alex saying the tower will or will not be here!!

Id.

25. According to Mr. Ronholm's diary for August 29, 1997, Chesapeake brought six men to the ASR-9 Project site on that date, erected the cross bracing for "the 10' sections" and then "was told by Alex Silva that they cannot go above the 17' level because the radar is not turned off." *Id.,* p. 72. It is unclear from the record what height the tower had reached as of Friday, August 29, 1997. It is assumed that sufficient "10' sections" had been assembled and erected that Mr. Silva felt it necessary to issue the warning. (Curiously, Mr. Silva's diary has no report at all for August 29, 1997.) Mr. Ronholm's diary indicates that Monday, September 1, 1997 was a "vacation" day, *i.e.*, Labor Day, and the next day work was performed at the site was Tuesday, September 2, 1997. *Id.* , p. 73. Neither his diary nor that of Mr. Silva indicates that Chesapeake had been at the site that day. *Id.*

26. The record contains a Memo to Mr. Silva from Mr. Ronholm dated September 2, 1997 regarding "Missing Tower Steel." The Memo -- which indicates that it was composed on August 29, 1997 -- advises: (1) that MRCC had already once re-scheduled tower erection to accommodate the availability of missing steel which the Government was to replace; (2) that, as of August 29, 1997, despite earlier promises of delivery, the steel had yet to be provided; (3) that MRCC was " quickly approaching the time where the missing tower parts will be needed to continue with the installation"; and (4) that a de-mobilization (of Chesapeake's equipment and personnel) would cause serious impact to the schedule and cost of the ASR-9 Project. The Memo concludes with a request that Mr. Silva advise "what you want us to do should the needed parts not arrive in time to satisfy our scheduled erection." DF No. 3, Tab 3-8. The record is not clear as to whether and to what extent, as of

September 2, 1997, missing steel was a reason for Chesapeake's failure to appear at the site. What is clear is that on Wednesday, September 3, 1997, Chesapeake did come to the site with 7 men and a crane and, according to Mr. Ronholm's diary, "began to really put up [the] 1st floor." DF No. 10, p. 74. However, it appears that on September 4, 1997, Chesapeake was beginning to encounter problems in the erection as a result of missing steel pieces:

> Tom Todd [the Chesapeake Superintendent] and Chesapeake Tower are here to erect tower. There appears to be some problems, *i.e.*, missing steel. Alex has not provided us w/ a list of steel that was taken from the site, so we do not know what should or should not be coming. He [presumably Tom Todd] needs G2 plates to continue -- These are for the 10' sections. I was told they [the Government] did not take steel for 10' sections. Now they might have.

Id., pp. 75-76. In his diary of September 4, Mr. Ronholm notes that "Chesapeake is not able to work a full day and waste[s] 6 men 4 hours by not having plates here and ready, not to mention the crane rental and time!!" *Id.*, p. 77. Mr. Silva's diary entry reflects that Chesapeake was only able to continue steel erection for 2 hours on September 4 before being stopped, and that the stoppage was due, not only to missing steel, but to radar usage as well: "Cont'd tower erection for 2 hrs. Stoped [sic] due to primary radar being on & missing steel for tower." DF No. 9, Silva Job Diary, September 4, 1997. As noted in Finding 13 above, Mr. Ronholm also met with Mr. Silva and the Contracting Officer, Ms. Tringali, on September 4 to review the tower steel situation and was surprised to learn that the Government would not honor what he had reasonably perceived to have been a promise regarding additional compensation for extra costs relating to "bent" steel, as opposed to the replacement of "missing steel."

27. Serious difficulties due to missing steel continued on September 5, 1997, and MRCC was forced on its own to order the fabrication of certain parts. The parts in question appear to have neither: (1) the missing parts noted on the MRCC inventory lists; nor (2) the parts that the Region is willing to acknowledge that its Mr. Henn took for the West Virginia project. The Ronholm diary entry for September 5 reads as follows:

> Tom @ Chesapeake Tower attempts to put up more steel. He is shut down by noon. He reinventories what he can on tower. I know, because I have FAA's tower parts order list what has been ordered -- some pieces [sic] are missing & not ordered (see letter to Alex) -- This BSer has cause[d] my tower erector to needlessly man the job and crane. He has gone backwards in his erection schedule and today caused his 6-man crew another 4 hrs. sorting through steel trying to figure what is here and what is not. Figure some pieces [sic] will need to be fab'ed if they are going to be able to continue w/ their work. It will be less costly to the FAA time wise for us if they fab the pieces and [unintelligible] 2185.00 is spent to fab the peices [sic]. Need reimbursement from FAA. Alex is not here this afternoon to clear [the fabrication order], so I decide to go for it.

DF No. 10, p. 78. For Friday, September 5, Mr. Silva's diary merely notes about tower erection: "Re-inventoried tower and pre-assembled." DF No. 9, Silva Job Diary, September 5, 1997. A letter dated September 8, 1997 from Mr. Ronholm to Mr. Silva addresses the issue of the additional missing steel and documents MRCC's decision to order fabrication of the needed parts at a cost of $2,184.00. DF No. 3, Tab 3-10.

28. The two diaries are likewise dissimilar in their treatment of tower erection progress on Monday, September 8, 1997. The Ronholm diary describes further the problems encountered with the lack of adequate assembly drawings for the GFM tower steel and the serious impact MRCC and its tower erection subcontractor continued to experience by reason of the missing steel. The diary for that day notes that the pieces MRCC ordered from the fabricator arrived on September 8, 1997 and notes further that Chesapeake has "officially demobilized." The Ronholm diary for September 8, 1997 also speaks about yet another GFM steel related problem -- encountering different bolt hole sizes as a result of the steel coming from two different models of used Government towers:

> Tommy Todd & Chesapeake Tower are here. There are big problems w/ the steel -- We Spend much time trying to locate some plans that actually show how this thing is supposed to go together. To no avail. Finally, Tommy calls some guy w/ the FAA in Oak City [*i.e.*, the FAA Aeronautical Center in Oklahoma City, OK]. He says that we have 2 different tower models, and the bolt holes ect. are not correct. We have the steel here that we had fabricated and we are going to try to make this thing work. The steel does not sit correctly. We need some direction before we can continue. Tom has spent well over 3 days trying to work around the FAA's missing pieces and can not wait any longer or spend any more time or money -- He officially demobilizes the site. He might not be able to get back on schedule until the end of October!! I write Alex and let him know. This situation is unacceptable. The tower steel is compromised and we want a new one or no liability if they want us to put this thing up.

DF No. 10, Ronholm Diary, pp. 81-82. In contrast, Mr. Silva's diary entry for Monday, September 8, 1997, relating to tower erection is rather sparse and says nothing about either the Chesapeake "demobilization" or the bolt hole issue: "Tower crew cont'd preassembly on ground level."

29. The bolt hole issue was brought to the Government's attention in a Letter of Transmittal dated September 9. 1997 from MRCC's Mr. Ronholm to Mr. Silva. In it, MRCC sought direction as to how to proceed and suggested that the Region consider obtaining an entirely different GFM tower from among various towers and tower sections being stored at the FAA facility in Oklahoma City. DF No. 3, Tab 3-12. That suggestion apparently was never adopted.

30. During his testimony at the ODRA adjudication hearing (Tr., Silva Testimony, pp. 736-737), Mr. Silva took issue with the notion that Chesapeake had ever "demobilized." He pointed to his own diary entries for the period immediately following September 8, 1997, which reflected that Chesapeake's crane remained on site all throughout that period. *Id.*; DR No. 9, Silva Job Diaries, September 9-15, 1997. Notwithstanding the presence or absence of a crane at the site, however, there is no doubt that Chesapeake had no ironworkers on the ASR-9 Project site doing tower erection related work all throughout that period. *Id.;* DR No. 10, Ronholm Diary, pp. 83-94. It was not until September 16, 1997, the day after the Government finally delivered the replacement GFM steel that Chesapeake's crew reappeared at the site. DR No. 10, Ronholm Diary, pp. 94-95. Indeed, Mr. Silva himself noted in his September 10, 1997 diary entry that permission had been given for the "primary radar" to operate, since "no tower

activities were ongoing." DF No. 9, Silva Job Diary, September 10, 1997. Thus, regardless of whether the term "demobilization" is appropriate, it is clear that, in addition to other delay and disruption to the tower erection process experienced by MRCC and Chesapeake at the beginning of September 1997 (due to, among other factors, the lack of adequate assembly drawings, the bolt size issue, the lack of parts that required expedited fabrication, and a radar shutdown -- all of which factors the ODRA would attribute to the Government -- *see* Findings 24-29 above and Finding 33 below), there was a total shutdown of tower erection activities for one full week from September 9-16, 1997 by reason of the absence of GFM steel when it was needed at the site.

31. A telephone conference regarding steel-related issues was conducted on September 9, 1997. With respect to that telephone conference, Mr. Ronholm's diary indicates that the Region had expressed a lack of concern as to the dissimilar bolt hole sizes MRCC was encountering and had directed MRCC to do what was necessary to "make it work," *i.e.*, to make the holes compatible with each other, including drilling and welding. During the telephone conference, MRCC was also advised that the missing steel would be delivered on Friday, September 12, 1997:

> Teleconference w/ FAA. Tony S., Alex S., Mike Lombard, my sub Tom Todd, and myself. FAA does not care that the hole sizes are dissimilar and they instruct us to use this tower -- make it work!!! Tom cannot re mobilize until the missing steel is onsite -- They promise it will come on Friday!! We will see! They also instruct us to weld or drill out any holes nessarry [sic] -- We will need to be compensated for this time -- No doubt tower sub will seek compensation for crane.

DF No. 10, Ronholm Diary, p. 83. During his testimony, Mr. Scozzafava did not take issue with the contention that bolt holes were dissimilar, but instead confirmed that he had no concern about the bolt hole dissimilarity. For him, the fact that the tower had previously been assembled and used negated any such concern. Tr., Scozzafava Testimony, pp. 540-542. No witness offered testimony on whether and, if so, how the bolt hole dissimilarity may have impacted on the Contract's requirement that bolt connections on the tower be "slip critical connections in accordance with specification for structural joints." DF No. 1, Contract Specification Section 13-3.4.2. As noted above, the missing steel was not delivered on Friday, September 12, 1997, but rather on September 15, 1997. The parties have stipulated in this regard: "All tower steel that was requested by MRCC after its steel inventory, and all steel that was removed by the FAA, was provided on site by September 15, 1997." SUF ¶C.19.

32. By Memo dated September 9, 1997, DF No. 3, Tab 3-11, Mr. Ronholm advised his company's president, Mr. Martin Resnik, about the September 9, 1997 telephone conference and about the various problems Chesapeake Tower had been encountering, including: (1) missing GFM steel; (2) lack of tower "assembly plans" ("no assembly plans were ever provided with the contract documents, only manufacturing prints ect. [sic]"); (3) the subcontractor's concern regarding bolt hole dissimilarity; (4) its concern regarding "bent pieces being made to work"; and (5) the subcontractor's concern about being compensated for the extra cost involved in having to modify steel to make it work. In this latter regard, Mr. Ronholm pointed out to Mr. Resnik that Chesapeake "bill[s] out at $52.00 per man, per hour" and that its crane cost was "in excess of $1,200.00 per week."

33. Immediately after the missing GFM steel was delivered to the jobsite, the Region issued two items of correspondence to MRCC in response to MRCC's September 8, 1997 letter regarding the additional missing steel it had forced to fabricate. Both appear to have been received from Mr. Silva by Mr. Ronholm at the jobsite on September 18, 1997 and to have been transmitted by him on that date to Mr. Resnik. The first item is a Transmittal to Mr. Ronholm from Mr. Silva dated September 15, 1997. The second is a letter to Mr. Resnik from Ms. Tringali dated September 17, 1997. Both items contain similar and, in some instances, identical language. Both enclosed a "consolidated list", which purportedly "identif[ied] both the missing steel noted as a result of [MRCC's] inventory" (as set forth in MRCC's Memo of July 9, 1997 -- DF No. 3, Tab 3-7) and "the steel taken by the FAA for use at another location" (the West Virginia tower project). Both documents "acknowledge" that MRCC purportedly "in good faith allowed the FAA to take several pieces of tower steel for the use at another location." As found above (Finding 15), the steel was taken without advance notice and without MRCC's permission. Its removal from the Suitland site was presented to MRCC as a *fait accompli*. Although both documents attempt to shift responsibility for the replacement of missing tower pieces the Region claims were not taken from Suitland for the West Virginia project, there is no documentary evidence in the record to support the Region's contentions that the items that MRCC was forced to fabricate were not among the pieces removed by Mr. Henn from the Suitland site without the contractor's prior authorization and consent. *See* Finding 15, above. There was no agreement or verification by MRCC of what was or was not taken by Mr. Henn on July 8, 1997. Although the instant MRCC contract dispute omits any claim for the direct fabrication costs, the ODRA finds that the Region, in proceeding to remove steel in the manner it did, without permission or prior agreement after it already had been placed the GFM tower steel in the contractor's custody, thereby assumed responsibility for any delay or other impact later caused to the ASR-9 Project by reason of any missing GFM tower steel. Here, the record clearly indicates that Chesapeake's progress in tower erection was hampered by the absence of the pieces in question for several days in early September, 1997.

34. In terms of Chesapeake's shutdown, Mr. Silva, by Transmittal dated September 18, 1997 (DF No. 3, Tab 3-16), in response to MRCC's letter dated September 9. 1997 (DF No. 3, Tab 3-12), asserted that, during the parties' telephone conference of September 10, 1997, "MRCC was directed to notify the tower erection sub-contractor to continue assembling the ASR tower steel." There was no testimony at the hearing to explain how Chesapeake could have proceeded any further with tower erection pending delivery of the missing steel and why a shutdown was not necessary. Mr. Ronholm's Diary shows that Chesapeake had taken additional steps to re-inventory the steel and had proceeded to make whatever progress it could in the absence of the promised GFM steel. *See* DF No. 10, Ronholm Diary. Further, Mr. Silva's did not criticize how Chesapeake's crew was working and, indeed, during the hearing observed that the crew had been working "efficiently." Tr., Silva Testimony, p. 741. Accordingly, the ODRA finds that any such "directive" on September 10, 1997 was at odds with the reality of the situation faced by Chesapeake at the ASR-9 site.

35. After the missing GFM steel was received at the site on September 15, 1997, tower erection was able to continue, but still was not a smooth, uninterrupted operation. In his daily diaries, Mr. Silva notes that on Tuesday, September 16, 1997,

there was "cont'd tower erection," that on Wednesday, September 17, 1997, the tower erection subcontractor installed steel at the 30' and 40' levels, and that on Thursday, September 18, 1997, the tower erector was working on the 40' and 50' levels. (DF No. 9, Silva Job Diaries, September 16-18.1997). What Mr. Silva does not note and what is noted in a September 18, 1997 Memo from Mr. Ronholm to Mr. Silva (DR No.3, Tab 3-17) is that, on September 17, 1997, the tower erector "spent six man hours in an effort to make bowed steel fit into place," and that such work required "the aid of the crane and a come along." Mr. Ronholm considered such work "above and beyond" what was called for in MRCC's contract and that MRCC was entitled to extra compensation as a result. *Id.* The Memo also advised Mr. Silva that on September 18, 1997, tower erection was halted for over 5 hours by reason of a radar shutdown. *Id.* Mr. Silva's diary is silent in this regard. *See* DF No. 9, Silva Job Diary, September 18, 1997. Mr. Ronholm's diary for September 18, 1997 indicates that Mr. Silva was fully aware of the radar shutdown, that it was Mr. Silva who notified Mr. Ronholm of it. The diary also provides additional detail on the difficulties being encountered by the tower erector with the GFM steel and indicates that the bent, twisted nature of the used steel must have been caused by the Government during the disassembly process:

> Alex calls and says that the primary radar is still on. He is @ home sleeping. This is not acceptable. ___ tower crew is on their way and need to use the crane.
>
> I call FAA after the crew arrives @ 7:30 A.M.-- no answer leave message. Return call &:43. Problem w/ Andrews [AFB] radar. No can work until problem is resolved. Won't call back soon. They [i.e., the tower erection people] are finally allowed to work @ 1:00 P.M.
>
> * * *
>
> Steel contractor [i.e., tower erector] is further delayed by twisted steel.
>
> * * *
>
> Although they [i.e., the FAA] refuse to take responsibility for the missing steel and the bent steel, we need to document all time and materials in order to claim these damages at the end of the contract. Our tower man shows me more twisted peices [sic] and we photograph them -- He explains how the peices [sic] could only be twisted like this when the tower was being removed or disassembled.

DF No. 10, Ronholm Diary, pp. 100-101. Mr. Ronholm likewise testified at the hearing that the steel was "bent"/"bowed"/"twisted" as a result of the manner in which it had earlier been handled by the Government in the disassembly of the tower. Tr., Ronholm Testimony, p. 102. There is no evidence in the record that contradicts Mr. Ronholm's observations and conclusion. In terms of quantifying the steel that was damaged, Mr. Ronholm testified that there was "a ton" of bowed GFM steel that required hammering on the ground or the use of "drift pins" (pins that are placed through opposing bolt holes and that are pounded so as to bring the holes into alignment). *Id.*, p. 105. Moreover, Mr. Silva did not take issue with Mr. Ronholm's estimate that approximately 100 pieces of the GFM steel were bowed or "warped" and required the use of drift pins. Tr., Ronholm Testimony, p. 103; Tr., Silva Testimony, pp. 737-738. This would be a substantial proportion of the total quantity of GFM tower steel reflected on the inventory. *See* DF No. 3, Tab 3-7. Accordingly, the ODRA finds the record

clear that a significant amount of the steel was, in fact, "bent," "bowed," "twisted" or “warped” and that, to the extent such condition existed, it was brought about by the manner in which the Government had earlier handled the GFM steel.

36. For Friday, September 19, 1997, Mr. Silva's diary merely notes that there was "cont'd tower erection" at the "40' and 50' level[s]". DF No. 9, Silva Job Diary, September 19, 1997. Mr. Ronholm's diary again documents difficulties in the erection process:

> Tower sub is here w/ six men read[y] for Monday to put up the 17' section [i.e., the top section on the 57' tower]. Tom says he lost another six man hours [expletive]ing with the steel trying to get the bent tabs to work ect.

DF No. 10, Ronholm Diary, pp. 102-103. Mr. Ronholm similarly testified about problems at the site with "bent tabs" -- which Mr. Silva explained to be the ends of the structural steel pieces through which connecting bolts passed. Tr., Ronholm Testimony, p. 102; Tr., Silva Testimony, pp. 730-731.

37. The reports by Messrs. Silva and Ronholm for the period Monday, September 22, 1997 through Friday, October 3, 1997 proceed in much the same manner, with the Silva diaries noting "cont'd tower erection" and the Ronholm diaries containing notations of time lost for "bent" or "twisted" steel. DF No. 9, Silva Job Diaries, September 22, 1997 - October 3, 1997; DF No. 10, Ronholm Diaries, pp. 104-123. The Ronholm Diary for Wednesday, September 24, 1997 records a discussion that Mr. Ronholm had with the Region's Project Engineer, Mr. Anthony Scozzafava, and reflects the frustration he was experiencing with the GFM steel:

> Speak w/ Tony. Show him the [expletive]ed up steel bends ect. Says we should have replaced it all at once -- One Project Engineer says to make it work -- Joe Hen [sic] -- The other Project Engineer says we should have notified him . . . but we could not have as he was not on the job @ that time. What or where was he when I was telling Joe Hen [sic] and Alex Silva that this steel was in unacceptable condition?? He was working in another job, not ours. So it would have been impossible to contact him prior to --- These people are unbelievable --

DF No. 10, Ronholm Diary, p. 109. His diary for the next day documents difficulties being encountered by the tower erection subcontractor with the tower plans that the Government had furnished:

> Chesapeake Tower is here to erect tower -- They have problems w/ the inside of the tower. We have NEVER been given a complete set of installation plans from the start of the job -- We speak w/ Tony Scozzafava, FAA who admits that the plans we were given were wrong!! If they knew they were wrong why did they give them to us? -- It has taken Tommy Todd 1/2 a day trying to figure out what was the problem w/ the interior of the tower -- it turns out that the B3's that form the vertical supports are upside down on the drawing (reference) we were provided.

Id., pp. 111-112. On Friday, October 3, 1997, tower erection was halted due to two pieces of steel being missing. Replacements for the two pieces were retrieved from the Suitland site and work resumed. Again, Mr. Ronholm notes major difficulties due to the condition of the GFM steel:

> Tommy Todd is here w/ crew -- Once again, they are having difficulties w/ the bent angles and twisted steel. About 33% of their time or more is spent trying to make this work.

Id., p. 123.

38. On Monday, October 6, 1997, another steel related problem was encountered. On that date, Chesapeake began to install grating on the tower. DF No. 9, Silva Job Diary, October 6, 1997. The Ronholm Diary for that date contains the following entry:

> Tower crew continues to struggle w/ the installation of the top peices [sic] and the handrail -- Also, an inventory of the grating reveils [sic] that several parts are unusable -- I let the RE Alex know about these -- Also send 2 of my men to Suitland to p/u more grating to try and make this work. The tower crew has almost run out of patience. Today alone they spent over 1/2 their time trying to make these bent and cut pieces work.

Id., p. 124. The Ronholm Diary entry for Tuesday, October 7, 1997 notes that the tower erection contractor was seeking a modification for the additional work entailed with the "bent and cut" grating and that Mr. Ronholm wrote Mr. Silva a letter requesting that he "make good" on his "earlier promise to compensate us for the extra tower work due to defective steel." *Id.*, p. 126. The "letter," a Memo to Mr. Silva dated October 7, 1997 (DF No. 3, Tab 3-18) read as follows:

> Alex,
>
> As you know, prior to our tower inventory and installation, there were problems noted with the steel and the steel grating. At the time it was originally brought to your and Joe hen's [sic] attention, we were verbally directed to proceed, and make work what we could. My tower installation company is now in the process of installing the grating. As discussed previously, there are areas on all the landings that will not allow the normal grating installation. This is due to the fact that when the tower was dis-assembled, someone cut the grating with a torch to remove it. As a result, parts of the grating were left on the existing steel that will not allow for the normal installation. Also, there are areas that were cut that were not replaced. These cut pieces will no longer fit where they should.
>
> Some of these pieces will work, with some modifications. These modifications however will require the use of additional man power and materials. As the tower installation price did not include this extra work, we will need some written authorization to proceed. As of today, the contractor can work until Thursday, October 9, without causing delays to our schedule. Please provide us with some written direction on this matter, no later then [sic] this Thursday.
>
> Thank You
> Craig Ronholm

The response from Mr. Silva came the next day. In a Transmittal to Mr. Ronholm dated October 8, 1997, Mr. Silva did not deny that MRCC had earlier been directed to "make the steel work" or that the grating was in the condition described by Ronholm. Instead, all Mr. Silva did was to refer to Contract Specification Section 13-3.5, to assert that "the tower furnished by the Government have [sic] been carefully checked and is believed to be accurately fabricated," and, in the language of that Specification Section, advised MRCC that "[m]inor errors which can be corrected by a moderate use of drift pins or moderate cutting, reaming, or chipping shall be corrected by the Contractor at no extra cost to the Government." Based on this recitation, Mr. Silva directed MRCC to "proceed with the installation of the tower erection as per the original contract." DF No. 3, Tab 3-19. The Region has not contested Mr. Ronholm's estimate of 100 pieces being bent or, as Mr. Silva preferred, "warped."

