



US Army Corps  
of Engineers ®

# EIRS Bulletin

Engineering Improvement Recommendation System

No. 97-09

Date: 24 November 1997

The Engineering Improvement Recommendation System Bulletin (EIRS) is part of our Information Feedback System and is used in military construction programs to expedite dissemination of information regarding problems. The probable solutions included in the EIRS BULLETIN have not been thoroughly explored or staffed. Accordingly, these probable solutions do not represent a final HQUSACE position, and their use is not mandatory. Probable solutions are considered as informational in nature for the purpose of permitting prompt consideration by the field. The EIRS Bulletin recipients are encouraged to comment on the probable solutions presented so that other viewpoints can be considered in the development of the final HQUSACE position. Since changes to criteria approved by ENG Form 3078, Recommended Changes to Engineering Documents, are expected to remain firm, they are identified as final solutions and should be used in current design. To defray printing costs, local reproduction of this bulletin is authorized. This issue of the EIRS Bulletin contains 1 enclosure as follows:

ENCL 1: RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS - ENG Form 3078 Follow-up Actions

FOR THE COMMANDER:

1 Encl



KISUK CHEUNG, P.E.  
Chief, Engineering and Construction Division  
Directorate of Military Programs

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS

ENG Form 3078 Follow-up Actions:

a. Problem: ENG Forms 3078 which indicate an affirmative action by HQUSACE are provided to the originating USACE Commands. Since the ENG Forms 3078 will result in changes to the criteria and guidance, all USACE Commands should receive the same information to be used in criteria designs.

b. Probable Solution: Reviewed ENG Forms 3078 which make a commitment to change guide specifications, manuals, etc. will be included in the EIRS Bulletin, unless the change has been accomplished. This enclosure includes a copy of ENG Form 3078.

ENG FORMS 3078

<u>CONTROL NO.</u>	<u>PUB NO.</u>	<u>OFFICE SYMBOL</u>
9056	CEGS-16415	CEMRO-CD-QM
9070	CEGS-16415	CESAS-EN-DE
9076	CEGS-16415	CEMRO-ED-DC
1010	CEGS-15332	CESPK-ED-M
1011	CEGS-15355	CESPK-ED-M
1012	CEGS-15371	CESPK-ED-M
1014	CEGS-15561	CESPK-ED-M
1015	CEGS-15562	CESPK-ED-M
1016	CEGS-15569	CESPK-ED-M
1017	CEGS-15650	CESPK-ED-M
1018	CEGS-15653	CESPK-ED-M
1019	CEGS-15775	CESPK-ED-M
1020	CEGS-15845	CESPK-ED-M
1021	CEGS-15951	CESPK-ED-M
1022	CEGS-15995	CESPK-ED-M
1023	CEGS-15895	CESPK-ED-M
1024	CEGS-02720	CEMRO-ED-DJ

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> (ER 1110-345-100)		OFFICE SYMBOL AND DATE CEMRO-CD-QM 22 July 1996
DOCUMENT NUMBER AND DATE	DOCUMENT TITLE	
CEGS-16415 ((December 1991))	Electrical Work, Interior	
DOCUMENT TYPE		
<input type="checkbox"/> DRAWING ((STANDARD) (DEFINITIVE)) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) (STANDARD)) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT		
Suspended Electrical Raceway Support		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: CEMRO-CD-QM <i>WJ</i> District Commander U.S. Army Engineer District, 215 North 17th Street Omaha, NE 68102-4978		(See Sheet 2)
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		CEMRO-CD
		NEIL R. BRUNSON, Chief, Construction Division
		DATE
		SIGNATURE
		7/25/96 <i>Neil R. Brunson</i>
1a.	TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ (Date)
1b.	TO: CEMRD-ET-C Division Commander U.S. Army Engineer Division, 12565 West Center Rd. Omaha, NE 68144-3869	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER
		<i>Cancel</i>
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		CEMRD-ET-C
		James W. Cumper, P.E. Senior Construction Program Manager
		DATE
		SIGNATURE
		3 Sep 96 <i>James W. Cumper</i>
2.	TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE
		Approved
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		CEMP-E
		KISUK CHEUNG, P.E., C, ENGR. DIV., D/MP
		DATE
		SIGNATURE
		5 Mar 97 <i>Kisuk Cheung</i>
3.	TO: CEMRD-ET-C Division Commander U.S. Army Engineer Division, 12565 West Center Rd. Omaha, NE 68144-3869	COMMENTS BY DIVISION COMMANDER
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		DATE
		SIGNATURE
4.	RETURN TO: CEMRO-CD-QM District Commander U.S. Army Engineer District, 215 North 17th Street Omaha, NE 68102-4978	COPY FURNISHED

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**

OFFICE SYMBOL AND DATE  
CEMRO-CD-QM  
22 July 1996

PROBLEM DESCRIPTION AND ACTION RECOMMENDED *(Use additional sheets if necessary)*

1. PROBLEM:

Using standard trade practices, suspended electrical raceway does not commonly get "securely fastened in place" as required by NFPA 70 Handbook Section 300-11 and CEGS 16415 paragraph 3.2.2.5. For example, electrical metallic tubing suspended from four-foot long all-thread rods has been installed and accepted with as much as one foot horizontal movement when lightly pushed. The new explanatory material in 1996 NFPA 70 Handbook Section 300-11 defines "securely fastened in place" to mean vertical support and prevention of horizontal movement or sway. This definition is not in the code text and therefore, is not contractually enforceable.

