

MEMORANDUM OF AGREEMENT

BETWEEN

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,  
GEORGE C. MARSHALL SPACE FLIGHT CENTER

AND

THE DEPARTMENT OF THE ARMY,  
THE U.S. ARMY CORPS OF ENGINEERS,  
U.S. ARMY ENGINEER DIVISION, HUNTSVILLE,  
U.S. ARMY ENGINEER DIVISION, SOUTH ATLANTIC,  
U.S. ARMY ENGINEER DISTRICT, MOBILE

1. PURPOSE:

The purpose of this Memorandum of Agreement (MOA) is to establish relationships and procedures under which the Department of the Army through the U.S. Army Corps of Engineers (USACE) will provide engineering and construction support to the National Aeronautics and Space Administration (NASA), George C. Marshall Space Flight Center (MSFC) for the Advanced Solid Rocket Motor (ASRM) program. USACE support will be provided by Huntsville Division (CEHND), South Atlantic Division (CESAD) and Mobile District (CESAM).

2. AUTHORITY:

This agreement is made pursuant to The Economy in Government Act (Title 31 USC 1535), Title 10 USC 3036, and The National Aeronautics and Space Act (Title 42 USC 2473).

3. REFERENCES:

a. USACE Regulation, ER 10-1-22, Organizations and Functions: U.S. Army Engineer Division, Huntsville, dated 17 July 1987.

b. Cooperative Agreement Between the National Aeronautics and Space Administration and the Department of the Army, Corps of Engineers on Construction, dated 17 March 1971.

c. Memo, J. A. Bethay, MSFC, to Col. Charles T. Myers III, CEHND, dated 7 December 1988, regarding CEHND Support to the ASRM Program.

d. Memo, LTG H. J. Hatch, USACE, dated 30 January 1989, subject: NASA ASRM - Yellow Creek. (Attachment 1)

4. BACKGROUND:

One of the continuous mission assignments for the U.S. Army Engineer Division, Huntsville (CEHND) is to provide support to and serve as the single point-of-contact between NASA and USACE for industrial type activities (ref. 3.a.). Work by CEHND for NASA in past years has been performed in design and construction management of major facility projects in support of NASA's Apollo and Space Shuttle Programs at MSFC and at the John C. Stennis Space Center (SSC). CESAD and CESAM have also provided significant engineering and construction support to NASA at MSFC, SSC, and the Kennedy Space Center (KSC).

5. SCOPE:

This MOA addresses responsibilities and relationships between USACE and MSFC for project management, engineering, and construction management in support of the ASRM program. As an integral part of the ASRM project NASA plans to acquire production, test, and support facilities at four sites: SSC, KSC, Michoud Assembly Facility, and the former Tennessee Valley Authority Plant at Yellow Creek, Mississippi (13 miles North of Iuka, MS). The ASRM Facilities Project will be managed by a NASA and USACE team. USACE will provide support in the following areas:

a. Project management, technical review, and engineering support for the ASRM facility designs for all locations and for the facility construction and equipment installation at Yellow Creek.

b. On-site construction management at the primary ASRM program site at the former Tennessee Valley Authority Plant at Yellow Creek, Mississippi.

e. Other engineering and construction tasks as mutually agreed.

6. RESPONSIBILITIES:

a. MSFC will:

(1) Identify all tasks within the mission to be performed by USACE.

(2) Provide all funding required to accomplish the tasks assigned to USACE. All funding arrangements will be made through the normal MSFC contracting and procurement process.

(3) Establish a point-of-contact within the MSFC Facilities Office for all matters relating to task assignments.

(4) Delegate appropriate contractual authority to designated CEHND and CESAM employees for facility design and construction activities. Delegation will be through the MSFC Procurement Office.

(5) Provide Contracting Officer services through the MSFC Procurement Office to include contract awards, notices to proceed, and contract changes.

(6) Be responsible for all process equipment design and acquisition and the systems integration of that equipment into the facility design.