See Tr., Silva Testimony, pp. 742-743. There were only a few hundred pieces of tower steel altogether. *See* DF No. 3, Tab 3-7. The quantity of steel requiring the use of drift pins, in the ODRA's view, was thus more than "moderate." In terms of the grating, from every indication in the record, the problems encountered with the used grating were major, not "minor". Accordingly, the tower erection that MRCC and Chesapeake were forced to do went well beyond what was contemplated in the "original contract."

39. With the Region apparently refusing to honor its earlier promise to consider compensating MRCC (and Chesapeake) for extra work associated with the grating installation and their work with "bent" and "twisted" GFM steel sections, Chesapeake's tower crew did not appear at the ASR-9 Project site on Thursday, October 9, 1997. Mr. Ronholm's Diary for that date reports a "deal" being offered by Mr. Silva, one which was not acceptable to Mr. Ronholm:

> Alex thinks the tower guys should be onsite -- I tell him why. He offers a deal to give me some $ for the steel grate issues if I'm willing to let the whole thing go -- i.e., down time and bent steel. No dice. These are all things we expect to be compensated for.

DF No. 10, Ronholm Diary, p. 128.

40. By Memo to Mr. Silva dated October 10, 1997, with copies to Messrs. Resnik, Todd, and Scozzafava (DF No. 3, Tab 3-20), Mr. Ronholm advised that he had directed Chesapeake to return to the site to continue tower erection. The Memo took issue with the notion that the repairs were "minor" in nature, and put Mr. Silva on notice that extensive modifications and welding would be required. The Memo recounts the circumstances of the June visit to the Suitland site and the discussion with Mr. Henn on that occasion regarding MRCC keeping track of its extra time in "making damaged pieces work." The Memo concludes with a statement that a detailed breakdown of time and costs for both MRCC and Chesapeake would be presented.

41. Mr. Ronholm's diary of Monday, October 13, 1997 notes that Chesapeake's Mr. Todd had indicated that he wanted to return to the site under "protest," planning to charge MRCC for the extra time and cost of dealing with the "tower steel and grates," DF No. 10, Ronholm Diary, p. 131. After an absence of 5 days (beginning on October 9, 1997), the tower crew did return to the site the next day, October 14, 1997, and did resume installation of the grating. DF No. 9, Silva Job Diary, October 14, 1997. The crew was again absent from the site for the next two days, however, due to heavy rain (on October 15, 1997) and windy conditions (on October 16, 1997). *Id.*, October 15-16, 1997; DF No. 10, Ronholm Diary, pp. 135, 137; DF No. 3, Tab 3-21 (letter dated October 16, 1997 from Mr. Resnik to Ms. Tringali). Mr. Ronholm's diary for Wednesday, October 15, 1997 relates his having met at the site that date with Ms. Tringali, the Contracting Officer, and having a discussion with her regarding the tower steel issue. The diary indicates that at least part of the reason for the tower crew's absence on that date was the Government's failure to resolve the tower steel issue:

> Carol Tringali is on site in the afternoon -- She asks about the whereabouts of the tower erectors -- I tell her that part of the reason they are not here is the grating issue -- I also let her know that we expect to be compensated for the down time ect. making steel work, the whole 9 yards -- This is an issue that needs a resolution or it will become a claim. No response yet.

DF No. 10, Ronholm Diary, p. 136.

42. Tower installation resumed on Friday, October 17, 1997 and continued until Friday, October 24, 1997. DF No. 9, Silva Job Diaries, October 17-24, 1997. The tower crew was not present at the site for the next two workdays. The daily diaries indicate that it had rained and was wet at the site on Monday, October 27, 1997, and that it was again windy on Tuesday, October 28, 1997. *Id.*, October 27-28, 1997; DF No. 10, Ronholm Diary, p. 147.

43. On Wednesday, October 29, 1997, grating installation continued. DF No. 9, Silva Job Diary, October 29, 1997. Mr. Ronholm, by Memo of that date (DF No. 3, Tab 3-22), sought written direction to weld grating steel to the C channel supports and again stated that MRCC intended to submit its extra costs and expected a modification to provide for those costs. Mr. Silva responded by Transmittal of that same date (DF no. 3, Tab 3-23), noting that field welding would be permitted "at no additional cost to the government as per specification section 13-3.6," where existing grating fasteners could not be replaced with Grate Fast "as per specification 13-3.4.4." The Transmittal also sought an update to MRCC's progress schedule, which then showed tower erection completion on October 6, 1997, a date that had come and gone.

44. The tower erection crew continued working on Thursday, October 30, 1997 (DF No. 9, Silva Job Diary, October 30, 1997: "cont'd tower mezzanine installation") but was unexplainably absent from the site on Friday, October 31, 1997 (*Id.*, October 31, 1997). Mr. Ronholm's diary entry for that latter date read: " Halloween. No tower crew. They need to finish up w/ its install." DF No. 10, Ronholm Diary, p. 157. The tower crew also did not come to the site on Monday, November 3, 1997, a sunny day with good working conditions according to the Silva Job Diary. DF No. 9, Silva Job Diary, November 3, 1997. The crew did resume its work on Tuesday, November 4, 1997, installing handrails on the tower, and performed work on the next two days as well. *Id.*, November 4-6, 1997. However, on November 7, 1997, both rain and a radar shutdown prevented any tower erection work as well as electrical work that MRCC had planned to do on the tower. *Id.*, November 7, 1997; DF No. 10, p. 162; *see also* DF No. 3, Tabs 3-25 and 3-26. The rain and radar shutdown are considered to have been concurrent causes of delay to tower completion on that date.

45. Although the weather was once again sunny on Monday, November 10, 1997 (DF No. 9, Silva Job Diary, November 10, 1997), the Chesapeake tower erection crew failed to appear at the site. In this regard, Mr. Ronholm reports:

> No tower crew -- They need to finish. Call. Speak w/ Tom -- He is very mad about what a piece of [expletive] mess this tower is turning out to be. Oh well, let's get it up, then argue about it. He will have full crew here tomorrow.

DF No. 10, Ronholm Diary, p. 165. Thereafter, from Tuesday, November 11, 1997, until Tuesday, November 18, 1997, with the exception of one rain day, Friday, November 14, 1997, Chesapeake was present at the site completing the grating and handrails associated with an OSHA-related modification. *Id.*, pp. 167-179; DF No. 9, Silva Job Diaries, November 11-18, 1997. Mr. Silva specifically noted welding activity on November 12 and 13, 1997. DF No. 9, Silva Job Diaries, November

12 & 13, 1997. As of Tuesday, November 18, 1997, tower erection appears to have been complete. Thus, tower erection appears to have taken a total of 82 calendar days (from August 28, 1997 -- *see* Finding 23 above -- through November 18, 1997). In contrast, the As-Planned Schedule called for that activity to be complete within 27 calendar days (from July 7, 1997 through August 3, 1997). *See* MCC Report, Diagram #1, p. 6. The overall tower erection delay was thus 55 calendar days.

46. In terms of the tower erection process, the record (as described in the foregoing findings) supports MRCC's contentions that much of the delay experienced during tower erection must be attributed to Government factors, including (1) late delivery of "missing" GFM steel and replacement steel for parts taken for the West Virginia project; (2) lack of adequate tower assembly drawings; (3) resolution of the bolt hole mismatch that Chesapeake discovered; (4) excessive amounts of "bent," "bowed" and "twisted" GFM steel; and (5) difficulties associated with torch cut tower grating. During the hearing, the Government witnesses asserted that, once the "missing" GFM steel was replaced on September 15, 1997, the tower erection went relatively quickly, and that any delay beyond that date should be attributed to the contractor. In this connection, according to Mr. Silva, the Chesapeake tower crew was "weird" and frequently was found unexplainably absent from the site. Tr., Silva Testimony, p. 734. There was no evidence presented at the hearing or otherwise in the record to indicate that the tower crew was in any way incompetent or that, when it was at the site, its performance was fraught with self-imposed inefficiency. To the contrary, as stated above, Mr. Silva's observation was that the tower erection crew had been working "efficiently." Tr., Silva Testimony, p. 741. One possible exception appears to be that so-called "V-section" to be mounted on the tower platform was initially placed incorrectly and had to be re-oriented. The correction was done by Chesapeake, apparently without impact to any other work, on a Saturday in early December 1997. (DF No. 9, Silva Job Diary, December 3, 1997 and December 6, 1997; DF No. 10, Ronholm Diary, p. 197).

47. The ODRA finds that any delay in tower erection during the initial period from August 28, 1997 through September 15, 1997, when the "missing" GFM was finally delivered, must be charged to the Government. In particular, we find that the so-called "demobilization" from September 9 through September 15, 1997 was the direct result of the lack of GFM steel when it was needed. As to the subsequent period, from September 16, 1997 through November 18, 1998, the ODRA finds that, **at most**, the contractor is at fault for 10 calendar days of delay, by reason of its subcontractor's unexcused failure to appear at the site. As related in the previous findings, Chesapeake's crew was not at the site on the following periods when work could have been accomplished: (1) October 9, 1997 through October 13, 1997 (5 calendar days); (2) October 31, 1997 through November 3, 1997 (4 calendar days); and (3) November 10, 1997 (1 calendar day). (Note: Such a conclusion would be based on the assumption that Chesapeake had no legal justification in failing to appear at the site, even when the Region indicated its lack of willingness to honor its earlier commitment and to compensate MRCC and Chesapeake for the extra time and cost being incurred to "make the steel work".) The 5 calendar days of delay due to rain, wind and radar shutdowns (October 15-16, October 27-28, and November 7, 1997) would not have been encountered but for the various Government-caused delays relating to tower erection. Even beginning, as it did, on August 28, 1997, and even taking into account the 10 calendar days of delay that arguably are attributable to the contractor, the erection process would have

been complete in a total of 37 calendar days, *i.e.*, by October 6, 1997, absent the Government-caused delays. Accordingly, the ODRA finds the Government responsible for a ***minimum*** of 45 out of the 55 calendar days of delay to the tower erection process.

Tower Electrical Work

48. Electrical work relating to the tower included conduit, obstruction lighting and lightning protection rods/terminals. Such electrical work, from a review of the Silva diaries, appears to have commenced on November 3, 1997 and to have been completed as of November 11, 1997. As with the tower erection work, this electrical work was delayed on November 7, 1997 by reason of both weather and the aforesaid radar shutdown. DF No. 9, Silva Job Diaries, November 3-11, 1997; *see also* Finding 44 above. It is not possible to determine from the As-Planned Schedule or any other scheduling information offered into evidence how, if at all, this minor delay to tower electrical work impacted the completion of other electrical work. In terms of its impact on tower completion, it would have been a concurrent cause of delay likewise attributable to the Government, since, but for the Government tower-erection delays, the 7 calendar days' worth of electrical work would have been completed before November 7, 1997, *i.e.*, before encountering the one day of delay to tower-related electrical work.

Tower Painting

49. On November 19, 1997, with their completion of both erection and tower-related electrical work, Chesapeake's crew began to paint the tower from the top down. DF No. 10, Ronholm Diary, p. 180. At that stage of the year in Washington, D.C., however, the weather was clearly not optimal for the application and curing of paint. Contract Specification Section 9-1.3.2(e) prohibits the application of exterior paint in "damp, rainy weather or until the surface has dried thoroughly from the effects of such weather." By Transmittal dated November 5, 1997 (DF No.3, Tab 3-24), Mr. Silva advised MRCC that special precautions should be considered when attempting to paint the tower during the "cold weather months." Specifically, Mr. Silva alluded to a purported requirement of Contract Specification Section 9-1.3.2(e) regarding a "minimum temperature of 50 degrees during application and drying". In fact, the Contract Specification Section does not contain a "50 degree" minimum. Rather, it calls for the" temperature of the surface to be painted and of the surrounding air temperature" to be "maintained between 45 degrees F and 95 degrees F during the application and drying period." Contract Specification Section 9-1.3.2(e). That Section also calls for application of paint to be performed in accordance with the paint manufacturer's written instructions. *Id.*

50. The parties disagreed over the interpretation of the Specification requirements regarding the application of exterior paint and over what was recommended by the paint manufacturer, in this case Sherwin-Williams, exchanging several items of correspondence on the subject. *See* DF No.3, Tabs 3-29, 3-30, and 3-31. Ultimately, by letter dated December 9, 1997 (DF No.3, Tab 3-34), the Contracting Officer directed that the remainder of the tower painting be deferred until the Spring of 1998. From the ODRA's perspective, regardless of whose interpretation was correct, it appears that, as of December 9, 1997, it was no longer practicable for MRCC to be applying paint to the tower. The daily reports indicate that daytime

temperatures were dipping below 45 degrees Fahrenheit, and that overnight low temperatures were beginning to go below freezing. *See* DF No. 9, Silva Job Diaries. Moreover, even though he felt the temperatures still to be sufficiently high to allow tower painting to continue, Mr. Ronholm conceded that he was experiencing difficulty with moisture and with keeping the surfaces dry at that stage of the year. Tr., Ronholm Testimony, p. 179. At the point in December when the painting was halted, Mr. Ronholm said, the weather was "miserable." Tr., Ronholm Testimony, p. 115. Indeed, the unrefuted evidence is that, when MRCC resumed tower painting during the Spring of 1998, it encountered areas where previously applied paint had not adhered adequately to the surfaces and consequently "bubbled" and peeled. DF No. 7, Tab 7-36; Tr., Scozzafava Testimony, p. 549.

51. Mr. Ronholm, who left the project in January 1998 (Tr., Ronholm Testimony, p. 6), estimated that the tower painting should have required a total of 3 days' worth of effort. *Id.*, p. 194. The record shows that the remainder of the tower painting, which actually resumed on May 14, 1998, was done by 1 or 2 painters on 15 separate days over a 5-week period. DF No. 9, Silva Job Diaries, May 14, 1998 through June 23, 1998; *see also* DF No. 11, Tab 11-52, Time Cards for Messrs. Tibbs and Harrison for 5/14/98 through 6/23/98.

52. The explanation offered for the tower painting taking as long as it did once it was resumed was that it was done by MRCC's own personnel rather than Chesapeake's tower crew and that, at the time the painting was eventually done, it purportedly was done without the same equipment (crane and hoist) that would have been used by Chesapeake. Tr., Resnik Testimony, pp. 324, 430-431. The record is confusing as to when MRCC took over the tower painting effort for Chesapeake. There is some indication that this may have taken place during the late Fall of 1997, even before the suspension directive. *See* DF No. 9, Silva Job Diaries, December 3 - 4, 1997 ("Cont'd tower painting"); DF No. 11, Tabs 11-24, 11-25, 11-26 and 11-27, MRCC Time Cards for Messrs. Harrison, Delyanis and Holland (indicating performance of painting work by MRCC into December 1997); DF No. 12, Tab 12-2, Certified Payroll Records for Chesapeake Tower, Inc. (last day on site -- 11/26/97). In any event, it is clear that, but for the Government's steel-related delays, MRCC would not have been required to do any tower painting in the Spring of 1998. More specifically, tower painting would have commenced at least 45 days earlier than it did on November 19, 1997 and likely would have been completed before the specified contract completion date and well before adverse weather set in, requiring a shut down of painting operations.

53. Although the record is not totally clear as to why MRCC waited until mid-May to re-commence tower painting work, the record does indicate that MRCC could not resume tower painting immediately at the beginning of the Spring by reason of Government construction activities on the tower and the Contracting Officer's directive not to proceed with tower painting pending the completion of those activities (*see* DF No. 7, Tabs 7-34, 7-36, and 7-38; Finding 111, below).

Concrete Masonry Structure

54. In terms of the new concrete masonry structure, the record reflects difficulties and delays in only two areas. First,

MRCC's concrete subcontractor, McDonnell, poured the building foundations out of square and was required to provide a "fix" consisting of an extra length of footing which was tied into the previously poured footing with dowels and epoxy. Tr., Ronholm Testimony, pp. 93-96. This "fix" consumed approximately one week to design and accomplish. *Id.*, p. 96; DF No. 10, Ronholm Diary, pp. 72-75. The second area of difficulty related to concrete masonry unit ("CMU") joints in the engine generator room walls and the subcontractor's being forced to come back to "strike the joints", removing excess mortar. (Tr., Ronholm Testimony, p. 211. This situation was brought about by McDonnell's mistaken belief that the walls in question were to be covered. Although remedying the foundation error clearly held up all subsequent construction activities for the new building (pouring the building slab, wall construction, etc.), Mr. Ronholm opined that subsequent efforts to recoup the lost time by "stacking of trades" within the building had been successful. Tr., Ronholm Testimony, p. 96. The record also has some indication that overtime work was used to make up for McDonnell's foundation delay. *See* DF No. 2, Tab 2-8. There is no evidence in the record of any impact associated with McDonnell's "come-back" work to "strike the joints." *Id.*, p. 212. Mr. Johnson's As-Built Schedule (Trial Exhibit No. 7) shows this work ("Point/Grind CMU Walls@ E.G. Rm.") taking 3 days (from October 13-15, 1997), with the Walls activity being complete with 24 days of total "float" remaining – indicating that there was no delay to the project's critical path by reason of this mistake on the part of McDonnell.

Electrical Work

55. In addition to the minor amount of tower related electrical work, the ASR-9 Project involved electrical work within and adjacent to the new concrete masonry structure, including the installation of a Government-furnished electrical generator and several transformers, the excavation of a 3000-plus linear foot trench for the above-mentioned electrical duct bank, and the installation of a new ASR-9 switchgear to connect the new building and tower to a commercial power source. DF No. 1, Contract Specification Section 16; Contract Drawings AEA-D 33797, Sheets 5, 7, and 20-26 of 26.

Trench Excavation

56. MRCC's trenching work and placement of the duct bank began late and proceeded very slowly. Whereas the As-Planned Schedule called for duct bank excavation to commence on June 23, 1997, MCC Report, Diagram #1, p. 6, trenching work did not start until one month later, on Tuesday, July 22, 1997. DF No. 10, Ronholm Diary, p. 34 ("Trenching begins.") Although Mr. Johnson's As-Built Schedule (Trial Exhibit No. 7) indicates a "Plates Delivery" on June 23, 1997, that delivery was not recorded in Mr. Ronholm's Diary for June 23, 1997. *Id.*, p.14. The first indication in his diary regarding a delivery of steel trench plates was Mr. Ronholm's notation for July 22, 1997: "Graybar Delivery. Steel trench plates come @ 4:30." *Id.*, p. 34. On June 23, 1997, there was an entry regarding the use of steel trench plates, but that entry indicated a potential downstream controversy concerning how plates were to be used on the project:

> Speak w/ Zack Coleman who goes over the trench plate issue w/ me. We don't need to plate everything for the trenches behind the runway and off the road. Tell this to Alex who says we still need to get FAA approval. Look out!!

Id., p. 14. When the plates were delivered on July 22, 1997, Mr. Ronholm's entry regarding Mr. Silva underscores that

controversy: "Alex sees plates. States: 'That should take some time.' I will not last long with him." *Id.*, p. 34.

57. At the ODRA hearing, it was explained that trench plates are regularly required to cover open trenches for safety purposes and that, in this instance, the Contract Specification clearly provided for their use. Tr., Silva Testimony, pp. 706-707. In this regard, SCR-30, ¶¶D and E specified as follows:

> D. Open Excavations
>
> Open excavations are defined herein as any trench (or opening in the ground surface) in unpaved areas exceeding six (6) inches in width or depth, and inn paved areas exceeding a vertical drop of three (3) inches with a six (6) inch horizontal measure. For any excavation or trenching, not more than 100 feet of excavation shall be permitted in advance of material placement. On the AOA no trenches will remain open overnight unless the Contractor is working on a closed portion of the Aerodrome, and special permission is obtained from the Airport Operations Authorities. Any open holes or trenches shall be prominently marked with cones, barricades and orange flags. Barricades will have flashing yellow lights attached if a trench is left open overnight.
>
> E. Covering Open Excavations
>
> The Contractor shall cover all open excavations, including trenches, that must remain open during non-working hours, with 1-inch steel plates, as directed by the Resident Engineer. The steel plates shall be carefully placed so that the plates will not shift.
>
> * * *

DF No. 1, Contract, pp. 210-211. The necessity to place and remove plates will cause trenching operations to be slower than they would be absent the use of plates. MRCC was seeking approval to dispense with plates for certain areas of the duct bank trench on the ASR-9 Project. In particular, MRCC sought permission to use only orange barricade tape where the trench proceeded parallel to a stretch of airport maintenance roadway and lay between the roadway and the Potomac River. Tr., Ronholm Testimony, pp. 183-185. Mr. Ronholm testified that he had a verbal commitment from the Contracting Officer and a Mr. Zack Coleman of the MWAA not to have to use trench plates other than where the duct bank excavation would cross the roadways. *Id.* The Resident Engineer, Mr. Silva, refused to accept MRCC's plan and insisted on the use of steel trench plates per SCR30, ¶E for the stretch of the ductbank running parallel to the roadway. He testified at the hearing that the edge of the trench was perhaps 5-10 feet and not more than 20 feet away from the edge of the roadway and that an open uncovered trench would pose a serious safety hazard, particularly at night, since the roadway in question has been heavily used and is not well lit. Tr., Silva Testimony, pp. 706-710. MRCC was unable to demonstrate definitively that there was no risk involved in leaving the trench uncovered. The above-quoted Contract provision gives the Resident Engineer discretion over where to require trench plates to be placed, and the ODRA finds that he acted reasonably and did not abuse his discretion in this instance.

58. Attempting to explain its late commencement of trenching, MRCC asserted that its early activity schedule for the project was somewhat too "aggressive." Tr., Ronholm Testimony, pp. 191-192; DF No. 10, Ronholm Diary, p. 55. Other than arguing that it should not have been required to use trench plates as extensively as it was, MRCC could not explain the slow pace of its trenching operation once it got underway. The record is not clear as to whether the MRCC As-Planned Schedule reflected the use of trench plates in the duration shown for the duct bank activity. However, it would have been unreasonable for the contractor not to have taken into account the use of trench plates and the impact such use would have on the rate of trenching progress. Mr. Ronholm testified that, because it only had 150 linear feet of trench plates on hand, MRCC could only have 150 LF of trench open at any one time, indicating that this slowed the pace of trenching. Tr., Ronholm Testimony, p. 187. He never explained why MRCC could not have had more plates available. Moreover, 150 LF of trench plates would be more than the 100 foot excavation/trenching limitation called out in SCR-30, ¶D: "For any excavation or trenching, not more than 100 feet of excavation shall be permitted in advance of material placement." The Ronholm diary for Tuesday, September 2, 1997 notes that: "More plates arrive on site." DF No. 10, Ronholm Diary, p. 73. Mr. Ronholm did not testify as to how many plates were involved, and why they were needed in early September -- and, indeed, whether they were needed for the duct bank trenching, as opposed to other excavation at the project site.

59. Even if the ODRA were to adopt MRCC's position regarding the purported unreasonableness of Mr. Silva in insisting on the use of trench plates, which it does not, it appears that there was at least one other cause for the slow pace of trenching that was clearly attributable to MRCC itself, namely, its difficulty in obtaining adequate manpower for the trenching operation. In this regard, the Contracting Officer observed that the project was undermanned, Tr., Tringali Testimony, p. 901, and there was at least one entry in Mr. Ronholm's diary noting that more laborers were needed for trenching. DF No.10, Ronholm Diary, p. 39.