2. RECOMMENDED SOLUTION:

Revise the first sentence of CEGS 16415 paragraph 3.2.2.5 to read:

"Metallic conduits and tubing, and the support systems to which they are attached, shall be securely and rigidly fastened in place to prevent vertical and horizontal movement..."

NAME OF SUBMITTER *(Optional)*  
David L. Burbeck

WORK TELEPHONE NUMBER *(Optional)*  
(402) 221-4185

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> (Submit a separate form in quadruplicate for each report) (ER 1110-345-710, 720 and ER 1110-2-1200)		OFFICE SYMBOL AND DATE <b>CESAS-EN-DE</b> 8 Nov 96
DOCUMENT NUMBER AND DATE	DOCUMENT TITLE	
16415	ELECTRICAL WORK, INTERIOR	
DOCUMENT TYPE		<input type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
<input type="checkbox"/> DRAWING ((STANDARD) ((DEFINITIVE)) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) ((STANDARD))  <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> ARCHITECT-ENGINEER INSTRUCTION MANUAL  <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		
SUBJECT		
Paragraph 1.3, Submittals, CEGS 16415		
ROUTING (Check)	ACTION RECOMMENDED BY DISTRICT COMMANDER	
FROM:	(See Sheet 2)	
District Commander U.S. Army Engineer District.	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
ATTN: CESAS-EN P.O. Box 889 Savannah, GA 31402 -0889	CESAS-EN	JOSEPH H ROGERS, JR., P.E., CHF, ENG DIV
	DATE	SIGNATURE
	20 Dec 96	<i>JHR</i>
1a. TO:	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____	
HOUSACE (CEEC-ES) WASH DC 20314-1000	DEC 31 1996 (Date)	
1b. TO:	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER	
Division Commander U.S. Army Engineer Division.	CONCUR. Suggest "FIO" and "GA" Designations be left blank as in 16370 and 16375. Default in Specs Intact should be "FIO", if Spec writer doesn't designate.	
ATTN: CESAD-EN-EE 77 Forsyth St., SW Atlanta, GA 30335-6807	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	CESAD-ET-E	GREGORY R. BAER, P.E. Chief, Engineering Division
	DATE	SIGNATURE
	1/27/97	<i>Gregory R. Baer</i>
2. TO:	COMMENTS OR ACTION BY CHIEF OF ENGINEERS	
HOUSACE (CEEC-ES) WASH DC 20314-1000	Approved, as annotated by CESAD-ET-E (note that this portion of the specification has since been partially restructured).	
	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	CEMP-E	RISUK CHEUNG, P.E., C, ENG & CON DIV., D/MP
	DATE	SIGNATURE
	14 Mar 97	<i>Risuk Cheung</i>
3. TO:	COMMENTS BY DIVISION COMMANDER	
Division Commander U.S. Army Engineer Division.		
ATTN: CESAD- <del>EN-EE</del> <sup>ET-EE</sup> 77 Forsyth St., SW Atlanta, GA 30335-6807	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
4. RETURN TO:	COPY FURNISHED	
District Commander U.S. Army Engineer District.		
ATTN: EN-DE P.O. Box 889 Savannah, GA 31402-0889		

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**

OFFICE SYMBOL AND DATE

CESAS-EN-DE  
8 Nov 96

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary)

1. PROBLEM:

The guide specification paragraphs SD-04 Drawings, Electrical Work, and SD-09 Reports, Materials and Equipment defaults to "GA" (Government Approval).

This means that all shop drawings are submitted to the government for approval in these categories, whether needed or not. These paragraphs, previously marked "FIO" (until about 2 years ago), put additional burden on field offices.

2. RECOMMENDED SOLUTION:

Make these paragraphs "FIO" with the option that the designer can specify "GA" if required by the nature of the project. For example, a dimming system may be "GA" if the designer considers this item an extension of design.

NAME OF SUBMITTER (Optional)

*Bennie G. Williams*  
BENNIE G WILLIAMS

WORK TELEPHONE NUMBER (Optional)