(7) Provide review and comments on selected contractor transmittals.

(8) Participate in prefinal, final, and activation inspections.

(9) Accept facility on the behalf of the Government.

b. CEHND will:

(1) Serve as the primary point-of-contact with MSFC and life cycle project manager for USACE support, to include coordination as required with HQUSACE, CESAD, CESAM, and other USACE agencies. Establish a point-of-contact (primary and alternate) for all matters relating to assigned tasks.

(2) Provide resource management for all funds received from MSFC, to include transfer of funds to other USACE agencies.

(3) Execute technical direction to ASRM prime contractor in accordance with authorities delegated in writing by the Contracting Officer.

(4) Review for technical adequacy and quality, facility designs and major changes to designs during construction that are prepared by the ASRM prime contractor.

(5) Review contractor progress reports and payment estimates for facility design activities.

c. CESAD will:

(1) Provide normal supervision to CESAM.

(2) Provide periodic quality assurance inspections of CESAM.

d. CESAM will:

(1) Provide on-site construction management at the Yellow Creek ASRM site.

(2) Participate in the Preconstruction Conference and other project meetings.

(3) Provide a daily on-site quality assurance program, which will consist of on site inspections, district overview inspections and verification testing by commercial labs.

(4) Monitor contractor enforcement of safety and labor requirements.

(5) Monitor construction progress and provide MSFC with periodic reports.

(6) Inform MSFC site manager of any forthcoming field changes and assist in gathering any field data needed in the redesign.

(7) Verify quantities, stored materials, and work in place for progress payments to the contractor.

(8) Perform constructibility, biddability reviews.

(9) Monitor construction phase submittals and transmit results to contractor.

(10) Participate in warranty inspections and assist MSFC with warranty disputes where the dispute involves a field construction issue.

(11) Review and monitor contractor management plans, pay estimates, change orders, and subcontracts for the work authorization documents system.

(12) Review, monitor and provide advice for the construction contracting procedures.


(13) Provide resource management and reporting for all funds received from MSFC.

7. EFFECTIVE DATE, REVIEWS, AND AMENDMENTS:

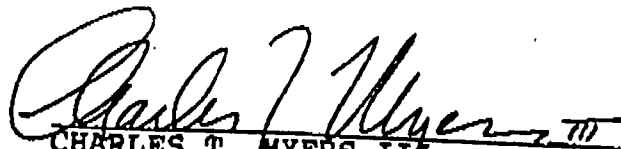
a. This memorandum is effective upon the date of the last signature by authorized representatives of MSFC and the Corps of Engineers. It will remain in effect until superseded or terminated by mutual agreement, in writing.

b. Any party wishing to terminate the memorandum will submit a written termination request to the other parties at least 30 days prior to termination. The request will include proposed termination milestones.


c. This MOA may be amended upon consent by all parties. Such amendments will be in writing and will be signed by the parties to this agreement.

  
J. A. BETHAY  
Executive Assistant to the Director  
Marshall Space Flight Center  
National Aeronautics and Space  
Administration

4/21/89  
DATE

  
CHARLES T. MYERS III  
Colonel, Corps of Engineers  
Commanding, Huntsville  
Division

4/24/89  
DATE

  
R. M. BUNKER  
Major General, United States Army  
Commanding, South Atlantic Division

5/1/89  
DATE



DEPARTMENT OF THE ARMY  
HUNTSVILLE DIVISION, CORPS OF ENGINEERS  
P.O. BOX 1600  
HUNTSVILLE, ALABAMA 35807-4301

*Burns DB*  
*Mathews*  
*Rpe*

REPLY TO  
ATTENTION OF

CEHND-ED-PM (415-10f)

19 June 1989

MEMORANDUM FOR HQUSACE, ATTN: CEEC

SUBJECT: Memorandum of Agreement (MOA) Between National Aeronautics and Space Administration (NASA) and U.S. Army Corps of Engineers for Advanced Solid Rocket Motor (ASRM) Program