Commercial Power Connection

60. In terms of the ductbank and installation of electrical conduit, a Memo from MRCC's Electrical Superintendent, Kevin Daniels, to Mr. Silva dated November 3, 1997 (DF No. 4, Tab 4-3) reports that MRCC had, as of that date, "already run [its] conduit from our switch gear pad to PMH-148" -- near Bldg. TV-900 -- and was planning to make the connection to commercial power at that location, as contemplated by the Contract drawings. *See* Finding 2 above. That connection could not be made, however, due to the refusal of the MWAA to permit it. In this regard, the parties have stipulated as follows:

> 20. The contract specified that permanent power was to be connected at PMH-148.
> 21. The Metropolitan Washington Airports Authority ("MWAA") refused to permit MRCC to connect power at PMH-148.
> 22. After rejecting a bid from MRCC to trench from PMH-148 to a new location for the permanent power connection, the FAA used its own forces to conduct this work.
> 23. MRCC could not connect to permanent power until the FAA's work crew completed its work.

SUF, ¶¶20-22.

61. Mr. Ronholm testified that the delay in commencing trenching was inconsequential, because the trenching and

ductbank installation were complete as of November 21, 1997, weeks before the Region completed its work relating to the commercial power tie-in. Tr., Ronholm Testimony, pp. 187-188.

62. The permanent power tie-in was eventually made on December 10, 1997. Trial Exhibit 7, As-Built Schedule; DF No. 9, Silva Job Diary, December 10, 1997.

63. Mr. Silva testified -- without challenge by MRCC -- that the power connection change meant somewhat less electrical work for MRCC. With the location of the connection being moved, a 30-foot section of cable connecting PMH-148 to the new ASR-9 switchgear was deleted from MRCC's contract. *See* Trial Exhibit 11. Also, MRCC was not required to pull wires and do the connection/termination work at the changed location, another already existing ("PEPCO") switchgear. Tr., Silva Testimony, pp. 689-703.

The 300 kva Transformer

64. Mr. Silva also testified -- again without challenge -- that the delay associated with the change in location for the power connection had no impact ultimately on the completion of the ASR-9 Project electrical work, since MRCC had still not connected the 300 kva transformer (located on a pad adjacent to the new concrete structure) and had not installed the 500 MCM cable connecting the transformer to the new building and the main disconnect switch by the time the connection was made (on December 10, 1997). Tr., Silva Testimony, pp. 703-704. As to the 500 MCM cable, Mr. Silva observed: "There was no way he could have run power into this facility without that 500 MCM cable." *Id.*, p. 705.

65. Mr. Silva noted that MRCC was substantially late in making the required submittals for the 300 kva transformer, and thus was late in placing its order for that transformer. Tr., Silva Testimony, pp. 639-640. The record is not clear on when exactly the 300 kva transformer was installed and fully connected. It was among several major items listed by Mr. Silva as not complete on November 5, 1997. *See* DF No. 7, Tab 7-2. The 300 kva transformer and 500 MCM cable both appear to have been completed by mid-December 1997. *See* Finding 107, below.

Mechanical Work: The HVAC Modification

66. As noted above (Finding 1), the Contract originally contemplated an HVAC system consisting of 8 wall-mounted Bard HVAC units that were to be furnished and installed by the contractor. By letter dated August 14, 1997, the Contracting Officer transmitted to MRCC a proposed change to the HVAC system, so-called "Impact Statement No. 4", and requested that MRCC furnish a proposal/impact statement for a contract modification. The change contemplated the deletion of the requirements relating to the Bard units and the substitution of two Government-furnished HVAC units to be mounted on pads outside and adjacent to the new concrete building. The new units (unlike the Bard units, which would have no associated ductwork) would require both exterior ductwork (and associated supports) to carry the air from the units into the new building and interior ductwork (and supports) to distribute the air inside the building. In addition, in terms of electrical power, the new

HVAC units would require "underground power and control cables and conduit." Finally, the change would require the construction of the two concrete pads on which the units were to be mounted, plus additional bollards to surround the pads and protect the units. DF No. 2, Tab 2-1.

67. The HVAC change had been contemplated even before award of the Contract (*see* Impact Statement No. 4 -- drawings dated March 1997), and a modification was issued to the Contract on July 18, 1997, in advance of Impact Statement No. 4, to reconfigure the new building's CMU walls, to fill in the openings that otherwise would have been required for the wall-mounted Bard units. *See* Contract Modification No. 3; Tr., Ronholm Testimony, pp. 11-13.

68. The Statement of Work ("SOW") for Impact Statement No. 4 expressly identified the new HVAC units to be provided as GFM: "The two Carrier Air Conditioning Units, **type 50DW-028**, will be provided by the Government." DF No. 2, Tab 2-1, Statement of Work, p. 1 (emphasis added).

69. By letter dated August 27, 1997 (DF No.2, Tab 2-2), MRCC's Mr. Ruan Lance posed a number of clarifying questions to Ms. Tringali regarding Impact Statement No. 4. Among these questions was the following:

> 8. Sheet 4 of 5 with regards to the new a/c units has no remarks in the description of the units to be provided. Can the remarks be clarified (i.e., what options).

70. Rather than providing specific information about options, the Contracting Officer, by letter to MRCC dated September 5, 1997 (DF No. 2, Tab 2-3), merely identified the units' model number, and the number she provided differed from the number specified in the Impact Statement No. 4 SOW:

> 8. The GFE AC units are **Carrier 50EW 028-6 480/3/60**. (Emphasis added).

The letter did not explain or in any way highlight this difference, nor did it indicate that the change in model number would signify a difference in terms of the orientation of the units' supply and return air apertures (*see* Finding 85 below). Although the purchase order itself does not indicate a specific manufacturer or model number for the HVAC units, *see* Order No. DTFA05-97-P-40204, dated August 5, 1997 (enclosed with letter dated October 22, 1999 from Regional Counsel to the ODRA), the Order was placed with Automatic Equipment Sales of Washington, the authorized Carrier dealer (*see* DF No. 2, Tabs 2-4 and 2-5), and the record reflects that, at the time the FAA ordered the units and issued the plans for Impact Statement No. 4 in August 1997, the Government representative who placed the order was made aware that Carrier no longer manufactured the specified 50DW-028 units and that the updated model number was 50EW-028. *See* DF No. 10, Ronholm Diary, pp. 207, 231; DF No. 2, Tab 2-65, Ronholm Memo of January 13, 1998. There is no indication, however, that the Government was made aware at that time that the change in model numbers meant a difference in supply and return orientation, and the ODRA finds that the Government had no actual knowledge of that difference until late November 1997, when that difference and its impact on exterior ductwork configuration was discovered and reported by MRCC's subcontractor, Calvert-Jones Co., Inc. ("Calvert-Jones"). *See* Findings 85 and 86 below.

71. Although MRCC, by letter to the Contracting Officer dated September 9, 1997, indicated that it "now [had] all the information the subcontractors have been requested" and that "quotes" on the HVAC modification would be forthcoming by September 16, 1997, DF No. 2, Tab 2-6, by letter dated September 10, 1997 (DF No. 2, Tab 2-7), also to the Contracting Officer, MRCC raised a further question regarding the specification that accompanied Impact Statement No. 4. More specifically, the sixth page of the Statement of Work for the HVAC modification appeared to be out of order. At the bottom of page 5 is section 15-1.3.2.1, Firestats. There is no subsection a. or b., yet page 6 begins with subsection c., Economizer Cycle. In its September 10 letter, MRCC raised this apparent omission and stated that its "subcontractors" believed that additional information was required in terms of HVAC controls:

> The specifications for the mechanical 15-1.3.2.1 Firestats lists Honeywell. The next page skips to letter c. [W]here is a and b[?] Is a page missing from our copy of impact statement #4? The subcontractors believe more information is required for the control portion of this project.

DF No. 2, Tab 2-7. Mr. Resnik, by letter dated September 12, 1997, sent a follow-up letter to the Contracting Officer, stating: "We are still awaiting information on your HVAC controller (sic) design. Please check to see when we can expect answers." DF No.2, Tab 2-8.

72. By letter dated September 16, 1997, the Contracting Officer responded to this inquiry, indicating that the subsections on page 6 of the specifications were mis-numbered and should have been under a separate section 15-1.3.2.2:

> c) Economizer Cycle, d) Outside Temperature Feed Forward, e) Isolate the Air Side of the AC Units, should be under the separate heading of 15-1.3.2.2.
>
> Letter[s] c), [d)], e) should read a), b), c).

The letter did not respond to MRCC's assertion that additional HVAC control information was required.

73. On that same date, September 16, 1997, MRCC submitted a price quotation for Impact Statement No. 4. DF No. 2, Tab 2-10. The quotation expressly excluded pricing for HVAC controls, and MRCC's forwarding letter stated that the exclusion was "beyond [MRCC's] control." The quote included a credit of $40,307.52 for the deleted work (relating to installation of the Bard units), and an "add" of $85,440.15, for a net contract increase ("DIFFERENCE") of $45,132.63. The quotation breakdown accompanying MRCC's September 16 letter indicated that the overall quotation for the additional work ($85,440.15) included for the new mechanical (HVAC) work a price of $52,270 (excluding controls) as quoted by Kelly HVAC, Inc. ("Kelly"). *Id.*, Breakdown, page 4 of 5. MRCC sent Ms. Tringali a Revision #001 to this price quotation, by letter dated September 17, 1997 (DF No. 2, Tab 2-12). The figure quoted for Kelly was not broken down any further. The differences between the September 16 submission and this Revision No. #001 were: (1) in the credit being offered for deleted work ($36,707.00 versus the initial figure of $40,307.52); and (2) in the net increase ("DIFFERENCE") ($48,733.17 versus the initial figure of $45,132.63). The price for the additional work remained at $85,440.15 and continued to exclude pricing for HVAC controls. *Id.*

74. By facsimile dated September 17, 1997, Mr. Scozzafava transmitted to MRCC a drawing dated "9-17-97" entitled "Wiring Diagram for Economizer Control." DF No. 2, Tab 2-11. This apparently was in response to the earlier MRCC statement regarding the need for additional control information. *See* Finding 71, above. This same drawing was transmitted by Ms. Tringali to Mr. Resnik on September 18, 1997. In her forwarding letter, Ms. Tringali stated: "Enclosed is the information you requested on the HVAC controller (sic) design for impact statement No. 4 . . . . " DF No. 2, Tabs 2-13, 2-14.

75. By Memo to Mr. Silva dated September 29, 1997 (with a copy to Mr. Scozzafava), Mr. Ronholm, *inter alia*, indicated that the economizer wiring diagram was not sufficient, raised certain questions regarding apparent conflicts in the HVAC control information furnished by the Region, stated that the control sequence previously requested had not been provided, and specifically requested that the Region furnish MRCC with a detailed control diagram:

> Per my conversation with Tony Scozzafava, on-site, Thursday, I am requesting more information with regards to the pending HVAC change order. As you know, we have had numerous problems with this modification. First, the control sequence that was requested has never been provided. You did provide us with a wiring diagram for the economizer controls, these will be provided with the units, and mount[ed] directly to them. However, the specifications for the change order and the drawings provided do not clearly state what sequence of events is desired with regards to the new units. The equipment room schedule of operation seems to indicate that both units are to run at all times. This is also reflected in the HVAC unit temperature/time settings (start sequence) listed on the same sheet, 4 of 5. The schematic flow diagram shows two motorized dampers in separate rooms, both labeled DM-2. If installed as shown, the damper in the equipment room will open both whenever the Engine Generator operates, as well as when the EG room temperature is above 85 degrees. Furthermore, the Schematic flow diagram, page 4 of 5, does not show a damper that is listed on the wall opening and door schedule, sheet one of five. This same schedule only indicates that there are two motorized dampers, not three as indicated on the schematic flow diagram. Because of these irregularities and conflicting drawings, we do not have a clear picture of what is the desired sequence and operation of these units and dampers. Please provide us with a detailed control diagram for what you want the AC units, exhaust fan, and wall heater to accomplish.

DF No. 2, Tab 2-15.

76. Drawing No. AEA-D-34017, Sheet 4 of 5, which accompanied Impact Statement No. 4, did contain some information in terms of a "Sequence of Operation" for the Equipment Room and Generator Room:

> Sequence of Operation
>
> A. Equipment Room
>
> Indoor A/C-1 and A/C-2 operate continuously year round to provide circulation and positive pressure inside the equipment room when the outdoor temperature is below the setting on the economizer change over, the first stage of cooling (on the 2 stage t'stat) closes and powers the economizer dampers to the economizer mode. The mixed air sensor senses a mixture of return air and outside air and modulates the dampers accordingly. Compressor operation is inhibited, if the second stage closes on the thermostat, the dampers return to the closed minimum position setting and the compressor starts for mechanical cooling, are standby and left in automatic. All units provided with a fire-stat to shut the fan down at high discharge air temperature.
>
> A. Generator Room

> When indoor temperature is above 85 F. ventilation fan EF-1 is activated and motorized dampers, DM-1 & DM-2 are opened to provide required ventiliation. Whenever the generator operates, DM-2 will open regardless of room temperature. During low outside temperatures, electric unit heater EUH-1 activates by built-in t-stat to maintain indoor temperature above 40° F.

On that drawing, a chart showed the thermostats for both HVAC units having cooling setpoints of "72" (*i.e.*, 72° F) – when the air conditioning would start -- and heating setpoints of "68" (*i.e.*, 68° F) – when the heating would be initiated.

77. The Region did not take issue with the observations set forth in Mr. Ronholm's September 29, 1997 Memo – including the observation that this drawing information on the Sequence of Operations appeared to indicate that both units are to be run at all times. Instead, on October 2, 1997, Mr. Scozzafava transmitted to MRCC by facsimile a one-page document entitled "Sequence of Operation for ASR-9 AC Units at National Airport," DF No. 2, Tab 2—16. The document reads, in its entirety, as follows:

> Sequence of Operation for ASR-9
> AC Units at National Airport
>
> AC-1 and AC-2 will operate independently to accomplish design room requirements. On normal mechanical cooling, return air dampers normally open and relief air damper normally closed. Set thermostat for AC-1 to (72 F), set AC-2 to (80 F). Damper generator room operation and air conditioning damper operation are entirely separate. AC-1 or AC-2 will energize based on room thermostat demand. If additional cooling is required, the standby unit will energize to maintain and satisfy the room requirements. When room temperature is satisfied, the standby unit will de-energize.
>
> During favorable out door conditions, the economizer control will open the relief dampers and closed (sic) the return dampers to allow 100% out door ambient cooling.
>
> The exhaust fan operates on a rise in temperature below thermostat setting (90 F); one intake damper is to open. Both air intake dampers to open during engine generator operation.
>
> The unit heater operates on a drop in temperature below thermostat setting (55 F).
>
> Please provide difference in time for fabrication and installation of flat oval duct specified versus pesumed (sic) rectangular duct fabrication and installation.

In addition to clarifying the issue as to simultaneous operation of the units, this "Sequence of Operation" appears somewhat different than the "Sequence of Operation" data included on the drawings with Impact Statement No. 4. For example, the thermostat temperature setpoints are not the same as had been indicated on the Impact Statement No. 4 drawing.

78. In a Memo dated October 9, 1997, Mr. Ronholm indicated that the information provided for HVAC controls was still not sufficient, and reminded Mr. Silva that MRCC had requested "a detailed control diagram for the HVAC system, [c]omplete with an accurate description of what events will cause specific actions from the equipment . . . ." "Without this," Mr. Ronholm stated, "my sub-contractors can only guess at what the designers of this modification intend it to do." DF No. 2, Tab 2-19.

Again, the Region did not take issue with this assertion. By letter dated October 10, 1997, the Region forwarded a sketch dated "10/10/97" prepared by Mr. John Sedlak, a mechanical engineer on the Region's staff, "indicating the sequence of operations for the HVAC system." DF No.2, Tab 2-20. The letter also stated that the Region was still "awaiting a price breakdown of the quote you received from Kelly HVAC" and promised that negotiations for the HVAC contract modification would proceed once the breakdown was received. *Id.* That breakdown was never forthcoming, however. As explained at the hearing, Kelly ultimately informed MRCC that it would not bid on the HVAC work under Impact Statement No. 4, due to a lack of information regarding HVAC controls. Tr., Resnik Testimony, p. 313.

79. On October 6, 1997, Mr. Resnik had a telephone conversation with Ms. Tringali. The parties are in disagreement as to what exactly was said during that conversation. According to Mr. Resnik, he told Ms. Tringali that he needed some direction with respect to the HVAC work, if MRCC was to complete the ASR-9 Project in November 1997, as specified. Tr., Resnik Testimony, pp. 351-352. By letter dated October 6, 1997, the Contracting Officer issued such a directive. Ms. Tringali's letter, in its entirety, read as follows:

> You are hereby directed to proceed with the HVAC work covered in Impact Statement No. 4 to Contract No. DTFA05-97-C-50842, ASR-9 Facility, Washington National Airport, Washington, D.C.
>
> We are still awaiting the breakdown from your electrical subcontractor. Upon receipt of the documentation, it will be reviewed and negotiations will be scheduled.
>
> Your expeditious handling of this matter is solicited.

DF No. 2, Tab 2-17. Significantly, this directive does not indicate that different model HVAC units would be furnished than those specified in Impact Statement No. 4. MRCC responded to this directive, by a letter also dated October 6, 1997. In that letter, MRCC stated that it would proceed with the work and pointed out that the electrical breakdown had already long been submitted, that it was the mechanical subcontractor's (*i.e.,* Kelly's) price breakdown that was needed, and indicated that the breakdown could not be provided as of that date, since the "FAA engineers" had just furnished "final clarifications" as of "Friday, October 3rd." Presumably, MRCC was referring to the request for additional information regarding HVAC controls and the furnishing of the one-page Sequence of Operations on October 2, 1997. *See* Finding 77; DF No. 2, Tab 2-16.

80. The exterior ductwork for the new HVAC units was to be spiral ductwork, a long lead time item. Tr., Ronholm Testimony, p. 20. Mr. Resnik testified that, during their October 6, 1997 conversation, he had advised Ms. Tringali that, to make the specified completion date, he would have to release the ductwork fabrication order immediately. According to Mr. Resnik, Ms. Tringali told him to proceed with the fabrication immediately, *i.e.,* to dispense with the requirement for shop drawing submittals. His testimony in this regard was as follows:

> BY MR. [WHEELOCK]:
> Q Now, there is one other issue in the HVAC. On the time that, the directive to proceed was received from Ms. Tringali on October 6th, was that by a telephone conversation with Ms. Tringali?
> A It was both.

MR. WALTERS: There is a letter in the Dispute File dated October 6th.
THE WITNESS: Yes.
BY MR. [WHEELOCK]:

Q And during that conversation did you have any discussion with Ms. Tringali about needing to fabricate duct work?

A Yes.

Q What was that conversation?

A I informed Ms. Tringali that if we were to get this work completed and get it on time that I needed something in writing, an approval of this change order. She informed me that she was going to issue a directive and that we would work out the monetary details later, which I guess meant for me to pay for it and they will decide whether or not how much they are going to pay for it. And at that time, I informed her that unless I had something in writing, telling me to proceed, that we weren't going to make that date, that they needed to start fabricating immediately. And she said, I am going to issue a directive, start fabricating.

MR. WALTERS: And those were her words?
THE WITNESS: Yes.
MR. WALTERS: To you?
THE WITNESS: Yes.
MR. WALTERS: Start fabricating.
THE WITNESS: Yes.
MR. WALTERS: And she didn't say that you would have to submit shop drawings before you would initiate that order for the fabrication?
THE WITNESS: No, she did not.

Tr., Resnik Testimony, pp. 351-353. On the basis of this directive, Mr. Resnik said, he immediately notified Mr. Chris Taylor of Calvert-Jones (the mechanical contractor that replaced Kelly once Kelly declined to bid the job) and directed Calvert-Jones to release the fabrication order. *Id.*, pp. 353-354. Calvert-Jones complied with that directive within a day or two. Tr., Taylor Testimony, p. 276.

81. During his testimony, Mr. Ronholm did not allege that the ductwork shop drawing requirement had been waived. Instead, it was his impression that felt MRCC could simply proceed with fabrication before receiving approval, so long as the ductwork conformed to the drawings issued with Impact Statement No. 4, which, according to Mr. Ronholm, they did. Tr., Ronholm Testimony, pp. 47-48. In other words, it seemed, Mr. Ronholm anticipated having to submit shop drawings at some later stage, for record purposes.

82. During her testimony, Ms. Tringali categorically denied having discussed ductwork fabrication in any way with Mr. Resnik. In terms of any implication that she had waived the requirement for ductwork shop drawing submittal, she stressed that she would have had to consult with the Region's technical personnel on such an issue, to determine the feasibility of such a waiver, and that, if she had waived that requirement, she would have confirmed it in writing in her October 6, 1997 letter. Tr., Tringali Testimony, pp. 903-908.

83. Both Mr. Resnik and Ms. Tringali presented credible testimony, yet their testimony in this regard is at odds. Mr. Resnik's testimony at the September 1999 hearing was consistent with his letter to Ms. Tringali of January 8, 1998, wherein he

told Ms. Tringali: "I am sure you will recall instructing us to order all duct work and material needed as there would be no time extension granted for this change." DF No. 2, Tab 2-62. It may well be that Mr. Resnik interpreted Ms. Tringali's directive to "proceed with the work" as a directive to release the ductwork order for fabrication without the necessity for first obtaining shop drawing approval. In terms of the implication that a time extension request had been denied, even though the Contracting Officer did not recall a time extension being requested by MRCC for the HVAC change, Tr., Tringali Testimony, pp. 905-906, there was such a request, but it does not appear to have been made until several weeks after the October 6, 1997 telephone conversation between Mr. Resnik and Ms. Tringali. *See* DF No.2, Tab 2-37, MRCC letter of October 28, 1997: "I would like to go on record and request an additional 30 days be added to the end of this contract for changes to date on Impact Statement #4." In the ODRA's experience, a Contracting Officer does not ordinarily discuss such matters as ductwork fabrication and the waiver of requirements for shop drawing submittal without technical support from her engineers. In any event, the fabrication order was released, according to Mr. Resnik, immediately after receiving the Contracting Officer's October 6, 1997 letter, *i.e.*, even before October 16, 1997, when MRCC executed its subcontract with Calvert-Jones, or October 22, 1997, when Calvert-Jones executed that document. Tr., Resnik, pp. 404-405; Trial Exhibit 4 (last two pages); DF No. 2, Tab 2-22. MRCC tendered for the Region's consideration a revised estimate dated October 23, 1997 for the work under Impact Statement No. 4.

84. On October 21, 1997, the two Government furnished HVAC units were delivered to the National Airport ASR-9 Project jobsite. Tr., Silva Testimony, p. 670. The off-loading of the units was done by MRCC's forces and later was deleted from the Calvert-Jones subcontract by change order. Trial Exhibit 4. At the time of their delivery, MRCC noticed that the units both had economizer packages. This was contrary to what had been indicated on the Sedlak sketch of October 11, 1997, and Mr. Ronholm brought this to Mr. Silva's attention, by Memo dated October 22, 1997. In the Memo, Mr. Ronholm requested "an updated sequence of operation that shows both economizer packages and their interface." DF No. 2, Tab 2-28.