( 912 652-5613

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> (ER 1110-345-100)		OFFICE SYMBOL AND DATE CEMRO-ED-DC 25 March 1997
DOCUMENT NUMBER AND DATE CEGS 16415 (August 1996)	DOCUMENT TITLE ELECTRICAL WORK, INTERIOR	
DOCUMENT TYPE		
<input type="checkbox"/> DRAWING ((STANDARD) (DEFINITIVE)) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) (STANDARD)); <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT Communications Raceways		
ROUTING (Check)	ACTION RECOMMENDED BY DISTRICT COMMANDER	
FROM: <b>CEMRO-ED</b> District Commander U.S. Army Engineer District, <b>1612 USPO &amp; Courthouse</b> <b>215 N. 17th Street</b> <b>Omaha, NE 68102-4978</b>	(See Sheet 2)	
	OFFICE SYMBOL CEMRO-ED	NAME AND TITLE (Print or Type) for Robert F. Rounph, Chief, Engineering Division
	DATE 28 March 1997	SIGNATURE <i>Charles W. Roubert</i>
<input type="checkbox"/> 1a. TO: HOUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>31 March 1997</u> <i>(Date)</i>	
<input type="checkbox"/> 1b. TO: <b>CEMRD-ET-E</b> Division Commander U.S. Army Engineer Division, <b>Missouri River</b> <del>R. O. Box 103 DTS</del> <del>Omaha, NE 68101-0103</del> 12565 W. Center Rd Omaha, NE 68144-3969	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER Recommend approval.	
	OFFICE SYMBOL CEMRD-ET-E	NAME AND TITLE (Print or Type) for KRISTINE L. ALLAMAN, P.E. <i>JK</i> Director, Engineering & Technical Services
	DATE 4/1/97	SIGNATURE <i>JK</i>
<input type="checkbox"/> 2. TO: HOUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE Approved.	
	OFFICE SYMBOL CEMP-E	NAME AND TITLE (Print or Type) for KISUK CHEUNG, P.E., C, ENGR. DIV., D/MP
	DATE 2 May 97	SIGNATURE <i>Kisuk Cheung</i>
<input type="checkbox"/> 3. TO: <b>CEMRD-ET-E</b> Division Commander U.S. Army Engineer Division, <b>Missouri River</b> <b>P. O. Box 103 DTS</b> <b>Omaha, NE 68101-0103</b>	COMMENTS BY DIVISION COMMANDER	
	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
<input type="checkbox"/> 4. RETURN TO: <b>CEMRO-ED-DI</b> District Commander U.S. Army Engineer District, <b>1612 USPO &amp; Courthouse</b> <b>215 N. 17th Street</b> <b>Omaha, NE 68102-4978</b>	COPY FURNISHED	

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CEMRO-ED-DC  
25 March 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

1. PROBLEM:

Paragraph 3.2.1.10, Communications Raceways.

A portion of this section was not included in the reissued (8/96) specification. It was included in the 12/91 version, and appears to have been inadvertently left out.

2. RECOMMENDED SOLUTION:

Paragraph 3.2.10, Communications Raceways should read as follows. Proposed changes are underlined:

3.2.10. Communications Raceways

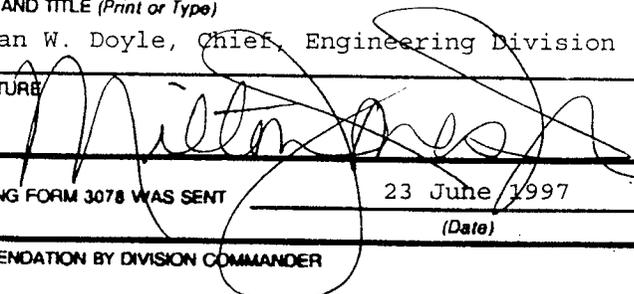
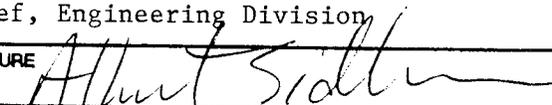
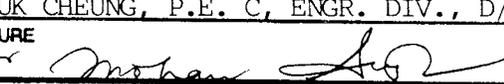
Communications raceways indicated shall be installed in accordance with the previous requirements for conduit and tubing and with the additional requirement that no length of run shall exceed 15 meters for 50 feet for 15 mm (1.2 inch) and 20 mm (3/4 inch) sizes, and 30 meters (100 feet) for 25 mm (1 inch) or larger sizes, and shall not contain more than two 90-degree bends or the equivalent. Additional pull or junction boxes shall be installed to comply with these limitations whether or not indicated. Inside radii of bends in conduits of 25 mm (1 inch) size or larger shall be not less than ten times the nominal diameter.

NAME OF SUBMITTER (Optional)

JAMES ZAVADIL, ELECTRICAL ENGINEER

WORK TELEPHONE NUMBER (Optional)

(402) 221-4562

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15332 June 1994	DOCUMENT TITLE Pre-Action and Deluge Sprinkler System, Fire Protection	CESPk-ED-M 16 June 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check) FROM: District Commander U.S. Army Engineer District,  Sacramento CESPk-ED-M	ACTION RECOMMENDED BY DISTRICT COMMANDER (See Sheet 2)	
	OFFICE SYMBOL CESPk-ED	NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division
	DATE 16 Jun 97	SIGNATURE 
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>23 June 1997</u> (Date)	
1b. TO: Division Commander U.S. Army Engineer Division, South Pacific CESPd-ET	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL.	
	OFFICE SYMBOL CESPd-ET-E	NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
	DATE 7/21/97	SIGNATURE 
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See attached sheet.	
	OFFICE SYMBOL CEMP-E	NAME AND TITLE (Print or Type) KISUK CHEUNG, P.E. C, ENGR. DIV., D/MP
	DATE 8/28	SIGNATURE 
3. TO: Division Commander U.S. Army Engineer Division, SOUTH PACIFIC ATTN: CESPd-ET 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District, Sacramento CESPk-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE

CESPK-ED-M

16 June 1997

## PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals to CEGS-01330, Paragraph 1.1.1.

SD-06: Test Procedures "GA"

SD-07: Preliminary Tests "GA"

SD-07: Final Test "GA"

SD-13: Contractor's Material and Test Certificate "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for only those submittals identified above.