1. We have enclosed the MOA between NASA, George C. Marshal Space Flight Center, and U.S. Army Corps of Engineers, U.S. Army Engineer Division, Huntsville, U.S. Army Engineer Division, South Atlantic, and U.S. Army Engineer District, Mobile. The MOA outlines the division of responsibilities necessary to perform design and construction management support services for the Advanced Solid Rocket Motor program facilities to be built at Yellow Creek, MS.
2. This agreement offers the U.S. Army Corps of Engineers the opportunity to prove the concept of partnering with another agency for projects involving innovative, technical, and managerial methods to accomplish challenging projects. Successful completion of the project will enhance the reputation of the U.S. Army Corps of Engineers. Employees and organizations of the U.S. Army Corps of Engineers will benefit from the growth and developmental opportunities offered by this project.
3. Huntsville Division is pleased to be joined by the South Atlantic Division and Mobile District in providing the services required by NASA.

Encl

*Charles T. Myers III*  
CHARLES T. MYERS III  
COL, EN  
Commanding

CF:

Commander, U.S. Army Engineer Division, South Atlantic, ATTN: CESAD-CO  
Commander, U.S. Army Engineer District, Mobile, ATTN: CESAM-CO

FACSIMILE HEADER SHEET  
(ER 105-1-5)

|                                     |  |                            |  |   |                        |
|-------------------------------------|--|----------------------------|--|---|------------------------|
| FROM (Name)<br><b>LARRY MATHEWS</b> |  | OFFICE SYMBOL<br><b>CO</b> | TELEPHONE NO.<br><b>(205) 690-2471</b> | RELEASEE'S SIGNATURE<br><i>P. Neill</i> |                        |
| TO (Name)<br><b>C. SCHROEDER</b>    |  | OFFICE SYMBOL<br><b>HQ</b> | TELEPHONE NO.<br><b>(202) 272-0650</b> | # PAGES<br><b>7</b>                     | PRECEDENCE<br><b>P</b> |
| SUBJECT                             |  |                            |  |   | DTG<br><b>10/11</b>    |

FORM 8860



DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

CEEC-C

80 JAN 1989

MEMORANDUM FOR: Commander, U.S. Army Engineer Division,  
Huntsville, P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: NASA ASRM - Yellow Creek *dash*

1. This letter will serve to confirm my decision to accept the design and construction mission for the subject project as requested by NASA in their 7 Dec 88 letter. That portion of the mission relating to design support will be assigned to HND and construction supervision to SAD/SAM.
2. Request that you immediately, in concert with SAD/SAM, negotiate a Corps/NASA memorandum of understanding which clearly defines mission responsibilities and appropriate authorities. Your continued coordination of such activities with CEEC-C is required in order to assure prompt approval of the resulting document by CEEC-2A.
3. I thank you, Henry Everett and your entire organization for the outstanding efforts given in support of the initial discussion with NASA and the analysis of program requirements leading to my decision. It is obvious that HND's reputation and long record of successful mission accomplishment has greatly contributed to NASA's expressions of confidence in the Corps ability to participate in this major undertaking. Keep up the good work!

H. J. HATCH  
Lieutenant General, USA  
Commanding

28 May 91

My 101  
14 March 1991

MEMORANDUM OF AGREEMENT (AMENDED)

BETWEEN

extends 5/89

NASA

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,  
GEORGE C. MARSHALL SPACE FLIGHT CENTER

AND

THE DEPARTMENT OF THE ARMY  
THE U.S. ARMY CORPS OF ENGINEERS,  
U.S. ARMY ENGINEER DIVISION, HUNTSVILLE,  
U.S. ARMY ENGINEER DIVISION, SOUTH ATLANTIC,  
U.S. ARMY ENGINEER DISTRICT, MOBILE

1. PURPOSE

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5. SCOPE:

This MOA addresses responsibilities and relationships between USACE and MSFC for project management, engineering, and construction management in support of the ASRM program. As an integral part of the ASRM project NASA plans to acquire production, test, and support facilities at four sites: SSC, KSC, Michoud Assembly Facility, and the former Tennessee Valley Authority Plant at Yellow Creek, Mississippi (13 miles North of Iuka, MS). The ASRM Facilities Project will be managed by NASA. USACE will provide support services in the following areas:

a. Engineering, management, and technical support services including review of mutually agreed upon ASRM facility designs for all locations and for the facility construction and equipment installation at Yellow Creek.

b. Construction management support services to the onsite MSFC construction manager at the primary ASRM program site at the former Tennessee Valley Authority Plant at Yellow Creek, Mississippi.

c. Other engineering and construction tasks as mutually agreed.

6. RESPONSIBILITIES:

a. MSFC will:

(1) Retain responsibility for project cost, schedule, and quality.

- (2) Identify the services to be performed by USACE.
- (3) Provide all funding required to accomplish the services provided by USACE. All funding arrangements will be made through the normal MSFC contracting and procurement process.
- (4) Establish a point-of-contact within the MSFC Facilities Office for all matters relating to support services.
- (5) Identify specific interface points within the MSFC and contractor organizations such that CEHND and CESAM Management personnel will have the freedom and flexibility necessary to fully provide all assigned support services. Interface activities will include open access to all meetings pertaining to CEHND and/or CESAM support services.
- (6) Be responsible for all process equipment design and acquisition and the systems integration of that equipment into the facility design.
- (7) Provide review and comments on selected contractor transmittals.
- (8) Participate in prefinal, final, and activation inspections.
- (9) Accept facility on the behalf of the Government.

b. CEHND will

- (1) Serve as the primary point of contact with MSFC for USACE services to include coordination as required with HQUSACE, CESAD, CESAM, and other USACE agencies. Establish a point of contact (primary and alternate) for all matters relating to requested services.
- (2) Provide resource management for all funds received from MSFC, to include transfer of funds to other USACE agencies.
- (3) Provide engineering, management, and technical support services to MSFC.
- (4) Review for technical adequacy and quality, mutually agreed upon facility designs and major changes to designs during construction that are prepared by the ASRM prime contractor.
- (5) Review contractor progress reports and payment estimates for facility design activities when requested by MSFC.

c. CESAD will:

- (1) Provide normal supervision to CESAM.
- (2) Provide periodic quality assurance inspections of CESAM.

d. CESAM will:

- (1) Provide construction management support services to the onsite MSFC construction manager at the Yellow Creek ASRM site.
- (2) Participate in the Preconstruction Conference and other project meetings.
- (3) Provide a daily onsite quality assurance program, which will consist of onsite inspections, district overview inspections and verification testing by commercial labs.
- (4) Monitor contractor enforcement of safety and labor requirements.
- (5) Monitor construction progress and provide MSFC with periodic reports.
- (6) Inform onsite MSFC construction manager of any forthcoming field changes and assist in gathering any field data needed in the redesign.
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- (11) Review and monitor contractor management plans, pay estimates, change orders, and subcontracts when requested.
- (12) Review, monitor, and provide advice for the construction contracting procedures.


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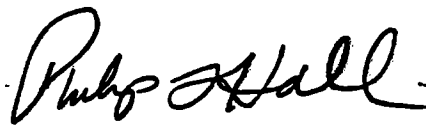
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\_\_\_\_\_  
J. A. Bethay  
Associate Director  
Marshall Space Flight Center  
National Aeronautics and Space  
Administration

5/28/91  
DATE

  
\_\_\_\_\_  
Philip L. Hall  
Colonel, United States Army  
Commanding, Huntsville  
Division

27 March 1991  
DATE

  
\_\_\_\_\_  
John E. Sobke  
Major General, United States Army  
Commanding, South Atlantic Division

10 April 91  
DATE