85. What neither party noticed on October 21, 1997 was that the HVAC units were not the same model number units as had been specified in Impact Statement No. 4 -- Carrier 50EW 028-6 480/3/60 (the "E" model) rather than Carrier 50DW 028-6 480/3/60 (the "D" model). There was some confusion at the hearing as to how the units were packaged when delivered – whether they were crated or shipped on pallets and wrapped with clear plastic covers ("shrink wrap"). *Compare* Tr., Ronholm Testimony, p. 18 *with* Tr., Silva Testimony, p. 671. In either case, however, it is clear that the plastic covering was removed from the units when they were hoisted onto the concrete pads that had been constructed for them outside the new CMU structure. Placing the units on the pads would have necessitated removing the plastic covers, since the plastic surrounded the pallets as well as the HVAC units. Tr., Silva Testimony, p. 677. It is also clear that the unit number could have been read from a plate located on the side of each unit. Trial Exhibit 10. Finally, it is clear that – regardless of their prior knowledge as to the model number change or lack thereof -- neither party was aware that the units delivered were different in terms of the configuration of their supply and return air apertures. Whereas the D model was to have horizontal/side-by-side supply and

return apertures, the E model had them vertical. Tr., Taylor Testimony, pp. 273-274. Both parties first became aware of that difference and its significance only later, at the end of November 1997, when Calvert-Jones attempted unsuccessfully to install the specially fabricated exterior spiral duct that was to emanate from the supply and return apertures. Tr., Ronholm Testimony, pp. 18-25; Tr., Taylor Testimony, p. 277; Tr., Silva Testimony, pp. 674-675.

86. On November 25, 1997, Calvert-Jones issued a Request For Information, RFI #2, notifying MRCC of the situation related to the change in HVAC model numbers and its impact on the spiral ductwork that had been ordered "per the plans" "to work with the 50DW028 unit." DF No.2, Tab 2-53. This condition was brought to Mr. Silva's attention in the field, and Calvert-Jones proceeded to try to work with the spiral duct, to determine whether it could be made to work with the E model units. This could not be accomplished. Accordingly, by letter dated December 15, 1997, Calvert-Jones wrote to Mr. Ronholm, advising that the "current ductwork layout will not work," stating that "it will be necessary to eliminate a majority of the spiral ductwork and order rectangular ductwork," asserting that "[i]t is not Calvert-Jones' responsibility to alter the original design of the project" and seeking "direction" as to "how far to proceed with the ductwork modifications." *Id.* Mr. Ronholm, in turn, transmitted this information to Messrs. Silva and Scozzafava, by Memo dated December 15, 1997. *Id.* Also, by Letter of Transmittal of that same date, Mr. Ronholm forwarded for review drawings prepared by Calvert-Jones that addressed the differences relating to the change in HVAC units. DF No .2, Tab 2-54. By Letter of Transmittal dated December 17, 1997, Mr. Ronholm submitted to Mr. Silva for review shop drawings prepared by Calvert-Jones for the HVAC modification. DF No.2, Tab 2-55.

87. Ms. Tringali, by letter dated December 17, 1997, responded to MRCC's December 15, 1997 Memo regarding the HVAC model change. In the letter, the Contracting Officer attempted to attribute responsibility for the situation to the contractor, arguing that, had it furnished shop drawings as required prior to ductwork fabrication (per Section 1-5.5.1 of the Contract Specifications), MRCC would have "verified all dimensions at the site before commencing work" (per Section 15-1.4.1 of the Contract Specifications) and thus would have discovered the difference in the supply/return aperture configuration and been able to make the necessary adjustments "well in advance of fabrication." DF No. 2, Tab 2-56. Even though the ODRA does not adopt Mr. Resnik's version of his conversation with Ms. Tringali and does not accept that MRCC had been relieved of its responsibility for submission of shop drawings prior to releasing the ductwork order for fabrication, it cannot agree that complying with the contract requirement would necessarily have averted the situation that was created by the Government's unanticipated model "switch." More specifically, assuming that MRCC had proceeded on October 6, 1997 in accordance with the contract and the Contracting Officer's directive to proceed "with the HVAC work covered in Impact Statement No. 4" (*see* DF No. 2, Tab 2-17), and had submitted shop drawings at that time on that basis, those drawings would have been in accordance with the Impact Statement No. 4 drawings, and the spiral ductwork configuration would have been precisely as indicated on the Impact Statement No. 4 drawings. Tr., Ronholm Testimony, pp. 49-50, 168; Tr., Taylor Testimony, pp.298-299. Because the units were not delivered to the site at that stage (two weeks prior to the October 21, 1997 delivery), there were no "dimensions at the site" to be "verified" and incorporated into the shop drawings. Tr., Ronholm

Testimony, p. 165. As noted above (Finding 85) and as acknowledged by the Government witnesses at the hearing, none of them was aware that there was a unit change and a difference in terms of ductwork configuration until the end of November 1997. Accordingly, there is no evidence that those who would have reviewed the HVAC shop drawings at the Region would have been aware of the change in unit model numbers or of its significance in terms of the supply/return aperture configuration difference. Accordingly, the fact that MRCC may have improperly dispensed with the submission of shop drawings in this case is not determinative of whether it would have discovered that difference prior to releasing the order for spiral ductwork fabrication. Even if everything had been done according to the contract in terms of shop drawing submittal, the same mistake could, and probably would, have occurred.

88. On December 31, 1997, the Contracting Officer notified MRCC that the HVAC shop drawings had been disapproved. DF No. 2, Tab 2-59. Comments for the HVAC submittals for the Equipment Room and Generator Room had been prepared on December 23, 1997, by two of the Region's mechanical engineers, Messrs. Len Zaretsky and Alonzo Lloyd, and were forwarded to MRCC by Mr. Silva on January 6, 1998. DF No. 2, Tab 2-60. The engineers' comments were as follows:

SHOP DRAWING SUBMITTAL	**CONTRACTOR NUMBER**	**FAA NO.**	**RECOMMENDED ACTION**
Equipment Room/CARRIER Package HVAC Units, Sequence of Operation			D

Comment:

1. The Plant Schematic Controls Diagram, The Point-to-Point Interconnection Details Diagram, The Control Panel & Field General Details, and the Bill of Materials shall be included in the submittal package for the HVAC Controls.

SHOP DRAWING SUBMITTAL	**CONTRACTOR NUMBER**	**FAA NO.**	**RECOMMENDED ACTION**
Generator Room, EF-1 and EUH-1, Sequence of Operation			D

Comments:

1. The Plant Schematic Controls Diagram, The Point-to-Point Interconnection Details Diagram, The Control Panel & Field General Details, and the Bill of Materials shall be included in the submittal package for the HVAC Controls.

1. Under Sequence of Operation, third paragraph from the top:
replace:

"… EF-1 is energized and the exhaust air damper is opened …"

with the following to read:

"… EF-1 is energized and the intake air damper DM-2 is opened …"

1. Under Sequence of Operation, forth paragraph from the top:
replace:

"On a rise in space temperature above setpoint (85 deg F), EF-1 is energized and the exhaust air damper is opened …"

with the following to read:

"On a rise in space temperature above setpoint (85 deg F), EF-1 is energized and the intake air damper DM-2 is opened. On a subsequent fall in space temperature to setpoint, EF-1 is de-energized and the intake air damper DM-2 is closed."

DF No. 2, Tab 2-60 (emphasis in original).

89. The Contracting Officer's December 31, 1997 letter to MRCC (DF No. 2, Tab 2-59) characterizes MRCC's HVAC shop drawing submittals as "incomplete" and cites to "Sections 1-5.5, SUBMITTALS, and 15-1.5, QUALITY ASSURANCE, of the contract specifications." In that letter, the Contracting Officer states: "we are still awaiting complete shop drawing for review, taking into account the existing site conditions." The reference to Section 15-1.5 is unclear, and the record is silent on why the Contracting Officer believed that section of the specifications to have any bearing on the shop drawings. The only drawings mentioned under Section 15-1.5 are the "as-built drawings." DF No. 1, Contract Specifications. Although Section 1-5.5 generally indicates that "lack of completeness or inadequate description will be justification for disapproval," it seems from the Contracting Officer's statement and from the engineers' comments that what the Region was seeking from MRCC in terms of shop drawings was a completely new HVAC design to take into account the change in configuration brought about by the difference in GFM units. In this regard, it should be noted that, when MRCC had inquired (by its letter of August 27, 1997, DF No. 2, Tab 2-2) as to whether the contractor would be "responsible for the shop drawings for the new GFM units and duct work," Ms. Tringali, by her letter dated September 5, 1997 had indicated only that the contractor would be responsible for shop drawings "on location of HVAC units and all interior and exterior duct connections as per specification section 15-1.3.4.3." DF No. 2, Tab 2-3. Further, the above-quoted engineers' comments regarding Sequence of Operations appear to introduce differences in terms of "what events will cause specific actions from the equipment." *See* DF No. 2, Tab 2-19, Ronholm Memo of October 9, 1997. In other words, these comments appear to call for the GFM equipment to operate differently than had been indicated either by the Sequence of Operations in the Impact Statement No. 4 drawings (*see* Finding 76, above) or by the Sequence of Operations provided by Mr. Scozzafava on October 2, 1997 (*see* Finding 77, above).

90. The parties having not come to agreement on the pricing of the HVAC modification, the Contracting Officer, by letter dated December 2, 1997, advised MRCC that a unilateral modification would be issued for the Impact Statement No. 4 work in the amount of $30,000, which was considered a "fair and reasonable price." DF No. 2, Tab 2-48. The unilateral modification, Modification No. 5, was issued on January 9, 1998, and transmitted to MRCC by the Contracting Officer's letter of January 12, 1998. DF No. 2, Tab 2-64.

91. By the aforesaid letter dated January 8, 1998 (DF No. 2, Tab 2-62 – *see* Finding 83), Mr. Resnik provided the Contracting Officer with a proposal in the amount of $18,780.41 for a further change order "for replacing exterior duct work outside the building to match the two units that are now on site." The proposal was based on additional costs of $17,073.10 claimed by Calvert-Jones. By letter dated January 9, 1998, Ms. Tringali refused to entertain the proposal for such additional costs, once again asserting that, had MRCC complied with the requirement for shop drawing submission prior to releasing its fabrication order, the needed change in exterior ductwork could have been accomplished "AT NO ADDITIONAL COST TO THE GOVERNMENT." *Id.* (emphasis in original). The Contracting Officer made this the subject of a final decision dated March 9, 1998, when she took the same position, denying additional compensation for the re-configured ductwork. DF No. 2, Tab 2-80.

92. Calvert-Jones prepared revised HVAC ductwork shop drawings and forwarded them to MRCC on February 4, 1998. DF No. 2, Tab 2-66. The shop drawings were returned "disapproved" by the Resident Engineer, Mr. Silva, on February 12, 1998. The record does not include the mechanical engineers' comments or the reasons for disapproval (or the engineers' drawings of how they "wanted the new duct configuration" – *see* DF No. 2, Tab 2-69, MRCC February 20, 1998 letter). However, the disapproval of the ductwork shop drawings seems, at least in part, to have been motivated by the fact that the FAA was "still awaiting re-submission on EUH-1 sequence of operations . . . ." DF No. 2, Tab 2-67.

93. By letter dated February 12, 1998, MRCC's Mr. Resnik complained to the Contracting Officer that it had been refused any payment for the HVAC modification work done up until that time, and asserted that it was "90% complete" with that work. DF No. 2, Tab 2-66. By letter dated February 19, 1998, the Contracting Officer disputed the claim that MRCC was "90% complete" with the HVAC work, reasserted that the Government would not bear the cost of the ductwork modifications relating to the difference in GFM units, once again raised the argument that earlier shop drawing submittal would have averted any additional cost in that regard, again advised MRCC that the HVAC shop drawings had been disapproved, and warned MRCC that, because the lack of a complete HVAC system was beginning to impact the installation of ASR-9 electronic equipment (by Northrup Grumman, another FAA contractor), the Government "may be forced to seek compensation from MRCC in the form of liquidated damages, until the work is completed." She warned MRCC further that "any additional charges incurred due to the delay in the HVAC installation will be passed on to MRCC." DF No. 2, Tab 2-68.

94. MRCC's Mr. Resnik, by letter dated February 20, 1998, notified the Contracting Officer that a copy of her February

19 letter had been forwarded to Calvert-Jones, to spur the subcontractor on in terms of shop drawing submittal and related that Calvert-Jones had advised that, with the ductwork shop drawing disapproval, the Region's engineers had provided drawings showing what they wanted in terms of ductwork configuration for the different HVAC models. In this regard, Mr. Resnik stated: "[H]ad this been supplied when you changed the units delivered to site, this project would have been completed in November as originally intended." The letter also addressed the issue of supplying portable temporary HVAC units to be used in conjunction with testing by Northrup Grumman. Those units, Mr. Resnik advised, were being rented on his credit card, based on a Government promise that MRCC's pay request would be "reviewed and processed" by the end of the following week, February 27, 1998. DF No. 2, Tab 2-69.

95. The Contracting Officer, by two letters dated February 25, 1999 and February 26, 1999, responded, asserting that the "notes and sketches" furnished by the Region's engineers were "comments" that had been provided with respect to the Calvert-Jones shop drawings, in order to "improve the HVAC system supply and return airflow …." Also, in response to a request for information from Calvert-Jones (DF No. 2 , Tab 2-71), the Contracting Officer in those letters confirmed that, because of the change in units – from the "D" model to the "E" model – the size of spiral duct would have to be larger (34" rather than 30" for the return duct and 58" rather than 54" for the supply duct). DF No.2, Tabs 2-72, 2-73.

96. By letter dated March 3, 1998, the Contracting Officer notified MRCC that it was still awaiting a re-submittal of the HVAC Sequence of Operations. DF No. 2, Tab 2-74. That re-submittal was made on the same date, and, by letter dated March 6, 1998, the Contracting Officer advised MRCC that the shop drawings had been "approved." In fact, however, whereas the submittals for the HVAC Unit Supply and Return Air Control Dampers and the Engine Generator Room HVAC Sequence of Operations had both been unconditionally "Approved," the submittal for the Equipment Room/Carrier HVAC Unit Sequence of Operations was returned "Approved as Noted/Resubmission Required." DF No. 2, Tab 2-76. Moreover, Mr. Zaretsky, the Region's mechanical engineer who had reviewed that submittal, conceded that at least one of the "notes" that were to be incorporated in the required re-submittal called for a modification that he subsequently learned was not feasible. More specifically, Note 3 specified: "Set room static pressure setpoint at 0.05" W.C. instead of 0.1"." The Impact Statement No. 4 specifications, under "Economizer Cycle" called for the building's internal pressure to be controlled by a pressure relief damper that, "with feedback from a pressure differential sensor," would maintain the static pressure at "slightly positive compare to outdoors, when using outside air for cooling." DF No. 2, Tab 2-1, Statement of Work, page 6, ¶c (third paragraph). Calvert-Jones' shop drawings showed a sensor with a setpoint of 0.1" – which clearly satisfied the requirement regarding "slightly positive." What Mr. Zaretsky wanted was a sensor that could be even more "sensitive," with a setpoint of 0.05". Upon investigation, Mr. Zaretsky found that the manufacturer did not have a sensor that was that sensitive. He then agreed to accept what Calvert-Jones had indicated it would use and was convinced that it was adequately sensitive. Tr., Zaretsky Testimony, pp. 976-980. Also, in the process of review of the shop drawings for the controls, the Region decided that some additional dampers were needed to make the system function properly. This clearly was a change, and the Region does not contest that it owes MRCC additional money for the change. By the same token, it urges that the reasonable amount would be

$1,925. *Id.*, pp. 968-973. Agency's Final Submission, page 5.

97. Calvert-Jones made a re-submission for the sequence of operations on March 10, 1998, a Revision No. 6 which the Region approved on March 23, 1998. DF No. 2, Tabs 2-81, 2-82, 2-84, 2-85, 2-86, 2-87, and 2-88. In the process, it appears that the Region reversed many, if not all, of its earlier comments on the prior submittal, "deleting" several of the earlier "requests". *See* DF No. 2, Tab 2-84; *see also* BAS letter to Calvert-Jones dated March 9, 1998 (referenced in Tab 2-82 and included as Attachment C to Declaration of Thomas B. Murphey).

98. By letter dated March 11, 1998, the Contracting Officer, responding to MRCC's letters of March 10, 1998 and March 11, 1998 (DF No. 2, Tabs 2-81 and 2-83), asserted that, because the HVAC system was to be a "normal operating system," it was not necessary for MRCC to "design" the system and once again argued that the "notes and sketches" provided by the Government were to "improve the HVAC system supply and return airflow submitted upon by Calvert Jones Co., Inc." As to the additional dampers, the letter, while acknowledging that a change in scope occurred, stated that "the price quoted from the Calvert Jones Co., Inc. is considerably higher than the Government estimate" and that the FAA would "require original invoices for all the additional components required for this modification." DF No. 2, Tab 2-86 (emphasis in original).

99. By letter to MRCC dated March 25, 1998, Calvert-Jones advised that it had completed both the ductwork and control work and that, as of Tuesday, March 24, 1998, completed the air balance for the HVAC system. DF No. 2, Tab 2-89.

100. At the hearing, the parties were in agreement that the HVAC work was essentially complete (other than for punchlist items that have since been eliminated as part of the separate settlement of the contract balance) as of March 31, 1999. Tr., pages 342-343; DF No. 2, Tabs 2-91 and 2-92. The record, however, indicates that at least some minor work relating to "installation of the HVAC controls and the safety disconnect switch of the lead [HVAC] unit" had to be completed in early April 1998. DF No. 7, Tab 7-38; DF No. 9, Silva Daily Diaries, April 6-7, 1998.

Contract Acceptance Inspections (CAIs)

101. Special Contract Requirement 12 (SCR-12) provides the following in terms of final inspection and acceptance:

> At least ten (10) calendar days prior to the estimated completion date, the Contractor shall notify the Resident Engineer in writing of the proposed final inspection date. The Resident Engineer shall, in turn, coordinate and schedule a final inspection date. All work shall be inspected and accepted on the basis of plans and specifications and a complete operable system will be required.

102. MRCC's Mr. Ronholm, by Memo dated November 4, 1997, notified the Resident Engineer of MRCC;s wish to hold a Contract Acceptance Inspection ("CAI") on November 14, 1997. DF No. 7, Tab 7-1. Mr. Silva declined this

request, but offered to provide MRCC with a partial CAI only for the Equipment Room and the tower, based on their completion by November 12, 1997. In this regard, Mr. Silva, in a Transmittal dated November 5, 1997 noted the following items as not complete:

- 300 kva transformer
- transformer 1 & 2
- engine generator start up
- UPS start up
- louvers (still pending the submittal process)
- HVAC installation, including controls
- tower completion, including painting
- siding
- doors
- miscellaneous electrical installations

DF No. 7, Tab 7-2. The ODRA finds the RE's listing to have been accurate, based on its review of the record.

103. Mr. Ronholm sent Mr. Silva a second Memo on November 19, 1997, requesting that a complete CAI be scheduled for Friday, November 21, 1997 at 2:00 P.M. and asserting that MRCC was "substantially complete with the bulk" of the contract work. DF No. 7, Tab 7-3. Although, as noted above, MRCC had completed tower erection and had begun painting of the tower on that date, November 19, 1997, without the electrical hook-up (which took place on December 10, 1997), the installation and energizing of the transformers (which took place somewhat later in December 1997 -- *see* Finding 107, below) and the completion of the HVAC system (which, as noted above, did not take place until April 1998), MRCC could not reasonably contend that there was a "complete operable system" within the meaning of SCR-12 as of mid-November 1997.

104. A partial CAI was conducted for the Equipment Room only on November 20, 1997. DF No. 7, Tabs 7-4 and 7-5. The Region was unable to gain access to the tower on that date, because it was being painted at the time of the inspection. DF No. 7, Tab 7-6. It seems that the Region was willing to conduct a partial CAI for the Equipment Room, because its other contractor, Westinghouse (which had acquired the Northrup Grumman component involved) required the Equipment Room for storage of electronic equipment that was to be installed later at the ASR-9 facility. Tr., Silva Testimony, pp. 727-728; Tr., Scozzafava Testimony, pp. 557-558.

105. By Memo dated December 9, 1997, Mr. Ronholm once again requested the scheduling of a final inspection, this time for Friday, December 12, 1997. With the electrical hook-up, which occurred on December 10, 1997, Mr. Ronholm asserted that MRCC would be able to "energize our site transformer and complete all our remaining work." DF No. 7, Tab 7-8. There is no evidence that all of the remaining electrical and other work was completed as of December 12, 1997. A Transmittal from

Mr. Silva to Mr. Ronholm dated December 9, 1997 denies this request and states that "some" of the items listed in Mr. Silva's November 5, 1997 Transmittal had yet to be cleared as of December 9, 1997 and that the Region was waiting for MRCC's submittals for the HVAC system, the electric unit heater and the Fuel Tank installation. DF No. 7, Tab 7-9.

106. Mr. Resnik, by letter to the Contracting Officer dated December 16, 1997, complained about the delay in scheduling of the CAI, asserting that Mr. Ronholm had weeks earlier requested that Mr. Silva schedule the "Kohler representative for the Engine Generator start-up" and that "[t]he only outstanding issue is the completion of Mod. #4 [*i.e.*, the HVAC modification]." Mr. Resnik, in that letter, contended that his "understanding" was that CAI would take place on either Wednesday, December 17, 1997, or Thursday, December 18, 1997, and that Mr. Silva did not "want the CAI to take place until January 1st, 1998," that this would "extend both [MRCC's] on site costs and overhead cost considerably." The letter concludes with Mr. Resnik asking Ms. Tringali to "take the necessary steps" for CAI "to take place on the date agreed to." DF No. 7, Tab 7-14.

107. By letter dated December 17, 1997, Mr. Resnik confirmed a telephone conference he had with Ms. Tringali and Mr. Scozzafava, wherein the request for a December 18, 1997 CAI was denied, purportedly due to the Government's inability "to provide the necessary FAA personnel." The letter further states: "Due to Holidays, you have given me a new CAI date of January 6th or 7th, 1998." DF No. 7, Tab 7-16. Ms. Tringali, by letter to Mr. Resnik dated December 18, 1997, and in response to Mr. Resnik's letters of December 16 and 17, disclaims any agreement regarding the scheduling of the CAI amd states that MRCC had been repeatedly advised that "several outstanding items" had to be "completed before the final inspection of the job would take place" and that, in particular, the Region was still awaiting the submission of maintenance manuals and guarantee documentation. From this, it seems that the items listed by Mr. Silva in his November 5, 1997 Transmittal had been completed sufficient for final inspection (other than the installation of the HVAC system and the painting of the tower) on or before December 18, 1997. Ms. Tringali's letter also speaks about the scheduling of the engine generator start-up and explains that it could not be scheduled when requested by Mr. Ronholm, since the installation had yet to be completed and since the Region had only a limited number of site visits permitted under the Kohler service contract. The letter further explains that, in addition to the Kohler representative, representatives of two other firms, ASCO and Exide, would be needed for the start-up. Ms. Tringali states that, although the Region attempted to accommodate Mr. Ronholm's request for a December 17 engine start-up, because of the holiday season and Kohler's requirement for "two weeks lead time", it was not possible to assemble the required personnel. She concludes by stating that the Region was "attempting to schedule the CAI for January 6 or 7 [1998]" and would notify MRCC in writing as to the "exact date." DF No. 7, Tab 7-20.