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

CO-C

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

CEMP-ET

18 August 1997

SUBJECT: 3078 Submitted by CESPCK-ED-M, 5 June 1997, CEGS 15332, Pre-Action and Deluge Sprinkler System, Fire Protection

1. Concur with the intent to limit government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.
2. This following action is applicable to the submittal items addressed in the subject 3078:
  - a. SD-06 Test Procedures: This item will remain "GA" in order to ensure that complete test procedures that adequately test the pre-action and deluge sprinkler systems are conducted by the contractor. Testing of the fire sprinkler systems is considered a critical function.
  - b. SD-06 Preliminary Tests: This item will remain "GA". This specification paragraph addresses scheduling of the preliminary tests. The required notification for testing should remain government approved to ensure that government personnel who need to witness the testing, such as the fire department, are properly notified. Testing of the fire sprinkler systems is considered a critical function.
  - c. SD-06 Final Acceptance Test Plan: This item will remain "GA". This specification paragraph addresses scheduling of the final tests. The required notification for testing should remain government approved to ensure that government personnel who need to witness the testing, such as the fire department, are properly notified. Testing of the fire sprinkler systems is considered a critical function.
  - d. SD-13 Contractor's Material and Test Certificates: This item will remain "GA" in order to ensure that required certificates on the fire sprinkler are complete and are furnished to the government.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15355 December 1994	DOCUMENT TITLE Aqueous Film-Forming Foam (AFFF) Fire Protection System	CESPK-ED-M 04 June 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)
		OFFICE SYMBOL: CESPK-ED
		NAME AND TITLE (Print or Type): Brian W. Doyle, Chief, Engineering Division
		DATE: 6/13/97
		SIGNATURE: <i>Brian W. Doyle</i>
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>11 June 1997</u> (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ET	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL.	
		OFFICE SYMBOL: CESPD-ET-E
		NAME AND TITLE (Print or Type): JACK E. FARLESS Chief, Engineering Division
		DATE: 7/21/97
		SIGNATURE: <i>Albert Sidh</i>
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE <i>Concur</i> See attached sheet.	
		OFFICE SYMBOL: CEMP-E
		NAME AND TITLE (Print or Type): KISUK CHEUNG, P.E. C, ENGR. DIV., D/MP
		DATE: 8/28
		SIGNATURE: <i>for Mohan A...</i>
3. TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ET 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL:
		NAME AND TITLE (Print or Type):
		DATE:
		SIGNATURE:
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
04 June 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1

SD-06: Instructions "GA"

SD-06: Final Acceptance Test Plan "GA"

SD-09: Tests "GA"

SD-13: Contractor's Material and Test Certificates "GA"

SD-19: O&amp;M Manuals "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776 CO-C  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

WORK TELEPHONE NUMBER (Optional)

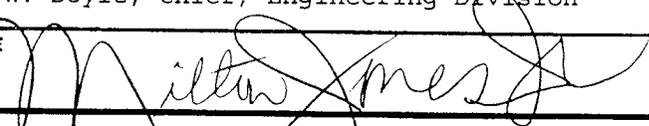
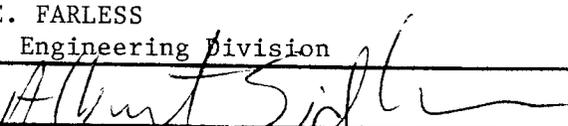
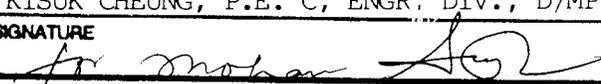
( 916 557-7296 )

CEMP-ET

18 August 1997

SUBJECT: 3078 Submitted by CESP-K-ED-M, 4 June 1997, CEGS 15355, Aqueous Film-Forming Foam (AFFF) Fire Protection System

1. Concur with the intent to limit government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.
2. The following action is applicable to the submittal items addressed in the subject 3078:
  - a. SD-06 Instructions: Concur, posted diagrams and instructions should be changed to "FIO" (For Information Only).
  - b. SD-06 Final Acceptance Test Plan: This item will remain "GA" (government approval) in order to ensure that complete test procedures that adequately test the AFFF fire protection systems are conducted by the contractor. Testing of the AFFF systems is considered a critical function.
  - c. SD-09 Tests: This item pertains to test reports and will remain "GA" in order to ensure that tests that adequately test the AFFF systems were conducted by the contractor. Testing of the AFFF systems is considered a critical function.
  - d. SD-13 Contractor's Material and Test Certificates: This item will remain "GA" in order to ensure that submitted AFFF system equipment which require government approval are certified by the manufacturer. Portions of the system that are listed in this specification section are highly specialized and require manufacturer certification. This requirement will also facilitate the government review of equipment submittals.
  - e. SD-19 O&M Manuals: This item will remain "GA" since inspection, maintenance and service of AFFF fire protection systems are highly specialized. It is important that O&M Manuals for these systems are complete and meet contract requirements before being turned over to the user.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15371 October 1994	DOCUMENT TITLE Wet Chemical Fire Extinguishing System	CESPK-ED-M 04 June 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)
		OFFICE SYMBOL CESPK-ED
		NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division
		DATE 6/16/97
		SIGNATURE 
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>11 June 1997</u> (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ET	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL.	
		OFFICE SYMBOL CESPD-ET-E
		NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
		DATE 7/21/97
		SIGNATURE 
2. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See attached sheet.	
		OFFICE SYMBOL CEMP-E
		NAME AND TITLE (Print or Type) KISUK CHEUNG, P.E. C, ENGR. DIV., D/MP
		DATE 8/28/97
		SIGNATURE 
3. TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ET 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		DATE
		SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
04 June 1997

## PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-06: Preliminary Tests "GA"

SD-06: Final Acceptance Tests "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

CO-C

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

CEMP-ET

18 August 1997

SUBJECT: 3078 Submitted by CESP-K-ED-M, 4 June 1997, CEGS 15371, Wet Chemical Fire Extinguishing Systems

1. Concur with the intent to limit government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.
2. This following action is applicable to the submittal items addressed in the subject 3078:
  - a. SD-06 Preliminary Tests: This item will remain "GA". This specification paragraph addresses scheduling of the preliminary tests. The required notification for testing should remain government approved to ensure that government personnel who need to witness the testing, such as the fire department, are properly notified. Testing of the fire protection systems is considered a critical function.
  - b. SD-06 Final Acceptance Test Plan: This item will remain "GA". This specification paragraph addresses scheduling of the final tests. The required notification for testing should remain government approved to ensure that government personnel who need to witness the testing, such as the fire department, are properly notified. Testing of the fire protection systems is considered a critical function.

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS**

(Submit a separate form in quadruplicate for each report)

(ER 1110-345-100)

OFFICE SYMBOL AND DATE

CESPK-ED-M  
10 Jun 1997

DOCUMENT NUMBER AND DATE

CEGS-15561  
August 1994

DOCUMENT TITLE

Central Steam Generating System,  
Combination Gas and Oil Fired

DOCUMENT TYPE

- DRAWING ((STANDARD) [DEFINITIVE])       SPECIFICATION ((GUIDE) [STANDARD])
- DESIGN GUIDES       TECHNICAL MANUAL
- ENGINEER MANUAL       ENGINEER REGULATION       OTHER

MILITARY

CIVIL WORKS

SUBJECT

"GA" Contractor Submittals

ROUTING (Check)

FROM:

District Commander  
U.S. Army Engineer District,

Sacramento  
CESPK-ED-M

ACTION RECOMMENDED BY DISTRICT COMMANDER

(See Sheet 2)

OFFICE SYMBOL

CESPK-ED for

NAME AND TITLE (Print or Type)

Brian W. Doyle, Chief, Engineering Division

DATE

16 Jun 97

SIGNATURE

*Milton [Signature]*

1a.

TO:  
HOUSACE (CEMP-EA)  
WASH DC 20314-1000

INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT

17 June 1997

(Date)

1b.

TO:  
Division Commander  
U.S. Army Engineer Division,  
  
South Pacific  
CESPD-ED

COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER

RECOMMEND APPROVAL.

OFFICE SYMBOL

CESPD-ET-E

NAME AND TITLE (Print or Type)

JACK E. FARLESS  
Chief, Engineering Division

DATE

7/21/97

SIGNATURE

*Albert [Signature]*

2

TO:  
HOUSACE (CEMP-EA)  
WASH DC 20314-1000

COMMENTS OR ACTION BY COMMANDER, USACE

See Attached Sheet

OFFICE SYMBOL

CEMP-ET

NAME AND TITLE (Print or Type)

Kisuk Cheung, P.E., C, Engr. Div., D/MP

DATE

7/21/97

SIGNATURE

*[Signature]*

3.

TO:  
Division Commander  
U.S. Army Engineer Division,  
  
South Pacific  
ATTN: CESPD-ED  
333 Market St.  
San Francisco CA  
94105

COMMENTS BY DIVISION COMMANDER

OFFICE SYMBOL

NAME AND TITLE (Print or Type)

DATE

SIGNATURE

4.

RETURN TO:  
District Commander  
U.S. Army Engineer District,  
  
Sacramento  
CESPK-ED-M (ET&S)

COPY FURNISHED

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE

CESPK-ED-M

10 JUN 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1

SD-01: Proposed Test Procedure "GA"  
 SD-01: Instrumentation Pressure Test Procedure "GA"  
 SD-01: Instrumentation Repair Procedure "GA"  
 SD-01: Instrumentation Acceptance Test Plans "GA"  
 SD-04: Instruments "GA"  
 SD-07: Testing "GA"  
 SD-19: O&M Manuals "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776  
 thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

CO-C

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS**

(Submit a separate form in quadruplicate for each report)

(ER 1110-345-100)

OFFICE SYMBOL AND DATE

CESPK-ED-M  
10 Jun 1997

DOCUMENT NUMBER AND DATE

CEGS-15562  
July 1989

DOCUMENT TITLE

Heating and Utilities Systems, Central  
Steam

DOCUMENT TYPE

- DRAWING ([STANDARD] [DEFINITIVE])       SPECIFICATION ([GUIDE] [STANDARD])
- DESIGN GUIDES       TECHNICAL MANUAL
- ENGINEER MANUAL       ENGINEER REGULATION       OTHER

MILITARY

CIVIL WORKS

SUBJECT

"GA" Contractor Submittals

ROUTING (Check)

FROM:

District Commander  
U.S. Army Engineer District,

Sacramento  
CESPK-ED-M

ACTION RECOMMENDED BY DISTRICT COMMANDER

(See Sheet 2)

OFFICE SYMBOL

CESPK-ED

NAME AND TITLE (Print or Type)

Brian W. Doyle, Chief, Engineering Division

DATE

16 Jun 97

SIGNATURE

*Milton Jones*

1a. TO:

HOUSACE (CEMP-EA)  
WASH DC 20314-1000

INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT

17 June 1997

(Date)

1b. TO:

Division Commander  
U.S. Army Engineer Division,

South Pacific  
CESPD-ED

COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER

RECOMMEND APPROVAL.

OFFICE SYMBOL

CESPD-ET-E

NAME AND TITLE (Print or Type)

JACK E. FARLESS  
Chief, Engineering Division

DATE

7/2/97

SIGNATURE

*Albert Sialman*

2 TO:

HOUSACE (CEMP-EA)  
WASH DC 20314-1000

COMMENTS OR ACTION BY COMMANDER, USACE

See Attached Sheet

OFFICE SYMBOL

CEMP-ET

NAME AND TITLE (Print or Type)

Kisuk Cheung, P.E., C, Engr. Div., D/MP

DATE

11 Aug 97

SIGNATURE

*for [Signature]*

3. TO:

Division Commander  
U.S. Army Engineer Division,

South Pacific  
ATTN: CESPD-ED  
333 Market St.  
San Francisco CA  
94105

COMMENTS BY DIVISION COMMANDER

OFFICE SYMBOL

NAME AND TITLE (Print or Type)

DATE

SIGNATURE

4. RETURN TO:

District Commander  
U.S. Army Engineer District,

Sacramento  
CESPK-ED-M (ET&S)

COPY FURNISHED

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
10 JUN 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1

SD-19: O&M Manuals "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776 CO-C  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS**

(Submit a separate form in quadruplicate for each report)

(ER 1110-345-100)

OFFICE SYMBOL AND DATE

CESPK-ED-M  
10 Jun 1997

DOCUMENT NUMBER AND DATE

CEGS-15569  
May 1995

DOCUMENT TITLE

Water and Steam Heating; Oil, Gas, or  
Both; Up to 20 MBTUH

DOCUMENT TYPE

DRAWING ((STANDARD) [DEFINITIVE])

SPECIFICATION ((GUIDE) [STANDARD])

DESIGN GUIDES

TECHNICAL MANUAL

ENGINEER MANUAL

ENGINEER REGULATION

OTHER

MILITARY  
XX

CIVIL WORKS

SUBJECT

"GA" Contractor Submittals

ROUTING (Check)

ACTION RECOMMENDED BY DISTRICT COMMANDER

FROM:

District Commander  
U.S. Army Engineer District,

Sacramento  
CESPK-ED-M

(See Sheet 2)

OFFICE SYMBOL

CESPK-ED

NAME AND TITLE (Print or Type)

Brian W. Doyle, Chief, Engineering Division

DATE

16 Jun 97

SIGNATURE

*Milton Jones*

1a. TO:

HOUSACE (CEMP-EA)  
WASH DC 20314-1000

INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT

17 June 1997

(Date)

1b. TO:

Division Commander  
U.S. Army Engineer Division,  
South Pacific  
CESPD-ED

COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER

RECOMMEND APPROVAL.

OFFICE SYMBOL

CESPD-ET-E

NAME AND TITLE (Print or Type)

JACK E. FARLESS  
Chief, Engineering Division

DATE

7/21/97

SIGNATURE

*Albert Sidler*

2 TO:

HOUSACE (CEMP-EA)  
WASH DC 20314-1000

COMMENTS OR ACTION BY COMMANDER, USACE

See Attached Sheet

OFFICE SYMBOL

CEMP-ET

NAME AND TITLE (Print or Type)

Kisuk Cheung, P.E., C, Engr. Div., D/MP

DATE

7/21/97

SIGNATURE

*Kisuk Cheung*

3 TO:

Division Commander  
U.S. Army Engineer Division,  
South Pacific  
ATTN: CESPD-ED  
333 Market St.  
San Francisco CA  
94105

COMMENTS BY DIVISION COMMANDER

OFFICE SYMBOL

NAME AND TITLE (Print or Type)

DATE

SIGNATURE

4 RETURN TO:

District Commander  
U.S. Army Engineer District,  
Sacramento  
CESPK-ED-M (ET&S)

COPY FURNISHED

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
10 JUN 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-06: Posted Instructions "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst (916) 557-7776 CO-C  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS

(Submit a separate form in quadruplicate for each report)

(ER 1170-345-100)