108. Internal memoranda to Mr. Resnik from MRCC's Messrs. Daniels and Ronholm dated December 17, 1997, December 18, 1997, and December 22, 1997 create some doubt on the contention regarding the unavailability of personnel for the engine generator startup. *See* DF No. 7, Tabs 7-17, 7-22, and 7-23. Also in Mr. Ronholm's December 22, 1997 Memo, he advises Mr. Resnik (1) that the maintenance manuals had previously been delivered to the engine generator room (*see also* DF No.7, Tab 7-28, Ronholm Memo dated January 12, 1998 to Mr. Silva stating the manuals and various other items "have

been located in the engine generator room and are now under your control"); and (2) that the warranty documentation would have been presented at the time of the "final walk through." DF No. 7, Tab 7-23. Neither party presented testimony on this point at the hearing. Based on the record, it appears that, other than for the HVAC work -- and for the seeding and tower painting that had been deferred by the Region's directive until the Spring of 1998 – a CAI could and should have been scheduled and conducted by December 31, 1997, at the latest.

109. By letter dated December 30, 1997, Ms. Tringali advised Mr. Resnik that the engine generator and UPS startup was scheduled for January 13, 1998, and the CAI was scheduled for the following day, January 14, 1998 at 10 A.M. DF No. 7, Tab 7-25. The CAI – other than for the HVAC system -- did, in fact, take place as scheduled on January 14, 1998. A punchlist was generated and was transmitted to Mr. Resnik by Ms. Tringali's letter dated January 20, 1998. DF No. 7, Tab 7-30. In that letter, Ms. Tringali asked that the punchlist items be completed – other than the tower painting and seeding, both of which were deferred until the Spring of 1998 – on or before February 6, 1998.

110. By letter dated March 3, 1998, the Contracting Officer asserted that there were "numerous" punchlist items remaining to be completed and notified MRCC that, unless they were accomplished (other than seeding and tower painting) by March 27, 1998, the Region would "obtain the services of an independent contractor to complete the remaining items" and seek reimbursement from MRCC for the costs of completion. DF No. 7, Tab 7-31. Mr. Resnik, by letter of the same date, took exception to the statement regarding "numerous" outstanding items, contending that only work relating to the tower was left undone. In that regard, he stated, work was being precluded by the radar not being shut down. DF No. 7, Tab 7-32. By letter dated March 6, 1998, Ms. Tringali rejected Mr. Resnik's statements regarding the status of the punchlist and noted that there was no record that MRCC had requested that the ASR-7 radar be shut down. DF No. 7, Tab 7-33.

111. By letter dated March 26, 1998, Mr. Resnik advised Ms. Tringali that MRCC had requested a re-inspection of the punchlist items for March 24, 1998, that initially, Mr. Silva refused to accommodate the request, stating that a "five-day pre-notice" was required, and that Mr. Silva then, on March 26, 1998, without any prior notice to MRCC, advised that there were "numerous FAA personnel on site" and that Calvert-Jones and its subcontractor, BAS Controls ("BAS"), should be on site "immediately," since the FAA was "doing an HVAC punch list." In that letter, Mr. Resnik also advised that MRCC wished to proceed with tower painting as of March 30, 1998, which would be "10 days into spring" but was told that painting would have to be postponed, because the Region's personnel were installing equipment on the tower. This, Mr. Resnik, indicated, would extend "our delays and subsequent expenses on this project." DF No. 7, Tab 7-34. By letter dated March 27, 1998, Mr. Resnik submitted a "formal request for the final inspection of punch list items." DF No. 7, Tab 7-35.

112. In response to Mr. Resnik's March 26, 1998 letter, Ms. Tringali, by letter dated March 31, 1998, advised that Mr. Silva had notified MRCC's Mr. Clint Tibbs (who had taken over for Mr. Ronholm upon his departure in January 1998) that a March 26 HVAC inspection would be conducted. In terms of the tower painting, Ms. Tringali explained that it would have to

await completion of the installation of the ASR-9 and Mode S equipment that were crucial to the "commissioning of the ASR-9 facility," that any delay in that installation would be "costly to the Government" and that tower painting would be "permitted only after the date and duration of the shutdown are coordinated through Mr. Alex Silva." DF No. 7, Tab 7-36.

113. Mr. Resnik, by letter dated March 31, 1998, responded to Ms. Tringali, informing her that, although Mr. Silva did request an HVAC inspection for March 26, he failed to confirm it in writing. DF No. 7, Tab 7-37. Regardless, Mr. Silva performed some form of "pre-HVAC inspection" on March 26, 1998. DF No. 7, Tab 7-38.

114. Subsequently, the parties scheduled and conducted the final CAI, relating to the HVAC system, on April 28, 1998. DF No. 7, Tabs 7-39, 40, and 41. Thereafter, MRCC completed the seeding and tower painting that had been deferred, MRCC's last day on the job being June 23, 1998. *See* Finding 51, above; DF No. 11, Tabs 11-46 through 11-52.

Delay Analysis: Impact on the "Critical Path"

115. MRCC was on the ASR-9 Project a total of 211 additional calendar days beyond the scheduled completion date of November 25, 1997 (*i.e.*, from November 26, 1997 through June 23, 1997). It is clear that the last work performed on the project, tower painting, was extended beyond that completion date by reason of Government delay factors associated with the GFM tower steel. *See* Finding 52, above. Although the initial suspension directive to defer tower painting until the Spring of 1998 was not *per se* "indefinite", *see* Tr., Resnik Testimony, p. 426, the subsequent notification that MRCC was to continue deferring that work until after the Government completed its installation of tower equipment rendered it "indefinite." In any event, by reason of such Government-caused delay, the ODRA finds the Region's claim to liquidated damages is not justified.

116. In terms of other, concurrent, causes of project delay, the two most significant factors brought out at the hearing were: (1) delays associated with completion of the HVAC modification work; and (2) delays in completion of the electrical work. As to the HVAC related delays, the ODRA finds that MRCC was unable to complete its HVAC work by the specified contract completion date for three reasons, all of which are attributable to the Government. First, it was not until October 6, 1997, with barely over six weeks remaining under the contract schedule (44 days were left until the November 25, 1997 completion date), that the Government issued its directive to install a much more complex HVAC system. The originally specified Bard wall units (independent plug-in units with individual thermostats – *see* Tr., Ronholm Testimony, pp. 60-61) did not involve many of the elements of the new design, including interior ductwork work, specially fabricated exterior spiral ductwork having a long procurement lead time – 5 of the remaining 6 weeks, the installation of exterior underground electrical cabling, and the construction of exterior concrete pads and associated protective bollards. *See* Finding 66. The refusal by the Region to have allowed additional time for that change order at that stage – even if everything had proceeded perfectly with its performance was, in the ODRA's view, unreasonable. Had the direction to proceed come earlier, perhaps such a change could have been accomplished within the original time parameters. However, that was not the case here.

117. Second, unbeknownst to MRCC (but apparently within the knowledge of the unidentified Government official who had ordered the units), the Carrier HVAC units that were ordered and delivered were not the same model units that had been specified in the Impact Statement No. 4 specifications and drawings. The Contracting Officer's letter of September 5, 1997 (DF No. 2, Tab 2-3) may have identified the correct model number, but the change in model numbers was not highlighted in any way. Calvert-Jones' Mr. Taylor conceded that, if he had been given a copy of the September 5 letter and had seen the "E" model unit identified, he likely would have checked it out and indicated that he should have been able to learn about the difference in supply/return aperture configuration, Tr., Taylor Testimony, p. 304. However, there is no indication in the record that Calvert-Jones was furnished a copy of the September 5 letter. MRCC had been dealing with another prospective HVAC subcontractor (Kelly) at that stage. Tr., Resnik Testimony, pp.311-312, and it would be unreasonable to shift the responsibility to MRCC for the impacts of the Government's unannounced substitution of GFM in the absence of clearer notice of the change. Moreover, the Region erred in directing MRCC on October 6, 1997 to proceed with the work "covered in Impact Statement No. 4," even though the specifications and drawings for Impact Statement No. 4 had not been changed to reflect the proper unit model number. Under these circumstances, the mere fact that MRCC proceeded with fabrication of the spiral ductwork without first obtaining shop drawing approval does not vitiate the Government's error or shift the responsibility for it to MRCC. *See* Finding 87, above.

118. The Region has argued that MRCC's failure to submit ductwork shop drawings after "verifying site dimensions" was the cause of its later difficulty with ductwork configuration. DF No. 2, Tab 2-56. The Region is asserting effectively that MRCC should not have relied on the Government's specifications and drawings to prepare shop drawings. According to the Government, MRCC should have waited however long it would take – in this case more than 2 weeks, until October 21, 1997 – for the delivery of the units to the site to verify that the Government had delivered what it had promised before preparing shop drawings for ductwork that required an additional 5 weeks to obtain. The Government's assertion is not persuasive, given that, at the time, only 6 weeks remained until scheduled project completion. In any event, the record indicates that the change in unit model numbers caused the ductwork system design to change. Not only did the model change mean a change in ductwork in terms of matching the new configuration of supply and return apertures, but it also caused the Government, in February 1998, in the course of the shop drawing approval process, to provide "notes and sketches" showing increased ductwork sizes and ultimately to direct the increase in ductwork sizes for both the supply and return duct. *See* Finding 95, above.

119. The third Government factor causing delay in terms of HVAC completion was a lack of stability in the HVAC design. Aside from the changes associated with the spiral ductwork, the Region acknowledges that it imposed a change in terms of requiring additional dampers for the system. Although the direct cost of the additional dampers may not have been substantial, and although the Region's engineers required their provision to "improve" the system's operation, the imposition of this change contributed to the overall delay that MRCC experienced in completing its HVAC work. Finally, there was design instability in terms of HVAC controls. It should be remembered that when MRCC inquired as to shop drawing submittals for the GFM HVAC units under Impact Statement No. 4, the only things the Contracting Officer indicated that shop drawings would be

needed for were the "locations of HVAC units and all interior and exterior duct connections as per specification section 15-1.3.4.3." DF No. 2, Tab 2-3. There was no mention whatsoever of the contractor being required to complete the design of the sequence of operations or that it would have to make shop drawing submittals on the HVAC controls.

120. Mr. Zaretsky may have considered such submittals and the interchange between Government and contractor mechanical engineers to refine the sequence of operations and the design of HVAC controls to be "normal procedure." *See* Tr., Zaretsky Testimony, pp. 945, 950. Still, the Region has not shown where such work was specified in the contract, nor has it explained how it could disclaim responsibility for the design of HVAC controls, based on an assertion that such design was not needed for a so-called "normal operating system." *See* Finding 98, above. Further, even if *arguendo*, refinement of the controls design were the contractor's responsibility, it is evident that the Region's efforts to obtain the best system possible here led to an excessive amount of "back and forth" between the Region and BAS and the attempted imposition of some requirements that proved either impractical or impossible to implement. *See* Finding 96; Declaration of Thomas B. Murphey and Attachment C thereto. Because of the changes imposed in terms of HVAC controls, the system was not completed until the beginning of April 1998 and was not accepted until the end of that month. *See* Findings 100 and 114. But for all of these Government delay factors, the HVAC system would have been complete by the November 1997 completion date.

121. Delay in the completion of the electrical work is attributable to both parties. As discussed previously, MRCC began duct bank trench excavation late and proceeded with that activity at a very slow pace. Duct bank excavation and electrical installation was complete as of November 21, 1997, more than 3 months beyond the August 10, 1997 date reflected on the As-Planned Schedule for completion of the "Ductbank" activity. Finding 61, above; DF No. 8, Tab 8-1. The ODRA attributes this delay to MRCC. But, as noted above, the delay relating to the ductbank was not the ultimate cause for late completion of electrical work, because the tie-in to commercial power was not made until December 10, 1997, and that was due to factors attributable to the Government. Finding 62, above. By the same token, however, the delay to the commercial power tie-in was not the ultimate cause of the delay to electrical completion, since it was not until the next week – by or before December 18, 1997 – that MRCC had completed the remainder of the electrical work, including that associated with the 300 kva transformer and 500 MCM cable. *See* Findings 65 and 107, above. We have also found that the Region should have conducted a CAI for everything but the HVAC work on or before December 31, 1997. Finding 108, above.

122. Since the overall project completion would have been delayed by the electrical delays attributable to MRCC even in the absence of the aforesaid HVAC and tower painting delays, the electrical delays qualify as concurrent causes of overall project delay. Accordingly, the total number of days of overall delay that are solely attributable to the Region must begin on January 1, 1998. However, as noted above (Finding 50), in terms of completion of the tower painting, there was a certain amount of re-work that MRCC had to do, to correct for bubbling and peeling paint that it had improperly applied during adverse weather in the late Fall of 1997. Also, the time taken by MRCC far exceeded the days of painting estimated by its Project Manager, Mr. Ronholm. It may be that MRCC was careful at that stage about over-staffing the job, in light of the

precarious financial situation it was in. Tr., Resnik Testimony, pp. 388, 433. Nevertheless, because the ODRA perceives from its review of the MRCC time sheets that the tower painting was not vigorously pursued (using only one or at most two men and working less than full days in many instances over an extended period of time, with many days being skipped with no explanation in the record), it would not be reasonable to charge the Government with the full amount of delay through June 23, 1998. *See* DF No. 11, Tabs 11-47 through 11-52. The ODRA concludes that, assuming an appropriate level of effort, the tower painting should have been completed by MRCC by the end of May 1998 – not including the time that may have been taken correcting for the areas of bubbling and peeling paint. Therefore, the ODRA finds the Region to be responsible for a net total of 151 calendar days of delay to the overall project – for the period from January 1, 1998 through May 31, 1998, and that MRCC is responsible for the subsequent delay period – from June 1, 1998 through June 23, 1998.

The MRCC "Claim" Submission and ODRA Procedural History

123. Even before MRCC left the project, and without MRCC tendering a formal claim to the Contracting Officer, the parties mutually sought to resolve their differences with respect to the ASR-9 Project with the help of the ODRA. Pursuant to the Administrator's Delegation, the ODRA Director, with the parties' consent, designated William Sheehan, Esq., a Senior Procurement Attorney with the William J. Hughes Technical Center and an adjunct Dispute Resolution Officer ("DRO") with the ODRA, to serve as an alternative dispute resolution ("ADR") neutral to work with the parties in a "pre-dispute" process. Several small matters were able to be resolved through this process. During the course of such pre-dispute ADR, which lasted approximately 77 calendar days, MRCC provided Mr. Sheehan with an informal request for equitable adjustment ("REA"), by letter dated May 6, 1998. This REA was not filed at that time as a contract dispute with the ODRA.

124. It was agreed that, because the pre-dispute ADR process was being conducted under the auspices of the ODRA, the parties would not be prejudiced in terms of the contractual limitation for submitting contract disputes to the ODRA. Near the conclusion of the process, by letter to the parties dated May 8, 1998, Mr. Sheehan confirmed that the 1 year limitation period specified by the contract's Disputes clause would be "tolled" to account for the time devoted to the ADR effort, up until Mr. Sheehan's "last involvement." In this regard, Mr. Sheehan stated, the process had begun on March 12, 1998 and was expected to conclude on or before June 1, 1998.

125. Because of disputes relating to MRCC's completion of remaining punchlist items, the Contracting Officer, on July 6, 1998, issued a notice to MRCC, terminating the contract for alleged default. On August 20, 1998, MRCC appealed the default termination, by means of filing a contract dispute with the ODRA. Richard C. Walters, Esq., an ODRA DRO, was assigned to adjudicate the case, and he promptly established a schedule for discovery, briefing, and adjudication. Additionally, the ODRA Director, with the parties' agreement, assigned Mr. Sheehan once again as an ADR neutral to pursue ADR techniques with the parties. Through ADR, the parties identified the most important punchlist items, negotiated a completion schedule, and set their prompt completion as a basis for withdrawing the default termination. They further agreed that

remaining, disputed items – including those identified in the May 6, 1998 REA – would be addressed separately.

126. Thereafter, MRCC completed the work that was identified. On January 5, 1999, the contracting officer retracted the default termination, and MRCC withdrew its contract dispute, and, by Order dated January 7, 1999, ODRA dismissed the contract dispute.

127. On November 5, 1998, while the default termination contract dispute was still pending, MRCC filed with the ODRA a document dated November 4, 1998, entitled "Claim Regarding Contract Dispute With Federal Aviation Administration." This document incorporated by reference the May 6, 1998 REA, and sought recovery in the amount of $494,600.71, plus interest and attorneys' fees. At that time, in light of the ongoing ADR process, the ODRA did not docket the "Claim" as a separate contract dispute. However, the letter from MRCC's counsel dated January 5, 1999, which withdrew the contract dispute regarding the default termination, stated the following with respect to the "Claim":

> Please be advised that this withdrawal does not apply to the claim of Martin Resnik Construction Co., forwarded to William Sheehan, Esq. of the Office of Dispute Resolution on May 6, 1998, and confirmed by claim filed with your office on or about November 5, 1998.

Upon dismissal of the contract dispute regarding the since retracted default termination (which had been docketed as 98-ODRA-00089), the ODRA docketed the "Claim" as a separate contract dispute under a new ODRA Docket Number, 99-ODRA-00111. Thereafter, Mr. Walters was once again designated as the DRO for purposes of adjudication. Mr. Sheehan, again with the parties' consent, continued his earlier efforts to seek resolution via ADR. Subsequently, the role of ADR neutral was transferred, with the parties' agreement, to the ODRA's Marie A. Collins, Esq. Despite serious efforts on the part of both parties, ADR did not produce a settlement, and the matter had to be resolved through the ODRA's default adjudicative process.

128. Because the "Claim" filed on November 5, 1998 did not satisfy the ODRA's requirements pertaining to the content of contract disputes, the DRO, by letter dated January 7, 1999, directed that MRCC submit to the ODRA certain supplemental information. The supplemental submittal, also entitled "Claim Regarding Contract Dispute With Federal Aviation Administration," was filed with the ODRA on February 12, 1999. On March 1, 1999, the Region filed with the ODRA an Agency Position Statement with respect to the MRCC Claim. On March 16, 1999, MRCC filed with the ODRA a Reply to Agency Position Statement Regarding Contract Dispute With Federal Aviation Administration.

129. Pursuant to the ODRA's procedures, the parties compiled and submitted a Dispute File and Dispute File Supplement. Thereafter, MRCC filed both preliminary and final versions of a scheduling analysis by its consultant, Mr. Mark Johnson of Management Counseling Corporation (the above-mentioned "MCC Report"), the final version dated June 10, 1999 filed with the ODRA on June 11, 1999. Although the Region had been afforded an opportunity to provide a response to that report,

none was filed.

130. The Region had the Defense Contract Audit Agency ("DCAA") North County Branch Office in San Diego, California perform an audit of the MRCC Claim. The DCAA Audit Report, Trial Exhibit 12, was filed with the ODRA on August 3, 1999. Thereafter, at the DRO's request, a supplemental report, Trial Exhibit 13, was prepared and was filed with the ODRA on September 1, 1999. The supplemental report consisted of a chart detailing the backup for "fixed overhead" figures shown in the Audit Report.

131. On June 7, 1999, the Region filed with the ODRA a Motion to Dismiss the MRCC contract dispute, based on alleged untimeliness. Alternatively, the Region argued, MRCC's contract dispute failed to state a "cause of action". In a letter dated June 9, 1999, the DRO provided the parties with the ODRA's preliminary views concerning the motion. In that letter, the DRO noted that the contract required contract disputes to be filed with the ODRA within 1 year of their accrual and that, because of the understanding regarding "tolling" of the limitations period for the duration of the pre-dispute ADR effort, the limitations period had been extended to 1 year and 77 calendar days – the 77 days representing the period March 12, 1998, the date when Mr. Sheehan had identified as the commencement of the pre-dispute ADR effort, until May 28, 1998, the actual date of Mr. Sheehan's "last involvement" with that effort. The Region had argued in its motion that the November 4, 1998 "Claim" filing should not be considered – and that the ODRA, in fact, did not consider it -- as a "contract dispute," because it had not satisfied the guidelines of the ODRA in terms of content for such a filing. This argument was rejected by the ODRA:

> The ODRA believes that the motion misapprehends what the ODRA had said previously regarding the contract dispute submitted by the Martin Resnik Construction Company ("Resnik"). The premise of the motion is that the ODRA did not consider the November 4, 1998 "Claim Regarding Contract Dispute," filed by Resnik with our Office on November 5, 1998, to be a contract dispute. The letter of January 7, 1999 from the ODRA Director does not support this view. The ODRA docketed the November filing as a contract dispute and sought supplemental information from Resnik to comport with requirements for the content of contract disputes. Resnik was specifically asked to provide information establishing that the "contract dispute" was timely filed. In this regard, Mr. Palladino stated that Resnik would have to demonstrate "that the November 5, 1998 filing did not exceed time limitations applicable to each of the individual claim items." Underlying this request was the ODRA's finding that the November filing constituted a "contract dispute." The Director distinguished the November filing from the earlier May 6, 1998 submission that had been presented to the ODRA's Mr. Sheehan as ADR neutral during the course of "pre-dispute" ADR.
>
> The ODRA does not wish to invite a plethora of jurisdictional litigation such as had been engaged in over the definition of a "claim" under the Contract Disputes Act ("CDA"). The ODRA therefore will not be overly technical about what will qualify as a "contract dispute" filing under the AMS. Generally, so long as it is clear -- as was the case here -- that the contractor wishes the ODRA to process a filing as a "contract dispute," the ODRA will accept that a contract dispute has been filed and will proceed on that basis. If the filing is lacking in adequate detail, the contractor will be directed to file supplemental information -- as was done in this case. As the ODRA indicates in its Website Guide, if a contractor fails timely to adhere to ODRA directives and requests, the ODRA may determine to dismiss the matter for either lack of prosecution or failure to state a claim.

Because the contract dispute had been filed on November 5, 1998, the ODRA, in that June 9, 1998 letter, determined that the operative date for "accrual" would be August 21, 1997 – 1 year and 77 days prior to November 5, 1998. The ODRA noted that all of the various elements of claim presented by MRCC appeared to have accrued subsequent to that August 21, 1997 date. Accordingly, the ODRA advised it would not dismiss the contract dispute. It did advise that the parties would have the opportunity to provide further evidence at the hearing regarding this timeliness issue and that the matter would be considered as part of these Findings and Recommendations. No further evidence was provided, and the ODRA's review of the record indicates that the preliminary views as expressed in the June 9, 1999 letter were correct. As to the alternative argument regarding alleged failure to state a "cause of action," the ODRA, in its June 9, 1999 letter made the following observations:

> As to the alternative motion to dismiss for failure to state a cause of action, the sole basis for that motion is that the Resnik claim submittal allegedly fails to adhere to current ODRA guidance regarding the contents of contract disputes, as enunciated in the Website Guide. Although Resnik's February 1999 supplementary submission may not comply perfectly with the instructions provided regarding particularization of the various claim items, there seems to be sufficient information provided thus far by Resnik as to each item to survive an FRCP Rule 12-type motion to dismiss.

Here, too, there is no reason, based on the evidence in the record, to support the Region's position on this alternative ground. Indeed, upon its review of the record and as explained more fully below (*see* Discussion), the ODRA finds that MRCC has made out a valid "cause of action" in this case.