OFFICE SYMBOL AND DATE

CESPK-ED-M  
18 Jun 1997

## DOCUMENT NUMBER AND DATE

CEGS-15650  
July 1992

## DOCUMENT TITLE

Central Refrigerated Air Conditioning  
System

## DOCUMENT TYPE

 DRAWING ((STANDARD) [DEFINITIVE]) SPECIFICATION ((GUIDE) [STANDARD]) DESIGN GUIDES TECHNICAL MANUAL ENGINEER MANUAL ENGINEER REGULATION OTHER MILITARY CIVIL WORKS

## SUBJECT

"GA" Contractor Submittals

## ROUTING (Check)

## FROM:

District Commander  
U.S. Army Engineer District,Sacramento  
CESPK-ED-M

## ACTION RECOMMENDED BY DISTRICT COMMANDER

(See Sheet 2)

## OFFICE SYMBOL

CESPK-ED

## NAME AND TITLE (Print or Type)

Brian W. Doyle, Chief, Engineering Division

## DATE

20 June 97

## SIGNATURE

## 1a. TO:

HQUSACE (CEMP-EA)  
WASH DC 20314-1000

INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT

23 June 1997

(Date)

## 1b. TO:

Division Commander  
U.S. Army Engineer Division,South Pacific  
CESPD-ED

## COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER

RECOMMEND APPROVAL.

## OFFICE SYMBOL

CESPD-ET-E

## NAME AND TITLE (Print or Type)

JACK E. FARLESS  
Chief, Engineering Division

## DATE

7/21/97

## SIGNATURE

## 2

HQUSACE (CEMP-EA)  
WASH DC 20314-1000

## COMMENTS OR ACTION BY COMMANDER, USACE

*Concur*  
See Attached Sheet

## OFFICE SYMBOL

CEMP-ET

## NAME AND TITLE (Print or Type)

Kisuk Cheung, P.E., C, Engr., Div., D/MP

## DATE

11 Aug 97

## SIGNATURE

## 3.

Division Commander  
U.S. Army Engineer Division,South Pacific  
ATTN: CESPD-ED  
333 Market St.  
San Francisco CA  
94105

## COMMENTS BY DIVISION COMMANDER

## OFFICE SYMBOL

## NAME AND TITLE (Print or Type)

## DATE

## SIGNATURE

## 4.

## RETURN TO:

District Commander  
U.S. Army Engineer District,Sacramento  
CESPK-ED-M (ET&S)

## COPY FURNISHED

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997**PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)****1. PROBLEM:**

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-01: Water Treatment System "GA"

SD-04: Layout, Plans, Elevations, Diagrams, Foundation Drawings, Bolt-Setting Information, Foundation Bolts. "GA"

**2. RECOMMENDED SOLUTION:**

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

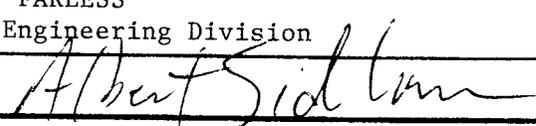
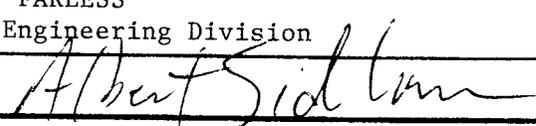
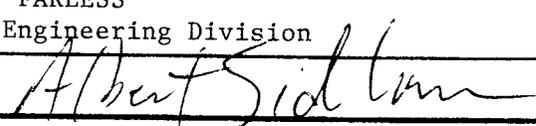
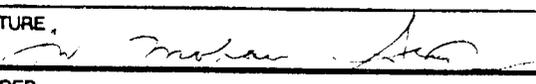
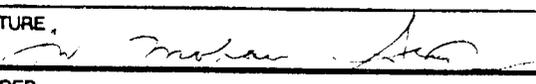
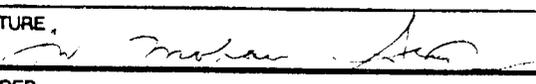
CO-C

WORK TELEPHONE NUMBER (Optional)