132. An evidentiary hearing on the record was conducted at the ODRA's offices in Washington, D.C. on September 22-24, 1999. During the course of the hearing, and prior to presenting its direct case, the Region again moved to dismiss the contract dispute, and the ODRA once again rejected this motion. Tr., pp. 541-543. Pursuant to the DRO's directions at the hearing, the parties made additional submissions to the ODRA. The Region provided the ODRA with a copy of the purchase order for the HVAC units and a March 19, 1998 e-mail message relating to the installation of antenna equipment at the ASR-9 tower. MRCC provided the ODRA with a check dated June 1, 1999 from The Connecticut Surety Company to Calvert-Jones, in the amount of $104,395.96, purportedly representing payment of a stipulated court judgment ("Consent Final Order") entered on December 4, 1998 against MRCC and the surety in a Miller Act lawsuit. *See* Reply to Agency Position Statement, Tab B. Also, MRCC transmitted at the ODRA's request what was to have been Mr. Johnson's working papers in support of his June 4, 1999 "Cost Corrections" document. What was submitted, however, was actually a revised claim statement entitled "Cost Corrections to the 20 May 1999 Deposition of Mark A. Johnson 4 June 1999, Revised 29 September 1999." The parties filed their final written submissions with the ODRA on November 3, 1999. Thereafter, by letter dated November 22, 1999, the ODRA notified the parties that it would not accept the revised claim statement and once again asked MRCC to provide the workpapers that related to the figures shown in Mr. Johnson's original June 4, 1999 "Cost Corrections" document that had been appended to the June 10, 1999 MCC Report. In addition, the ODRA asked MRCC to provide an affidavit from The Connecticut Surety Company explaining: (1) the relationship between The Connecticut Surety Company and the company previously identified as MRCC's surety, *i.e.*, the Star Insurance Company; (2) why it was that The Connecticut

Surety Company had paid the consent judgment to Calvert- Jones; and (3) why the amount of the check ($104,395.96) appeared in excess of the amount of the judgment, including interest and attorneys' fees.

133. By letter dated November 29, 1999, in response to the ODRA's request, counsel for MRCC furnished two declarations, one from Mr. Johnson and a second from Susan Curtiss, Esq., Claims Attorney for Funds Management, Inc., the claims division of The Connecticut Surety Company. The Declaration of Susan Curtiss explains that The Connecticut Surety Company had acquired the surety bond business of the Star Insurance Company and that the amount paid represented a "principal amount" due Calvert-Jones of $89,908.00, plus interest at 9% per year, $3,500 of attorneys' fees and $199 of court costs. From the November 29, 1999 letter and accompanying Declaration of Mark A. Johnson, it appears that Mr. Johnson had made an error in his June 4, 1999 presentation. More specifically, the error relates to certain total dollar figures shown on a backup spreadsheet, a file named "MRCCoh.123". Apparently, what was supposed to be listed on that spreadsheet were the cumulative totals for all field office support costs, which included not only the cost of office trialer rental, but also such things as portable toilet, site telephone and the like. Instead, the spreadsheet lists "Field Office Trialer Rental for Period" for two periods (06/09/97-12/31/97 and 01/01/98-06/23/98). The error was then compounded by showing for those two periods totals of $12,218.32 and $0.00, respectively. Although other data provided by Mr. Johnson indicates that the $0.00 total was accurate for the 1998 period for office trialer rental costs, the $12,218,32 was actually the total of two other figures for "Field Office Labor" appearing on the same backup spreadsheet -- $12,160.00 for the period 06/09/97-12/31/97 and $58.32 for the period 01/01/98-06/23/98. Mr. Johnson, in his September 29, 1999 "revised" version of the June 4, 1998 "Cost Corrections" document had merely used the same basic cost information, but corrected the totals. As a result, the daily field office cost rates he had derived were actually $510.70/day for 1997 and $170.98/day for 1998, as reflected on the "9/29/99" version of the backup spreadsheet. Thus, as a result of these error corrections, the claim total increased somewhat.

134. The MRCC "Claim" as presented by Mr. Johnson – with the above-described post-hearing corrections and exclusive of any interest on the amount ultimately found due – totals $ 349,914.19, as detailed below:

[Contract Balance]

Original contract	$ 976,772.00	
Bilateral C/O's 1-4 & 6	$ 40,301.67	
Unilateral C/O #5	$ 30,000.00	
Total Contract	$1,047,073.67	
Deduct Payments	$ *995,416.21*	
Contract Balance Due		**$ 51,657.46**

Unilateral C/O #5 Additional Costs

10/23/97 Estimate	$ 46,821.97	
Additional Costs, Calvert Jones	$ 54,181.90	
Temporary Air Conditioning	$ 3,518.44	
Unilateral C/O #5	$ (30,000.00)	
Balance Due		**$ 74,522.31**

Unilateral C/O #7 FAA Credits Taken

1) Hazard Material Testing	$	0.00
2) Manhole Deleted	$	3,112.00
3) Concrete Encased RGSC	$	0.00
4) Single vs. Dual Transformer	$	1,100.00
5) Panel SPA	$	600.00
6) Two Disconnected Switches	$	990.00
7) HV Cable	$	200.00
8) HV Cable Splice	$	120.00
9) Panel CPA Cables	$	200.00
10) Reduction in Cable Size	$	200.00
11) Reduced Number of Conductors	$	70.00
12) Metal Cleat	$	420.00
13) Remove Alarm Panel	$	500.00
14) Concrete Test	$	0.00
15) C/O #5 Overcharge	$	0.00
C/O #7 (U) Total	**$**	**(7,512.00)**

Delay Impact Costs

Home Office Overhead

1997

37 CD x $2,284/day = $ 84,508.00

1998

174 CD x $564/day = $ 98,092.00

Subtotal $ 182,600.00

Site Overhead

1997

37 CD x $510.70/day = $ 18,895.90

[1998]

174 CD x $170.98/day = $ 29,750.52

Subtotal $ 48,646.42

Total Impacts **$ 231,246.42**

GRAND TOTAL OF CLAIM (exclusive of interest) **$ 349,914.19**

135. Two items within the "Claim," the amount sought for the "Contract Balance Due" and the amount for "C/O #7 (U) total," were both resolved during the course of the hearing as a result of a negotiation session which the DRO urged the parties to conduct, as were additional credits asserted by the Region in its letter to MRCC of September 21, 1999, Trial Exhibit 1. *See* Tr., p. 387. As a result, the amount currently involved in the MRCC "Claim," exclusive of interest on the amount found due, is $305,769.73.

136. Although, in response to the ODRA's Pre-Hearing Status Conference Memorandum and Order, by letter of its counsel dated March 26, 1999, MRCC had stated its intent to pursue an earlier claim (included in the MRCC February 12, 1999 "Claim" submission) for interest on late payments of invoices, no evidence or testimony was presented at the hearing regarding that claim. Also, no mention of that interest claim was made by MRCC in its final written submission to the ODRA, the "Closing Brief." Because the MCC Report was to supersede the prior statements of claim quantum, the ODRA can only surmise that the claim item in question was dropped.

137. Essentially, there are only two items of claim remaining, the first in the amount of $74,522.31 for the additional direct costs of performing the HVAC work – over and above the $30,000.00 allowed under unilateral Modification No. 5, and the second in the amount of $231,246.42 for overall delay and associated impact costs. In terms of the delay/impact claim, MRCC points to the following six elements of alleged delay: (1) the HVAC change; (2) the GFM tower steel; (3) obtaining the commercial power feed; (4) delivery of GFM other than the tower steel; (5) power shutdowns due to interference with the ASR-7 radar; and (6) conducting the CAI.

138. As to the claim for delay and impact costs, for the reasons set forth above, the ODRA has found that the ASR-9 Project was delayed overall by a net of 151 calendar days, by reason of factors solely attributable to the Government. The delays associated with the HVAC change, tower steel, and the commercial power feed (the first 3 of the 6 elements of alleged delay within the MRCC "Claim") have been analyzed at length in the prior findings. The ODRA finds that MRCC failed to sustain its burden of proof with regard to the fourth delay element -- its allegations regarding delivery delay for GFM other than the tower steel. Indeed, the unrebutted testimony at the hearing was that MRCC had specifically requested the delivery of the GFM engine generator be deferred, because of a lack of storage facilities available on site. Tr., Silva Testimony, pp. 713-714. In terms of power shutdowns, the evidence presented by MRCC at the hearing regarding such shutdowns and, more specifically, their overall impact on project completion was scant. *See* Tr., Ronholm Testimony, pp. 129-133; Tr., Resnik Testimony, p. 426; Tr., Johnson Testimony, pp. 457-460; Trial Exhibit 7. MRCC failed to make any mention of such shutdowns in its final written submission. Moreover, the only shutdown highlighted in the "Claim" was the November 7, 1997 radar shutdown. As discussed above, that delay had impact on MRCC's work, only because of the earlier steel related delays and is considered as part of the overall delay associated with the steel. *See* Findings 44 and 47, above. Finally, regarding the allegations concerning delay in the scheduling and conduct of the CAI, we have found that the Region should have conducted the second interim CAI of January 14, 1998 two weeks earlier, and have factored that into the computation of concurrent contractor caused delay. *See* Findings 108, 121 and 122, above. In terms of the final CAI, conducted on April 28, 1998, the record is devoid of evidence to demonstrate that the Region caused further delay to the overall completion by reason of delaying that CAI. In any event, at that stage, MRCC had to remain on site to complete the tower painting, which the Region had directed be deferred. Accordingly, there was no additional impact to overall completion caused by the Region's actions with regard to that CAI.

"Claim" Quantum

The Delay Damage Claim

139. Mr. Johnson's computation of the daily home office overhead rates was based on a never before used variant of the so-called "Eichleay Formula." The standard Eichleay Formula is usually expressed in the following 3 steps:

Step One: Determine Home Office Overhead Allocable to the Contract

Contract Billings	x	Total Overhead for	=	Allocable
Total Billings for Contract Period		Contract Period		Overhead

Step Two: Determine The Daily Home Office Overhead Rate

Allocable Overhead	=	Daily Contract
Number of Actual Days of Contract Performance		Overhead Rate

Step Three: Determine Amount Recoverable

Daily Overhead Rate	x	Number of Days Delay*	=	Amount Due

* Days Attributable to Government

140. Whereas Step One of the above Eichleay Formula allocates home office overhead to the contract in question based on a "billings-to-billings" ratio – representing the ratio of billings on the contract in question divided by the contractor's total overall billings during the period the contract was being performed, Mr. Johnson added a weighting factor to his calculations, which took into account differences in the durations of MRCC's various projects for each of the two calendar years involved. Mr. Johnson's reasons for doing this were provided during his testimony:

BY MR. [WHEELOCK]:

Q Now, with respect to the delay impact costs that are at the bottom of that page, you have stated amount of $182,600 for home office overhead. How did you calculate that number?

A Basically I went through a process of, there are not accounting records, separate pots to the level that I would normally like to see them. And so, I used what I had, which was the -- The contractor's '97 and '98 balance sheet, which indicates the, I am sorry, the income statement, which indicates the income. It indicates the cost of sales, or the directs, but it doesn't do it by specific project. So, what I did was, I followed the Eichleay approach, with some modifications. I took the total contract billings for the year, for example, in 1997, on all of his projects, to get a total for that year. I did the same thing for '98, the total contract billings for that particular year. And then when I was looking at the, his organization, the way it is set up, does a lot of small jobs, short jobs. And they are one, two, and three months and some are longer, Washington National was longer, a couple of others were four months and so on. But, it is obvious that the overhead is much more relative to how long the job lasts as opposed to the longer it goes, the more overhead it is going to use.

So, I took the Eichleay, but I also weighted the cost of each project by the time, by the number of

months that it actually ran, so that the allocation of overhead costs would be weighted by not only the dollars, because if you had a project that took three months and was $100,000.00 or if you had a project that took, $100,000.00 project that took six months, obviously, they would not take the same amount of overhead in order to administer those jobs. So, I weighted it by the number of months that the projects ran. And followed the Eichleay formula each year to come up with what the hours per day would be and then allocate it based on the delay.

MR. WALTERS: Well, first of all I would like to have a copy of your worksheets. Second of all, the Eichleay formula is not weighted by number of months, so you are not really using the Eichleay formula. That, the Eichleay formula is strictly allocated based upon billing dollars, dollar to dollar, with the presumption that, that overhead dollars will follow billing dollars. There is some sort of a relationship between billings, volume of work, billings and overhead expended for work.

THE WITNESS: And I would agree with that approach on projects, because normally the projects are a year or more long, so that formula works good. When you are dealing with ones and twos and three months projects, I don't think it is as good as a yardstick. And that is why I factored it with the, weighting it with the time.

BY MR. [WHEELOCK]:

Q Now, Mr. Johnson, did you attempt to calculate using a traditional Eichleay calculation on this project?

MR. WALTERS: No, he didn't.

THE WITNESS: Well, I followed the formula with the exception I weighted the dollars with the time. It is time and dollar weighted as opposed to just dollars.

MR. WALTERS: Right. Let me ask you this. Where is this methodology, where has it ever been used or approved?

THE WITNESS: Well, I don't know that it has. It was obvious to me when I looked at the projects each year, and I look at the multiple ones and one and a half months and four and a half months and so on, the different length of time that the projects are actually taking, that the overhead to be allocated in relation to what it would take to administer the job, should be weighted by time as well as by dollars.

BY MR. [WHEELOCK]:

Q And my question was actually, Mr. Johnson, have you, subsequent to doing this report, gone back and done an Eichleay calculation using the Eichleay formula to either validate, to validate the numbers that you have come up with in this report for home office overhead?

A Not, and drop out the time weighting, you mean?

Q Yes.

A I think that at some meeting we did that, but I don't know if I have those figures with me. I don't know that I have that paperwork with me.

MR. WALTERS: Let's talk about the rationale for your deviation from the Eichleay formula, again.

If the great bulk of Mr. Resnik's work is in the short term projects, why would there have to be a weighting to begin with? Now, if you are saying that, are you saying that more overhead is consumed in a short term project than a long term project?

THE WITNESS: I am saying just the reverse. That if you have a $100,000.00 project that is done in three months, as an example, as opposed to $100,000.00 project that is done in six months, that you will use more home office overhead in the six month project than you will in the three. That is really the basis for my approach. And to my knowledge, I haven't read it anywhere in court case or anything, but my feeling and I feel strongly, that that more closely represents the allocation of overhead in this particular case.

MR. WALTERS: Well, that is a pretty interesting theory and I will certainly have to think about that. I haven't ever seen it before and I have seen all kinds of variations of the Eichleay formula.

THE WITNESS: Well, I haven't either, but I haven't run into an individual like the Resnik Construction where he had so many of them that were such short durations like they are. But, normally when you run into these types of things, they are on large multi million dollar projects that go for a year or two years, three years, whatever, and it is not really, it is not really a problem. When I looked at the situation here, I just felt that was a more adequate way of allocating the overhead.

Tr., Johnson Testimony, pp. 499-504.

141. Using this methodology, Mr. Johnson calculated that the ASR-9 Project should be allocated a 62.43% share of total home office overhead costs for calendar year 1997 and a 21.41% share of total home office overhead costs for calendar year 1998. Trial Exhibit 8. On a non-time weighted basis, using the figures developed by Mr. Johnson, the Eichleay's billings-to-billings ratio would yield much lower percentages: 42.7% for 1997 and 10.4% for 1998. *Id.* In terms of the "Contract Period," because MRCC's books did not provide sufficient information to determine the project's share of home office overhead for the period from the notice to proceed (June 9, 1997) until MRCC's final day on the project (June 23, 1998), he developed his percentages for each calendar year involved. In terms of "Total Overhead for the Contract Period," Mr. Johnson added to the pool of booked overhead costs two types of imputed cost. First, he added "Mr. Resnik's salary" (taken in the form of owner's "draws") of $176,743 for 1997 and $129,833 for 1998. Second, he added imputed office rental ("Office equivalent rents") for the space used in the first floor of Mr. Resnik's home in the City of Del Mar, California, as the MRCC home office. For both years, $56,184 was added, which figure purportedly was based on a somewhat below the average rental for the location involved ($3.00/ square foot/month x 1294 SF). MCC Report, Cost Corrections to the

20 May 1999 Deposition of Mark A. Johnson, page 6. Mr. Johnson also included in the 1997 home office overhead pool two items of expense listed separately on MRCC's profit and loss statement for 1998 as "prior year expenses," namely, $5,000 in "bonus – prior year" and $39,732 in "insurance from audit," which latter amount Mr. Johnson explained related to an audit of workmen's compensation insurance for 1997. Tr., Johnson Testimony, p. 513.

142. Mr. Johnson developed the $2,284.00/day daily project home office overhead rate for Calendar Year 1997 by taking the total of $749,891 in Operating Expenses for the entirety of calendar year 1997 (modifying the amount shown on MRCC's financial statement for that year by adding in the above items of "insurance from audit," "bonus – prior year," imputed home office rental cost, and Mr. Resnik's draws), multiplying that figure by 62.43%, representing the allocable share for the ASR-9 project derived based on Johnson's weighted "billings-to-billings" methodology, and dividing the product by 205 calendar days – representing the period from June 9, 1997 (the date of Notice to Proceed on the ASR-9 Project) until December 31, 1997, the end of the calendar year. Even assuming both the applicability of the Eichleay Formula here and the propriety of Mr. Johnson's unique "billings-to-billings" weighting methodology as well as the propriety of the aforesaid adjustments to the Operating Expenses pool (*see* Discussion, below), Mr. Johnson's computation of a daily rate for 1997 would be seriously flawed, because he divides a full year's (*i.e.,* 365 calendar days') worth of Operating Expenses by the aforesaid 205 calendar day period. This, in the ODRA's view, obviously produces an improperly inflated daily rate under any circumstances. Mr. Johnson appears to have made this same error in calculating his daily home office overhead rate of $564/day for calendar year 1998 as well.

143. In terms of jobsite overhead costs, Mr. Johnson acknowledges that at least "some" of the jobsite costs – both site

overhead and site direct costs – had been included in the Operating Expenses pool and allocated using the above-described variant of the Eichleay Formula. In this regard, Trial Exhibit 8 states for the calendar year 1997 expenses:

> ***Total 1997 Operating Expenses – includes a mix of office overhead, site overhead (some) and some site directs.*** As an alternative to completely re-entering MRCC accounting system the operating costs are reallocated based upon contract billing for 97 (per the Eichleay Formula), weighted by the number of months the projects were in progress in 97. This provides a ratio that is time and dollar sensitive.

Trial Exhibit 8 (emphasis added). During his testimony at the hearing, Mr. Resnik presented handwritten spreadsheets that MRCC maintained via "hand-posting" to record job specific costs. These spreadsheets had been provided earlier to the DCAA auditor in connection with his audit. Mr. Resnik explained that MRCC has a single checking account that it uses for all purposes for all projects. (Note: Although the payroll checks shown on the spreadsheets are in a different series of check numbers, he said, they are from the same account.) The spreadsheets for the ASR-9 Project contained the check number and name of payee, plus columns for such indirect cost items as "Office Trialer" and "Office Labor," as well as columns for obviously direct cost items, such as "Excavate Trenching", "Pile Driving", etc. DF No. 13, Tab 13-5; Tr., Resnik Testimony, pp. 221-222. The figures Mr. Johnson developed for 1997 and 1998 "Site Overhead" appear from his working papers (provided to the ODRA after the hearing – *see* Findings 132 and 133, above) to have been derived from his review of "invoices". Unfortunately, MRCC did not provide the ODRA with copies of those "invoices". The dates and costs listed by Mr. Johnson do not appear in the aforesaid MRCC spreadsheets that Mr. Resnik presented at the hearing and that had been furnished to the auditor in connection with the DCAA audit report. *See* DF No. 11, Tab 11-5, Spreadsheets. For example, the amounts shown by Mr. Johnson for "Office Supplies" for "01/10/98" and "01/20/98" -- $19.67 and $122.87, respectively – are nowhere to be found on those spreadsheets. Moreover, there is a substantial question as to whether many, if not the great majority of the cost categories listed by Mr. Johnson for jobsite overhead are not already included within the Operating Expenses used to compute extended home office overhead costs under the Eichleay Formula. The DCAA auditor, Mr. Jaime Lugue, raised that question during his testimony. Tr., Lugue Testimony, p. 877. For instance, it is not at all certain that the figures listed by Mr. Johnson for "Site Telephone" are not already incorporated in the Telephone expense subcategory of Operating Expenses. The costs claimed for "Travel" and "Lodging" might already be in Operating Expenses as well. *See* Trial Exhibit 13. MRCC did not provide further testimony or evidence to resolve the auditor's question, and, upon reflection, the ODRA considers it a valid question.

144. What does not seem to be duplicated within any Operating Expenses subcategory are the payroll costs for Messrs. Craig Ronholm, Clint Tibbs and Pat Harrison claimed as extended "Field Supervision." Those costs do appear on the MRCC spreadsheets. However, at least for Messrs. Tibbs and Harrison, the time cards presented by MRCC indicate that, even after they took over responsibilities as Superintendent for Mr. Ronholm beginning in January 1998, their time was not solely devoted to supervision. Indeed, much of it was spent performing activities that could only be considered "direct labor," such as operating equipment, working on and painting the tower, seeding the site, etc. *See* DF No. 11, Tabs 11-31 through 11-52.

Based on our review of the MRCC spreadsheets and time cards, and applying an appropriate allocation of hours using the work descriptions on the time cards, the most we can recommend as extended "Field Supervision" during the 151 day period, January 1, 1998 through May 31, 1998, would be $7,956.22. That amount was derived as follows:

Person	Date(s)	Supervisory Work Description	Hours	Pay Rate	Amount
C. Ronholm	1/1/98 thru 1/6/98				$ 750.00
C. Ronholm	1/7/98 thru 1/13/98				$1,500.00
C. Ronholm	1/14/98 thru 1/18/98				$1,050.00
C. Tibbs	2/12/98	"Office Work"	8	$29.16	$ 233.28
C. Tibbs	2/24/98	"Escorted Calvert-Jones"	4	$29.16	$ 116.64
C. Tibbs	2/25/98	"Sign Off Punchlist Items"	4	$29.16	$ 116.64
C. Tibbs	3/3/98	"Redid Floor Plan"	6	$29.16	$ 174.96
P. Harrison	2/27/98	"Escorted McDonnell"	2	$20.00	$ 40.00
C. Tibbs	3/5/98	"Escorted Calvert-Jones"	8	$29.16	$ 233.28
P. Harrison	3/17/98	"Escorted Calvert-Jones"	5	$20.00	$ 100.00
C. Tibbs	3/16/98	"Escorted Calvert-Jones"	4	$29.16	$ 116.64
C. Tibbs	3/17/98	"Escorted Calvert-Jones" and "signed off punchlist "	8	$29.16	$ 233.28
P. Harrison	3/19/98	"Escorted Calvert-Jones"	8	$20.00	$ 160.00
P. Harrison	3/20/98	"Supervise BAS"	8	$20.00	$ 160.00

Person	Date(s)	Supervisory Work Description	Hours	Pay Rate	Amount
P. Harrison	3/25/98	"Escorted Calvert-Jones"	2	$20.00	$ 40.00
P. Harrison	3/26/98	"Escorted Calvert-Jones"	3	$20.00	$ 60.00

P. Harrison	3/27/98	"Escorted Calvert-Jones"	4	$20.00	$ 80.00
P. Harrison	3/30/98	"Escorted Calvert-Jones"	3	$20.00	$ 60.00
P. Harrison	3/31/98	"Escorted Calvert-Jones"	1	$20.00	$ 20.00
C. Tibbs	4/2/98	"Received existing punchlist. Walked thru with Alex."	4	$29.16	$ 116.64
C. Tibbs	4/6/98	"Escorted BAS"	2	$29.16	$ 58.32
C. Tibbs	4/7/98	"Escorted BAS"	4	$29.16	$ 116.64
C. Tibbs	4/10/98	"Waited for Alex"	2	$29.16	$ 58.32
C. Tibbs	4/13/98	Went thru manuels (sic)"	4	$29.16	$ 116.64
C. Tibbs	4/16/98	"Went over punchlist – did submittals"	8	$29.16	$ 233.28
C. Tibbs	4/20/98	Escorted Hertz" "Worked on one line drawing"	8	$29.16	$ 233.28

Person	Date(s)	Supervisory Work Description	Hours	Pay Rate	Amount
P. Harrison	4/17/98	"Waited for Calvert-Jones"	2	$20.00	$ 40.00
C. Tibbs	4/21/98	"Escorted Tom Todd" "Inspected Tower"	5	$29.16	$ 145.80
C. Tibbs	4/22/98	"Faxes/Material"	2	$29.16	$ 58.32
C. Tibbs	4/26/98	"Phone Calls" "Paperwork"	2	$29.16	$ 58.32
C. Tibbs	4/27/98	"HVAC Inspection" "Escort BAS/CJ"	6	$29.16	$ 174.96

C. Tibbs	4/30/98	"Paperwork"	4	$29.16	$ 116.64
C. Tibbs	5/1/98	"Paperwork"	4	$29.16	$ 116.64
C. Tibbs	5/5/98	"Check Prices for Lift Sprayer/Crimper"	4	$29.16	$ 116.64
C. Tibbs	5/6/98	"Check Lock & Barrel Thru Bill Robertson"	5	$29.16	$ 145.80
C. Tibbs	5/21/98	"Checked on Lift"	5½	$29.16	$ 160.38
C. Tibbs	5/22/98	"Went to work – couldn't get in – no Alex."	2	$29.16	$ 58.32
C. Tibbs	5/24/98	"Went thru with BAS/CalvertJones on Control Work"	5	$29.16	$ 145.80
P. Harrison	5/28/98	"Escorted Calvert-Jones/BAS for Inspection"	6	$20.00	$ 120.00
				TOTAL	**$7,956.22**

145. Mr. Lugue provided nothing whatsoever for jobsite overhead, on the assumption that it was all included in the Operating Expenses pool along with MRCC's home office overhead Trial Exhibit 12; Tr., Lugue Testimony, p. 881. He also used a different approach for home office overhead cost recovery. Mr. Lugue applied the standard Eichleay computations, but then, based on guidance from DCAA headquarters as provided at a 1999 seminar in Baltimore, Maryland – *see* Trial Exhibit 15 – reduced the "Total Overhead for the Contract Period" by factoring out cost items that he deemed not to be "fixed" in nature. *See* Trial Exhibits 12 and 13. He also eliminated from the home office overhead pool costs that would have been "unallowable" under the Federal Acquisition Regulation ("FAR"), specifically, $2,737.98 in "bank charges" and $73,207.93 in "interest" expense. At the hearing, Mr. Lugue acknowledged that FAA contracts under the Acquisition Management System ("AMS") are not subject to the FAR. Tr., Lugue Testimony, pp. 876-877. Further, although the FAA's own "Cost Principles" under the AMS (FAA AMS Toolbox Guidance T3.3.2) call for the disallowance of interest expense (*Id.*, ¶6p), the AMS requires that the Cost Principles be invoked by a contract clause. AMS §3.3.2.2; *see also* FAA Pricing Manual, Section 13, Cost Principles, ¶13.3, Applicability to FAA Contracting: "[T]he CO will incorporate the cost principles and procedures in contracts with commercial organizations." In this regard, Mr. Lugue indicated that, in preparing for his testimony, he had inquired of the Contracting Officer and was advised by her that no clause in the instant contract incorporated or invoked the

FAA Cost Principles. Tr., Lugue Testimony, pp. 878-879.

146. In the DCAA Audit Report for the MRCC Claim, Mr. Lugue, at the request of the Region and based on the Region's "technical evaluation", indicated "0" days of entitlement and, on that basis, "questioned" the full amount of MRCC's claim for delay damages. The Audit Report shows a "Daily Contract Fixed Overhead Rate" of $237/day. Trial Exhibit 12, page 10. Mr. Lugue conceded that, if the ODRA were to find 211 days of delay due to Government causes, as claimed by MRCC, then, approximately $50,000 would be due for unabsorbed overhead under his Eichleay computations. Tr., Lugue Testimony, p. 860.

147. The auditor's $237/day rate – which, as indicated above, factors out so-called "variable" costs – does not include any amounts for either imputed home office rental or Mr. Resnik's "draw." Also, the $237/day rate does not appear to take into account the $44,731,82 of "prior year expenses" ("Insurance from audit" and "Bonus – prior year") listed separately on the Calendar Year 1998 MRCC financial statement. *See* Finding 141, above; DF No. 13, Tab 13-1. Unlike Mr. Johnson, the auditor did attempt to apportion the overhead figures for the two calendar years before dividing those figures by the numbers of days in the contract performance period. He divided what he had determined to be the "fixed" overhead for Calendar Year 1997 ($247,736) by 12 months and then multiplied the dividend ($20,645) by 6 months, purportedly to reflect the period in 1997 when MRCC was on the ASR-9 Project. For Calendar 1998, he divided the "fixed" overhead figure ($114,739) again by 12 months, and multiplied the dividend ($9,562) by 7 months, purportedly the amount of time spent by MRCC on the project in Calendar Year 1998. The total of the two products, $190,804, he then multiplied by the figures for "Contract Billings/Total Billings for Contract Period" ($1,074,074/$2,147,414) – an allocation percentage of approximately 47.4% for the entire contract period developed per the standard Eichleay Formula (without time weighting per Mr. Johnson's variation) – and divided the result, $90,370, by the total number of days spent on the project, 381 days, to arrive at $237/day. *See* Trial Exhibits 12 and 13.

148. In terms of Mr. Resnik's "draw," Mr. Johnson's June 4, 1999 "Cost Corrections" document states: "Based upon a CPA prepared balance sheets (sic), Martin Resnik drew $175,743 in 1997 and $129,833.47 in 1998." MCC Report, "Cost Corrections to the 20 May 1999 Deposition of Mark A. Johnson," page 6. (It should be noted that Mr. Johnson uses a slightly different figure in his computations, $176,743. *Id.* This inconsistency was not corrected in the September 29, 1999 revision of Mr. Johnson's materials that had been provided by MRCC.) Mr. Resnik did not testify to having taken "draws" in both years. Even if Mr. Kimes, MRCC's accountant is a CPA, the financial statements provided for 1997 and 1998 admittedly were not certified financial statements, Tr., Resnik Testimony, p. 225. Moreover, the statements do not indicate that Mr. Resnik took draws in the amounts stated by Mr. Johnson. Neither "$175,743" nor "$176,743" appears on the 1997 statement, DF No. 13, Tab 13-1, and although the figure "$129,833.47" does appear on financial statement for 1998, it appears in the "Equity" section opposite the account title

"Owner's drawing account". DF No. 13, Tab 13-2. Accordingly, there is no evidence in the record that Mr. Resnik actually drew anything in either year.

Additional HVAC Costs

149. Regarding MRCC's claim for additional performance costs for the HVAC modification, the Audit Report questions the amount sought in its entirety. Trial Exhibit 12. This was done due to a lack of cost documentation in the form of "invoices and cancelled checks". Tr., Lugue Testimony, p. 861; Trial Exhibit 12, pp. 2, 7. The claim for HVAC costs appears to be based in part on the amount paid to Calvert-Jones by MRCC's surety. Mr. Resnik indicated that MRCC is liable to reimburse the surety for the amount paid. Tr., Resnik Testimony, p. 388. In addition, MRCC is claiming $3,518.00 as reimbursement for costs incurred in renting temporary air conditioning units. The Region has not contested this claim other than to say that MRCC has failed to provide documentation of the costs expended. Mr. Resnik testified that he had put the cost on his credit card. Tr., Resnik Testimony, pp.318-319. The remainder of the HVAC claim is based on estimated costs taken from MRCC's October 23, 1997 revised estimate for the work under Impact Statement No. 4 (*see* Finding 83, above) rather than actual costs. *See* Tr., p. 858. In particular, MRCC is claiming the $12,609.00 estimated for electrical work under the HVAC modification, the $16,346.00 estimated for site work done by its subcontractor, McDonnell, and another $3,213.00 estimated for site work MRCC performed on its own. Although the Region did not take specific issue with two of these figures, for the McDonnell estimate, Mr. Scozzafava, during his testimony made a point of explaining why the amount claimed was unreasonable. According to Mr. Scozzafava, the proper and "conservative" figure – one that he stated that he verified from two sources – should have been approximately $9,000.00. This is the amount he included in the estimate used to justify the $30,000.00 unilateral decision for Modification No. 5. Tr., Scozzafava Testimony, pp. 595, 599-600; Trial Exhibit 9. Mr. Scozzafava testified further that he regarded his $30,000.00 estimate to have been a reasonable one. Tr., Scozzafava Testimony, p. 606. Mr. Scozzafava's testimony was not rebutted by MRCC at or even after the hearing. However, the portion of the Scozzafava estimate that pertains to the new mechanical (HVAC) work appears not to include several work elements detailed by Calvert-Jones in its October 23, 1997 letter. More specifically, the Government mechanical/controls estimate, exclusive of prime contractor profit for MRCC, was in the total amount of $39,644.18 and consisted of the following:

Mechanical		
Testing & Balancing	$ 3,500.00	
Ductwork Modifications	15,232.50	
Duct Lining	4,200.00	
Duct Supports	3,385.00	
Subtotal	$ 26,317.50	
Subcontractor Overhead @ 10%		2,631.75
Subtotal	$ 28,949.25	

Subcontractor Profit @ 10%	2,894.30	
Subtotal	$31,844.18	
Louver/Damper (including overhead & profit)		1,800.00
Total Mechanical	$33,644.18	
Controls (including overhead & profit)		6,000.00
Total Mechanical/Controls	$39,644.18	

See Trial Exhibit 9, pages 2 and 6. In contrast, the Calvert-Jones estimate of October 23, 1997 contained, *inter alia*, 3 more louver/dampers, an exhaust fan, a unit heater with a thermostat, piping, a starter, 11 air outlets/dampers, 2 man bars, etc.

:

Base Price

Three (3) Louvers/Dampers	$10,257.00
One (1) Exhaust Fan	$ 4,036.00
One (1) Unit Heater with Thermostat	$ 980.00
Identification	$ 438.00
Piping	$ 321.00
Starter	$ 668.00
Sleeves	$ 823.00
Temperature Controls	$12,678.00
Air Balance	$ 1,563.00
Rigging	$ 1,806.00
Labor	$ 3,527.00
Total Base Price	$37,097.00

Additional Work

One (1) Louver/Damper	$ 3,418.00
Louver Quick Ship	$ 3,612.00
Ductwork	$21,083.00
Eleven (11) Air Outlets/Dampers	$ 1,463.00
Two (2) Man Bars	$ 1,176.00
Temperature Controls	$ 5,000.00
Labor	$ 8,596.00
Total Additional Work	$44,348.00

Total Overall Mechanical/Controls $81,445.00

DF No. 2, Tab 2-32, Calvert-Jones letter dated October 23, 1997. The $81,445.00 figure coincides with the original price of Calvert-Jones' Subcontract ($82,439.00) less $994.00, the amount of deductive Change Order No. 1 to that Subcontract. *See* Trial Exhibit 4.

150. As part of MRCC's October 23, 1997 revised estimate and as part of the present HVAC claim, MRCC allowed a credit to the Region of $36,741.00 for the originally specified HVAC work (associated with the furnishing and installation of the 8 Bard wall units). Although Mr. Scozzafava had included a slightly higher credit ($39,346.70) within the estimate he had prepared (*see* Trial Exhibit 9), he did not testify specifically about the credit, and the Region did not produce any other evidence or testimony to demonstrate how or why it was entitled to a greater credit than the one offered by MRCC. In terms of prime contractor profit, the Scozzafava estimate allowed 10%. *Id.* Such a markup was consistent with the provisions of the contract. *See* DF No. 1, Contract, SCR-21 at page 204. MRCC's October 23, 1997 estimate calls for 10% prime contractor profit as well. DF No.2, Tab 2-32.

I. Discussion

A. Additional HVAC Costs

In terms of MRCC's claim for additional HVAC related costs, the ODRA recommends that MRCC be provided an equitable adjustment, over and above the amount previously allowed under unilateral Modification No. 5, of $56,047.60. That amount was computed as shown below, and the details of its derivation are explained in the following paragraphs.

Calvert-Jones Subcontract, including all change orders		$ 84,908.00
Settlement of Claims for Ductwork Modifications and Additional Dampers		5,000.00
Electrical Work (per Trial Exhibit 9 Estimate)		7,300.00
Site Work Subcontract (per Trial Exhibit 9 Estimate)		9,000.00
Site Work – MRCC (per Trial Exhibit 9 Estimate)		1,900.00
Temporary HVAC Costs	3,518.00	
Subtotal	$111,626.00	
Plus: MRCC Profit @ 10%	11,162.60	
Subtotal	$122,788.60	
Less: Credit for HVAC Work Deleted	(36,741.00)	
Subtotal	$ 86,047.60	
Less: Amount Allowed Under Unilateral Mod. 5		(30,000.00)
Amount Due for Additional HVAC Costs		$ 56,047.60

The Calvert-Jones Subcontract amount of $84,908.00 was an actual historical cost for MRCC. The FAA's Cost Principles (*see* Toolbox Guidance T3.3.2, ¶5(a)(3), Determining Reasonableness) provides: "No presumption of reasonableness should be attached to the incurrence of costs by a contractor. If an initial review of the facts results in a challenge of a specific cost by the CO or the CO's representative, the burden of proof is upon the contractor to establish that such cost is reasonable." Nevertheless, as noted previously, the AMS contemplates that the Cost Principles are to be incorporated into FAA contracts by specific contract provision, and the provision incorporating the FAA Cost Principles was not inserted into the ASR-9 contract. Finding 145, above. Moreover, the ODRA concludes, based upon its review of the documentary record and observation of the witnesses at the hearing, that Calvert-Jones was not overpaid for the HVAC modification work it and BAS performed. There certainly is doubt concerning the completeness of the Government's estimate used to justify its $30,000 unilateral contract modification. *See* Finding 149, above. Accordingly, the ODRA accepts the subcontract amount of $84,908.00 as reasonable.

MRCC did not explain why the "principal amount" of the consent judgment obtained by Calvert-Jones was $5,000.00 higher – *i.e.*, $89,908.00. However, the ODRA presumes that the amount constitutes a settlement of the claims for

additional dampers requested by the Region's mechanical engineers during the course of their shop drawing review process, *see* Finding 96, above, as well as the claim for the ductwork modifications Calvert-Jones was forced to conform the exterior ductwork to the changed supply/input aperture configurations on the different model HVAC units. The Region has conceded that the former claim is worth $1,925. *Id.* As to the second claim, Calvert-Jones had originally proposed to do the work for $17,073.10 (DF No. 2, Tab2-62, Proposed Change Order No. 3, dated January 7, 1998), and then offered to do the work for only $8,710, eliminating any labor costs and markups for overhead and profit (Trial Exhibit 4, p. 6 – proposed Change Order No. 3, Revised dated January 21, 1998). Although the Region rejected this claim, arguing that earlier shop drawing submittal would have averted any additional costs associated with the unit model change, the ODRA does not accept that argument. *See* Findings 87 and 118. The $5,000.00 overall settlement that appears to have been reached is, in our view, completely justified, and the ODRA recommends including that amount as part of the equitable adjustment here.

There is, however, no legal basis for recommending that the Government assume responsibility for the interest, attorneys' fees, and court costs that MRCC reimbursed to Calvert-Jones via its surety. It is not clear why the surety could not have advanced the payment at an earlier stage, so that interest, attorneys' fees, and litigation and associated court costs could have been avoided entirely. Here, the only interest that may be paid MRCC will be based upon MRCC's own claim submission and on the provision of the ASR-9 contract that allows for the accrual of interest on the amount found due, at rates established by the Secretary of the Treasury. DF No. 1, Contract ¶3.9.1-1, Contract Disputes, page 231. As to attorneys' fees, such costs have been held recoverable only pursuant to the Equal Access to Justice Act, 5 U.S.C. §504. *Equal Access to Justice Act Application of Weather Experts, Inc. Pursuant to FAA Order ODR 97-25*, 96-ODRA-00013 EAJA.

As to the three estimated amounts for electrical and site work related to the HVAC change, it is well established that a contractor bears the burden of proving the reasonableness of claimed costs. *E.g*., *H.E. Johnson Co., Inc.,* ASBCA No. 50861, 98-2 BCA ¶29,868. In this case, MRCC fell far short of sustaining its burden, having presented no testimony or other evidence to justify the estimate figures it proposed in October 1997. There was no proof as to any amount actually expended. Accordingly, the ODRA recommends that the Government estimates for those three items be used here.

Although MRCC did not provide an invoice or cancelled check in support of its claim for temporary HVAC, it did present Mr. Resnik's testimony regarding having paid for that cost with his credit card. The Region did not challenge that MRCC provided the temporary HVAC. The units were provided at the request of Northrup Grumman, because, in the absence of the permanent HVAC units, Northrup Grumman needed air conditioning in order to perform testing of equipment it was installing for the Government. By letter to the Contracting Officer dated February 20, 1998, Mr. Resnik documented a conversation with Mr. Silva regarding the need for these units as well as the fact that he would be

paying for their rental on his credit card. DF No. 2, Tab 2-69. Even though the Contracting Officer did not formally direct MRCC in this regard, there was no response to this letter or any other evidence in the record to indicate that she intended that MRCC not provide those units. Also, the Region did not contest that the units were provided and that it had the benefit of those units. The delay in completion of the HVAC work was, as we have found above, attributable to the Government. Accordingly, even in the absence of a formal change order here, the circumstances gave rise to an implied in fact contract, and the additional cost of procuring these temporary air conditioning units would be properly chargeable to the Government. *See Parking Company of America, Inc*., GSBCA No. 7654, 87-2 BCA ¶19,823. The Region has not challenged the $3,518 amount, and the ODRA finds it to be reasonable.

The application of a 10% markup for MRCC profit, as noted above, is in accordance with the contract terms. Finding 150, above; DF No. 1, Contract, SCR-21 at page 204. The ODRA is not recommending the inclusion of a markup for MRCC overhead, to avoid duplication of recovery from application of the Eichleay Formula. *See* Section III.B, below.

Just as a contractor must bear the burden of proving its claim, so too the Government bears the burden of proving a Government claim. *Maintenance Engineers, Inc.*, VABCA Nos. 5350, 5457, 99-2 BCA ¶30,513. In this case, the Region had the burden of establishing the reasonableness of the credit ("downward adjustment") it is claiming for the deleted HVAC work. *Environmental Data Consultants, Inc. v. General Services Administration*, GSBCA Nos. 13244, 13331, 13534, 96-2 BCA ¶28,614. That burden was not sustained, since the Region offered no evidence to support the figure it advances. Accordingly, the ODRA is recommending use of the contractor's proposed credit of $36,741.00.

A. **The Delay Damage Claim**

When a "claim being asserted by a contractor is based upon alleged government-caused delay, the contractor has the burden of proving the extent of the delay, that the delay was proximately caused by government action, and that the delay harmed the contractor." *Wilner v. United States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994) (*en banc*). In *M. Raina Associates, Inc*., ASBCA No. 50486, 99-1 BCA ¶30,180, the Armed Services Board of Contract Appeals stated at 149,319:

> To be entitled to extended period costs . . . [the contractor] has the burden of proving that the claimed compensable delay was solely due to government-responsible causes, was not concurrent with contractor-responsible or excusable delay, and delayed the overall completion of the contract.

Here, as indicated by the above findings of fact, MRCC has sustained its burden of proving that the Government was solely responsible for delaying overall project completion by a total of 151 calendar days. MRCC seeks compensation

for such delay in the form of extended jobsite costs as well as for unabsorbed/extended home office overhead.

Extended Jobsite Costs

Extended jobsite costs, sometimes known as extended field overhead costs, have long been recognized as an allowable item of contractor recovery, where Government delay factors extend the duration of a project. *E.g.*, *U.A. Anderson Construction Company*, ASBCA No. 48087, 99-1 BCA ¶30,347. In the present case, the ODRA finds that, absent the various Government-caused delay factors, MRCC would have avoided expending $7,956.22 in field supervision costs during the first five months of 1998. Finding 144, above. Accordingly, we are recommending that MRCC be reimbursed for those costs. As we note previously, the ODRA is not recommending any further compensation for extended jobsite costs, because MRCC has failed to demonstrate that the other jobsite costs it has claimed are not already included in the Operating Expenses pool it is using for purposes of computing extended home office overhead recovery. Finding 143, above.

Unabsorbed/Extended Home Office Overhead

A contractor's home office overhead costs, such as depreciation, utilities expenses, insurance, home office salaries and the like are not nomally charged directly to any one project or contract. They are necessary for the performance of all contracts and for the success of the contractor's overall business. Accordingly, such costs are ordinarily charged and recovered or "absorbed" by allocating these costs to individual projects as indirect overhead costs. In many cases, a contractor will recover such costs by applying an historical home office overhead markup to some direct cost base, such as direct labor costs or total direct costs, when bidding projects or proposing prices for contract change orders. Government caused delays and suspensions of work can extend the duration of a contract and can result in an underabsorption of home office overhead. *See, generally,* Walters, *Capital Electric – Eichleay's Swan Song?*, n. 11, *supra*; Kent and Walters, *Recovering Indirect Costs,* Construction Briefings No. 80-6 (Federal Publications, Inc. November 1980), 1 CBC 245.

In *Eichleay, supra,* the Armed Services Board of Contract Appeals observed that home office overhead costs continue during periods of suspension or partial suspension and are not absorbed, that a contractor may not find itself able to take on alternative work to absorb such costs, and that there is no "exact" method for computing an adjustment to allow the contractor to recover its unabsorbed home office costs:

> The problem out of which this dispute arises is how to allocate home office expenses incurred during a period of suspension of work. These expenses continue during temporary or partial suspensions, and it was in this case not practical for the contractor to undertake the performance of other work which

> might absorb them. There is no exact method to determine the amount of such expenses to be allocated to any particular contract or part of a contract. It has been held a number of times that it is not necessary to prove a specific amount, but only to determine a fair allocation for the purpose of compensating a contractor for delay by the Government. *Fred R. Comb Co. v. United States*, 103 C. Cls. 174, 184 (1945); *B. W. Construction Co. v. United States*, 104 C. Cls. 608, 643-644 (1945), *cert. den*. 327 U. S. 785; *Irwin & Leighton v. United States*, 101 C. Cls., 455, 481 (1944); *Brand Investment Co. v. United States*, 102 C. Cls. 40, 58 Fed. Supp. 749 (1944), *cert. den*. 324 U. S. 850.

The Board approved of the previously described home office cost allocation formula – which thereafter became known as the "Eichleay Formula" – as "a realistic method of allocation of continuing home office expenses." The Eichleay Formula has been the most commonly used allocation formula over the past four decades, especially for Government caused construction contract delay situations, and the United States Court of Appeals for the Federal Circuit has ruled the Eichleay Formula to be the exclusive method for allocating and recovering such costs. *Wickham Contracting Co., Inc. v. Dennis J. Fischer*, 12 F.3d 1574 (Fed. Cir. 1994). The ODRA considers the Eichleay Formula a reasonable approach to providing a contractor with appropriate relief for unabsorbed/extended home office overhead costs in cases where such additional costs have been created by acts or omissions of the FAA.

In recent years, the Federal Circuit has refined its definition of the prerequisites to be imposed on contractors before permitting the use of the Eichleay Formula for unabsorbed overhead recovery. First, there must be some form of Government work suspension, where the contractor is placed on "standby" pending direction to proceed with the suspended work. The suspension does not have to be a complete suspension of all activities on a project. *Altmayer v. Johnson*, 79 F.3d 1129 (Fed. Cir. 1996)("There is no requirement that a contract be suspended before a contractor is entitled to recover under *Eichleay*.") The *Eichleay* case itself involved only partial work suspensions. There, the Board noted "performance of the contract was at no time completely suspended . . ." *Eichleay, supra* at 5117, and the Government had pointed out: "The suspension applied to only about 50 per cent of the work, and direct costs were continuously incurred on unaffected work." *Id.* Even where a contractor continues to perform some work, "the fact remains that the overall project income [is] spread over an additional [time] period; hence, less of that income [is] allocable [or available to absorb] home office overhead costs." *Altmayer, supra*, 79 F.3d at 1134. In *R. G. Beer Corp*, EngBCA No. 4885, 86-3 BCA ¶19,012, where the U.S. Army Corps of Engineers Board of Contract Appeals observed:

> We also reject the Government's related argument that *Eichleay* properly should be applied only in cases of total work stoppage. . . . [T]o the extent only a partial suspension does occur, the problem of proof is simply one of factually determining the number of days of delay. *Eichleay* is only applied in the case of partial suspensions after reduction of the total number of days in the partial suspension period, as appropriate to reflect progress made toward job completion.

Id. 96,028. *See, generally,* Palladino, *New Causes of Delay and Delay Damages* (American Bar Association, Section of Public Contract Law Seminar, 1992).

Second, the suspension must be of uncertain or indefinite duration, such that the contractor must remain on "standby" and ready to resume work performance. *Altmayer, supra.* Third, during the "standby" period, it must be "impracticable" (not necessarily impossible) for the contractor to take on additional replacement work to absorb its home office costs. *West v. All State Boiler, Inc.*, 146 F.3d 1368 (Fed. Cir. 1998). Once a contractor establishes that a Government suspension caused it to be on "standby" for a "period of uncertain duration" and that it could "at any time be required to return to work immediately," a presumption of "impracticability" arises regarding the contractor's ability to take on "additional work which could have otherwise absorbed its home office expenses." *Id.* at 1373. The Federal Circuit has indicated that its use of the term "additional work" in this context means that, to overcome the presumption of "impracticality," the Government must demonstrate that the contractor was able to take on an "alternative or substitutional contract" to absorb those expenses. In this regard, the Court rejected the notion that merely demonstrating that the contractor was able to perform any additional work during the suspension period would be sufficient to preclude recovery of unabsorbed overhead costs under *Eichleay*. *Id.* at 1377, n.2.

In *Melka Marine, Inc. v. United States,* 1999 WL 607162 (Fed. Cir. August 12, 1999), the Court also indicated that the focus should be on whether it was impractical for the contractor to obtain "sufficient replacement work," noting that a contractor's "ability to take on *any* other work during the delay period" would not be a proper basis for denying *Eichleay* recovery. *Id.* at *5 (emphasis supplied). *See, generally,* McCaleb, *Melka Marine: The Federal Circuit's Effort to Unmuddy The Eichleay Waters*, The Government Contractor, Vol. 41, No. 34 (Federal Publications, Inc. September 1, 1999).

In the present case, with regard to the suspension of tower painting, as we have found, although the suspension may not initially have been "indefinite," inasmuch as the work in question was to resume in the "Spring" of 1998, the suspension was later rendered indefinite, by reason of the Government postponing the work until its own completion of other tower related work. *See* Finding 115, above. Completion of the HVAC work under Modification No. 5 likewise was effectively suspended while MRCC accommodated the unanticipated change in model unit numbers and while the Region finalized its design of the HVAC controls. *See* Findings 66 through 100, above. The impact of these concurrent Government-caused delays, as we have stated, was to extend the project completion date by 151 calendar days. *See* Finding 122. Although MRCC was able to perform punchlist and other minor work during the period of delay, it was essentially on "standby" awaiting Government direction to proceed with the balance of the HVAC and tower painting work.

The Government has not shown where it would have been practicable for MRCC to take on substitute or replacement work during that period, so as to absorb its home office overhead costs. Indeed, as Mr. Resnik testified, MRCC was at the maximum limit of its $1 million bonding capacity with this contract, and until the contract was completed, although

MRCC was permitted to take on some smaller projects, an "alternative or substitutional contract" could not be considered. *See West v. All State Boiler, Inc., supra.* at 1373. Tr., Resnik Testimony, pp. 392-393, 427-428. Thus, all of the prerequisites for the application of the *Eichleay* formula as specified by the Federal Circuit have been satisfied in this case.

The real question is what the appropriate *Eichleay* recovery should be here. In that regard, the ODRA does not accept the computations offered by MRCC's consultant, Mr. Johnson. First, as noted in the above findings, the daily home office rate Mr. Johnson has developed is improperly inflated, because he has divided annual allocated overhead figures (365 days' worth of overhead) by 205 days for 1997 and 174 days for 1998. Second, the ODRA finds no precedent for and does not accept Mr. Johnson's method of home office overhead allocation that gives added weight to projects with longer durations. In addition to such a method having never been endorsed by another forum previously, the rationale for the approach is subject to serious question. Although in many instances, a longer project may require more home office involvement than one of shorter duration, that is not always the case.

Furthermore, weighting each project by its actual duration to establish allocated overhead could result in a double recovery for the extended period produced by Government-caused delay factors. Also, Mr. Johnson's belief that somehow projects shorter than 1 year ought be treated differently is not persuasive. Using Mr. Johnson's approach, a contractor having projects with durations in the 12 to 18 month range would not weight projects by duration while another with projects with durations in the 6 to 12 month range would. In this way, whereas the second contractor would allocate twice the home office overhead for a 12 month, $100,000, contract that it allocates for a 6 month, $100,000, contract, the first would allocate no more overhead to an 18 month, $100,000, contract than it does to a 12 month, $100,000, contract.

As the Board in *Eichleay* observed, "[t]here is no exact method to determine the amount of [home office] expenses to be allocated to any particular contract or part of a contract." Like the Board in Eichleay, the ODRA will use "the same formula" that has been used with approval for many decades rather than to experiment with formulas that may not yield better or fairer results.

One other issue that bears discussion is that MRCC's accounting system is not set up for the standard *Eichleay* computation. As we have noted above, the Operating Expenses pool may include items other than home office overhead costs. More particularly, jobsite overhead type costs may be mixed into the Operating Expense accounts for such things as telephone, travel, lodging and other expenses. It is for that reason that we are not recommending separate compensation for those expenses as part of extended jobsite costs. Because the *Eichleay* Formula provides a reasonable means of allocating the costs in the Operating Expense pool to individual contracts such as the ASR-9 Project, however, applying the formula to the expenses in the Operating Expense pool should theoretically produce

approximately the same result as if those jobsite costs had been directly charged to separate jobsite overhead accounts.

Mr. Lugue, in his Supplemental Audit Report (Trial Exhibit 13), listed the MRCC Operating Expenses for both Calendar Years 1997 and 1998 in the following chart and recommended the elimination of two items of purportedly "unallowable" costs as well as a number of costs he deemed "variable" – leaving only so-called "fixed" home office costs for his *Eichleay* calculation. The "Total Operating Expenses" figures for 1997 and 1998 are those appearing in the Income Statements provided by MRCC's accountant (DF No. 13, Tabs 13-1 and 13-2).

Operating Expenses		MRCC Claimed			Audit Recommended		
		1997	1998	TOTAL	Unallowable	Variable	Fixed
501	Advertising	$225.56		$225.56		$225.56	
502	Publications	50.00		50.00		50.00	
503	Bank Charges	1,692.85	1,045.31	2,737.96	$2,737.96		
505	Blue Prints	2,605.36	284.87	2,870.23		2,870.23	
515	Bonds	31,900.00	23,253.83	55,153.83		55,153.83	
520	Depreciation	12,498.72	12,498.72	24,997.44			24,997.44
525	Engineering	10,363.86		10,363.86		10,363.86	
540	Inspection Fees	1,830.50	1,485.11	3,315.61		3,315.61	
545	Insurance	57,333.92	31,872.50	89,206.42			89,206.42
550	Interest	24,900.23	48,307.70	73,207.93	73,207.93		
555	Licenses	81.75	520.13	601.88			601.88
556	Lodging	30,588.08	4,870.79	35,458.87		35,458.87	
557	Meals	1,673.65	2,168.09	3,842.74		3,842.74	
558	Badging/Security Checks	653.50	50.00	703.50		703.50	
560	Office	23,220.57	2,219.73	25,440.30			25,440.30
562	ADP	2,476.40	959.70	3,436.10		3,436.10	
570	Professional Fees	9,199.29	6,954.24	16,153.53			16,153.53
575	Dumpster/Dump Fees	(2,777.56)	2,240.47	(537.09)			2,240.47
580	Small Tools	1,381.71	156.87	1,538.88		1,538.88	

581	Shipping	(2,755.06)	182.02	(2,573.04)		(2,573.04)	
585	Taxes	53,850.37	29,758.48	83,609.85		83,609.85	
588	Telephone	31,912.43	17,744.35	49,656.78			49,656.78
590	Travel	21,028.68	1,029.40	22,058.09		22,058.09	
591	Parking	62.12	116.00	168.12		168.12	
592	Car Rental	17,241.69	2,788.86	20,030.65		20,030.65	
595	Utilities	5,058,55	831.70	5,890.25			5,890.25
600	Vehicle Expense	4,748.35	2,658.21	7,305.56		7,305.56	
601	5th Wheel Expense	863.00	840.00	1,503.00		1,503.00	
602	Gas	12,103.52	8,864.24	20,967.78		20,967.78	
605	Wages, office	108,431.71	37,498.19	145,926.90			145,926.90
	Bonus		500.00	500.00		500.00	

Operating Expenses	MRCC Claimed			Audit Recommended		
	1997	1998	TOTAL	Unallowable	Variable	Fixed
Equipment Rental		12,687.48	12,687.48		12,687.48	
Payroll Fees		1,415.03	1,415.03			1,415.03
Permits		988.56	988.56			988.56
Legal Fees		11,242.60	11,242.60		11,242.60	
Airfare		3,,564.03	3,564.03		3,564.03	
Vehicle Repair		766.91	766.91		766.91	
Total Operating Expenses	$472.231.55	$272,144.30	$744,376.86	**$76,945.89**	**$308,689.56**	**$382,517.56**

In terms of the "fixed" vs. "variable" distinction, there are a number of anomalies in the auditor's chart. For example, there is no apparent reason for treating "Professional Fees" as "fixed" and "Legal Fees" and "Engineering" as "variable". Similarly, there is no apparent reason for treating "Office" expense as "fixed" and "ADP" as "variable". There is no legal precedent for the auditor's position, notwithstanding its endorsement by his agency, the DCAA. *See* Trial Exhibit 15. The distinction was considered and rejected twice by the Corps of Engineers Board of Contract Appeals. *R..G. Beer Corporation,* EngBCA No. 4885, 86-3 BCA ¶19,012; *A.A. Beiro Construction Co., Inc.,*

EngBCA No. 5103, 91-3 BCA ¶24,149. The Department of Veterans Affairs Board of Contract Appeals, in *Salt City Contractors, LTD,* VACAB No. 1362, 80-2 BCA ¶14,713, explained the flaw in the DCAA's approach:

> The *Eichleay* formula, in determining an average daily rate of home office expense, uses the total home office expense incurred during the period of performance. This necessarily includes some costs which may vary during such period. Even those costs which the Government defines as "fixed" costs may vary. For example, the rent for office space may increase or decrease, and the utility bills certainly vary, but these are, without question, allocable overhead cost items. It is generally accepted that the *Eichleay* formula is used primarily for construction contracts, where there is an assumption that almost all overhead is fixed rather than variable n2, but this is not to say that overhead costs which do not remain constant are to be excluded solely on this basis. The Government contends that any costs for which the contractor has an option as to how much, if anything, it will incur, are to be excluded. Such a position is in direct contradiction to the cost principles contained in Part 1-15 of the Federal Procurement Regulations (FPR), which are applicable to this contract in accordance with Clause 20 of the General Provisions n3. For example, the Government would reject such costs as dues and subscriptions, or advertising which, with certain qualifications, are allowable under the FPR cost principles.

As can be seen from the above chart, Mr. Lugue did reject dues, subscriptions, and advertising. During his testimony, he was asked about any case precedent for this DCAA position, and he cited to the Federal Circuit decision (*i.e., Wickham, supra).* *See* Tr., Lugue Testimony, p. 884. We have reviewed that decision and find no mention whatsoever of either fixed or variable home office overhead. Further, the ODRA cannot find any other case precedent that endorses this approach. Under these circumstances, the ODRA does not accept the auditor's recommendations regarding the elimination of "variable" overhead from the standard *Eichleay* computation.

On the other hand, as noted above, Mr. Johnson conceded that MRCC's Operating Expense pool did include some direct project costs. Finding 143, above; Trial Exhibit 8. It would not be appropriate to compute *Eichleay* recovery for unabsorbed/extended home office overhead using direct costs. Upon review of the listing of accounts comprising the Operating Expense pool, the ODRA finds two accounts to be direct project costs. These are "Bonds" and "Equipment Rental." Surety bond costs are ordinarily direct charged to each project. Unlike other forms of insurance that may benefit the contractor's business as a whole, surety bond costs are incurred and paid based on the value of particular contracts or the value of additional work under a contract change order. Frequently, additional bonding costs are recovered as a separate markup percentage in computing an equitable adjustment. *E.g., U.A. Anderson Construction Company, supra.* Here, the ODRA does not accept the "Bonds" account as a proper element of home office overhead cost for an *Eichleay* compatutation and will thus eliminate the amounts listed for 1997 and 1998 from the Operating Expense pool prior to calculating unabsorbed/extended home office overhead.

It is not clear from the record what equipment rental was covered by the Equipment Rental account. Conceivably, some rental costs for the rental of home office equipment could be included. However, the financial statements provided do not show any separate account for project related construction equipment rental, and there is a separate

"Office" account in MRCC's Operating Expense pool. Accordingly, it appears possible, if not probable, that "Equipment Rental" was strictly for project-related construction equipment rental costs. In any event, MRCC did not present evidence that establishes "Equipment Rental" as anything other than direct project related costs. *See* Tr., Lugue Testimony, pp. 871-872. Thus, the amounts listed for "Equipment Rental" should also be eliminated from the Operating Expense pool for purposes of any *Eichleay* Formula damage computation.

To be added to the Operating Expense pool for calendar year 1997 are the two "prior year's" cost items noted on the financial statement for 1998, namely, "Insurance From Audit" in the amount of $39,731.82, and the "Bonus" of $5,000.00. *See* Finding 141, above. According to the financial statement, these amounts were paid by MRCC, and the Region offered no challenge to their inclusion.

As to the so-called "unallowable" items that the auditor identified, there is nothing in either the FAR or FAA Cost Principles that bans recoverability of "bank charges." Moreover, there is no evidence in the record that the "bank charges" listed for MRCC had anything to do with interest payments for monies borrowed or other financing charges. Accordingly, the ODRA would not eliminate the "bank charges" amounts as "unallowable," even if the FAA Cost Principles were to apply here. As to the amounts shown for "interest" expense, as noted above, the FAA Cost Principles (and the provision making "interest" expense "unallowable" – FAA AMS Toolbox Guidance T3.3.2, ¶6p) were never incorporated into MRCC's contract. Finding 145, above. Further, there was no evidence presented by the Region that MRCC's incurrence of this cost did not benefit its overall business or that the amounts incurred were unreasonable. Hence, there is no basis for the ODRA to eliminate that expense in this instance from the Operating Expense pool as an "unallowable" home office overhead cost. *See, generally,* Walters, *The Matter of Interest in Federal Government Contracting*, ABA Public Contract Law Journal, Vol. 14 No. 1 (1983).

The final issue to be considered involves imputed costs. As to the amounts claimed for "draws" by Mr. Resnik as MRCC's sole proprietor, MRCC has failed to sustain its burden of proving either: (1) the reasonableness of the amounts claimed; or (2) that Mr. Resnik actually took those draws. *See* Finding 148, above. *Compare Sage Construction Company,* ASBCA No. 34284, 90-1 BCA ¶22,576 (president's salary paid by closely held corporation was shown to be reasonable). Imputed costs such as imputed salary may be allowed upon appropriate proof, but such proof was absent in this case. *See, generally, Aerojet-General Corporation,* ASBCA No. 17171, 74-2 BCA ¶10,863, 1974 ASBCA LEXIS 388 at pp. 45-46; *but cf. Able Contracting Company*, ASBCA No. 27411, 85-2 BCA 18017 ("The entire amount claimed by Biele [president of the contractor] for his personal services is not a proper [home office] overhead cost, even if otherwise allowable, because he spent a substantial amount of his time working as job superintendent and electrician in direct performance of this contract . . ."). Accordingly, because of a failure of proof, the ODRA does not recommend that any amounts be allowed for "draws". On the other hand, MRCC provided unrebutted evidence regarding its maintenance of a home office as well of the reasonableness of the

imputed rental value it is claiming for the home office. *See* Tr., Johnson Testimony, pp. 514-516; MCC Report, "Cost Corrections" document, p. 6. Recovery of imputed rental value is proper under these circumstances, *Sage, supra* (recovery of imputed truck rental value permitted); *Aerojet, supra.*, and the ODRA recommends allowance of the full amount claimed by MRCC for such imputed cost.

Taking all this into account, the appropriate recovery for unabsorbed/extended home office overhead based on the record in the present case would be $83,697.79. This amount was derived as follows:

CY 1997 Operating Expenses		$472,231.55	
(per MRCC financial statement – DF No. 13, Tab 13-1)			
Adjustments:			
Plus:			
Insurance From Audit	$39,731.82		
Bonus	5,000.00		
Imputed Home Office Rental	56,184.00		
Subtotal	$ 100,915.82		
Minus:			
Bonds	(31,900.00)		
Net Adjustments		69,015.82	
CY 1997 Home Office Overhead			$541,247.37
Portion of CY 1997 for ASR-9 Project:			
6/9/97 – 12/31/97: 206 C.D.			
206 C.D./365 C.D. =		x 56.4%	
Home Office Overhead for 1997 During ASR-9 Contract Period			$305,263.51
CY 1998 Operating Expenses		$272,144.30	
(per MRCC financial statement – DF No. 13, Tab 13-2)			
Adjustments:			
Plus:			
Imputed Home Office Rental	$56,184.00		
Minus:			
Bonds	$23,283.83		
Equipment Rental	12,687.48		
Subtotal	(35,971.31)		
Net Adjustments		20,212.69	
CY 1998 Home Office Overhead			$292,356.99
Portion of CY 1998 for ASR-9 Project:			
1/1/98 – 6/23/98: 174 C.D.			
174 C.D./365 C.D. =		x 47.7%	
Home Office Overhead for 1998 During ASR-9 Contract Period			$139,454.28
Total Home Office Overhead for Contract Period			$444,717.79

Eichleay Formula Computation

Step One:

Contract Billings / Total Billings for Contract Period	x	Total Home Office Overhead for Contract Period	=	Allocable Overhead
$1,017,074 / $2,147,414	x	$444,717.79	=	$210,630.48

Step Two:

Allocable Overhead / Number of Actual Days of Contract Performance	=	Daily Contract Overhead Rate
$210,630.48 / 380 C.D.	=	$554.29/C.D.

Step Three:

Daily Overhead Rate	x	Number of Days Delay*	=	Amount Due
$554.29/CD	x	151 CD	=	$83,697.79

*Days Attributable to Government

The Region's Claim to Liquidated Damages

It has long been recognized that the Government may not recover liquidated damages for delays in contract completion which it has caused or which result from concurrent Government and contractor delay factors. In this regard, the Armed Services Board of Contract Appeals has stated:

> [W]here Government action causes the delay in contractor performance, liquidated damages are not assessable. In a related vein, when concurrent delay exists, that is delay caused by both Government and contractor fault, the contractor is entitled to an extension in performance time, but not delay damages. *Commerce International Company, Inc. v. United States,* 167 Ct. Cl. 529, 338 F.2d 81 (1964). Accord, *John McShain, Inc. v. United States,* 188 Ct. Cl. 830, 835, 412 F.2d 1281, 1284-85 (1969); *Broome Construction, Inc. v. United States,* 203 Ct. Cl. 521, 528, 492 F.2d 829, 833 (1974).

Elias Pamfilis Painting Company, ASBCA No. 30113, 86-2 BCA ¶18,913, 1986 ASBCA LEXIS 773 at *30-*31. Here, the ODRA has found that the delay in contract completion was caused by concurrent Government and contractor causes during the period November 25, 1997 through December 31, 1997 (*see* Findings 121-122, above) and that the Government is solely responsible for the delay period of 151 calendar days from January 1, 1998 through

May 31, 1998. Finding 122, above. It would therefore be improper to assess liquidated damages against MRCC for that period. For the period June 1, 1998 through June 23, 1998, however, the ODRA has found delay in completion solely attributable to the contractor. *See* Finding 122, above. Accordingly, the ODRA recommends that MRCC be assessed 23 calendar days of liquidated damages -- a total of $11,500 – for that period. Because the Region did not have full access to the ASR-9 tower during that period, the ODRA does not find that MRCC had achieved "substantial completion," such that the assessment of liquidated damages would be inappropriate. *See Kinetic Builders, Inc.*, ASBCA Nos. 51012, 51611, 99-2 BCA ¶30,450.

Summary

MRCC is thus entitled to a contract time extension of 188 calendar days, from November 25, 1997 through May 31, 1998, and to a net equitable contract adjustment of $136,201.61, derived as follows:

Additional Adjustment for HVAC Costs		$ 56,047.60
Extended Jobsite Costs (Field Supervision)		7,956.22
Unabsorbed/Extended Home Office Overhead		83,697.79
Subtotal	$147,701.61	
Less: Liquidated Damages (23 CD @ $500/CD)		(11,500.00)
Net Equitable Adjustment Due*		$136,201.61

*Plus interest at the rates prescribed by the Secretary of the Treasury, to be computed from November 5, 1998, the date of MRCC's submittal of the "Claim Regarding Contract Dispute With Federal Aviation Administration," Finding 127, above, until the date of payment to MRCC.

I. Conclusion

For the foregoing reasons, the ODRA finds MRCC entitled to a contract time extension of 188 calendar days, from November 25, 1997 through and including May 31, 1998, and to a net equitable adjustment of the contract price in the amount of $136,201.61, plus interest at the rates prescribed by the Secretary of the Treasury from November 5, 1998 until the date of payment to MRCC. Accordingly, the ODRA recommends that the Administrator order the Region to provide relief to MRCC consistent with these findings and recommendations.

_____/s/_____
Richard C. Walters
Dispute Resolution Officer

FAA Office of Dispute Resolution for Acquisition

APPROVED:

_____/s/_____
Anthony N. Palladino
Associate Chief Counsel and Director
FAA Office of Dispute Resolution for Acquisition