( 916, 557-7296

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> <small>(ER 1110-345-100)</small>		OFFICE SYMBOL AND DATE				
<b>DOCUMENT NUMBER AND DATE</b> CEGS-15653 September 1993	<b>DOCUMENT TITLE</b> Air-Conditioning System (Unitary Type)	CESPCK-ED-M 18 Jun 1997				
<b>DOCUMENT TYPE</b> <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS				
<b>SUBJECT</b> "GA" Contractor Submittals						
<b>ROUTING (Check)</b> FROM: District Commander U.S. Army Engineer District,  Sacramento CESPCK-ED-M	<b>ACTION RECOMMENDED BY DISTRICT COMMANDER</b> <p style="text-align: center;"><i>(See Sheet 2)</i></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OFFICE SYMBOL CESPK-ED</td> <td style="width: 75%;">NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division</td> </tr> <tr> <td>DATE 20 June 94</td> <td>SIGNATURE </td> </tr> </table>		OFFICE SYMBOL CESPK-ED	NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division	DATE 20 June 94	SIGNATURE 
OFFICE SYMBOL CESPK-ED	NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division					
DATE 20 June 94	SIGNATURE 					
<b>1a.</b> TO: HOUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ 25 June 1997 _____ (Date)					
<b>1b.</b> TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPDP-ED	<b>COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER</b> RECOMMEND APPROVAL.					
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OFFICE SYMBOL CESPD-ET-E</td> <td style="width: 75%;">NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division</td> </tr> <tr> <td>DATE 7/21/97</td> <td>SIGNATURE </td> </tr> </table>		OFFICE SYMBOL CESPD-ET-E	NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division	DATE 7/21/97	SIGNATURE 
OFFICE SYMBOL CESPD-ET-E	NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division					
DATE 7/21/97	SIGNATURE 					
<b>2</b> TO: HOUSACE (CEMP-EA) WASH DC 20314-1000	<b>COMMENTS OR ACTION BY COMMANDER, USACE</b> See Attached Sheet					
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OFFICE SYMBOL CEMP-ET</td> <td style="width: 75%;">NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP</td> </tr> <tr> <td>DATE 11 June 97</td> <td>SIGNATURE </td> </tr> </table>		OFFICE SYMBOL CEMP-ET	NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP	DATE 11 June 97	SIGNATURE 
OFFICE SYMBOL CEMP-ET	NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP					
DATE 11 June 97	SIGNATURE 					
<b>3.</b> TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPDP-ED 333 Market St. San Francisco CA 94105	<b>COMMENTS BY DIVISION COMMANDER</b>  <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OFFICE SYMBOL</td> <td style="width: 75%;">NAME AND TITLE (Print or Type)</td> </tr> <tr> <td>DATE</td> <td>SIGNATURE</td> </tr> </table>		OFFICE SYMBOL	NAME AND TITLE (Print or Type)	DATE	SIGNATURE
OFFICE SYMBOL	NAME AND TITLE (Print or Type)					
DATE	SIGNATURE					
<b>4.</b> RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPCK-ED-M (ET&S)	<b>COPY FURNISHED</b>  					

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997**PROBLEM DISCUSSION AND ACTION RECOMMENDED (Use additional sheets if necessary.)****1. PROBLEM:**

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-01: Water Treatment Systems "GA"

SD-04: Layouts; Plans, Elevations, Diagrams, Foundation Drawings, Bolt-Setting Information, Foundation Bolts, Details, Sequences "GA"

SD-07: Demonstrations "GA"

SD-08: Welder Qualifications "GA"

SD-09: Tests "GA"

SD-09: System Performance Tests "GA"

**2. RECOMMENDED SOLUTION:**

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

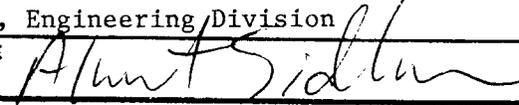
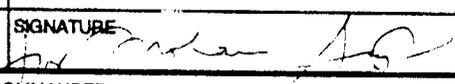
CO-C

WORK TELEPHONE NUMBER (Optional)

( 916 557-7296 )

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15775 July 1992	DOCUMENT TITLE Field-Erected Heat Pump System	CESPK-ED-M 18 Jun 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)
		OFFICE SYMBOL CESPK-ED
		NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division
		DATE 20 June 97
		SIGNATURE 
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>23 June 1997</u> (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ED	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL.	
		OFFICE SYMBOL CESPD-ET-E
		NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
		DATE 7/21/97
		SIGNATURE 
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See Attached Sheet	
		OFFICE SYMBOL CEMP-ET
		NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP
		DATE Jul 97
		SIGNATURE 
3. TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ED 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		DATE
		SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

**1. PROBLEM:**

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though it does not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-07: Training "GA"

**2. RECOMMENDED SOLUTION:**

Change the "GA" submittal to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst

CO-C

thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

WORK TELEPHONE NUMBER (Optional)

( 916 557-7296 )

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15845 February 1989	DOCUMENT TITLE Energy Recovery Systems	CESPK-ED-M 18 Jun 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) ((DEFINITIVE)) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> ENGINEER MANUAL <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) ((STANDARD)) <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)
		OFFICE SYMBOL CESPK-ED
		NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division
		DATE 30 June 97
		SIGNATURE <i>[Signature]</i>
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ 23 June 1997 (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ED	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER  RECOMMEND APPROVAL.	
		OFFICE SYMBOL CESPD-ET-E
		NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
		DATE 7/21/97
		SIGNATURE <i>[Signature]</i>
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE  Concur in part. See attached sheet.	
		OFFICE SYMBOL CEMP-ET
		NAME AND TITLE (Print or Type) KISUK CHEUNG, P.E. Chief, Engineering Division
		DATE <i>[Signature]</i>
		SIGNATURE <i>[Signature]</i>
3 TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ED 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		DATE
		SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997

## PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though it does not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-08: Test Procedure "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittal to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

CO-C

WORK TELEPHONE NUMBER (Optional)

( 916, 557-7296 )

Attachment to Eng Form 3078  
CEGS-15845, February 1989  
Energy Recovery Systems  
Dan Gentil, HQUSACE, (202) 761-8622

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases, we are giving the designer the option of determining the review level depending on the project specific requirements.

SD-08 Statements, will be changed as follows on the next notice update;

From: Test Procedure; GA

To: Test Procedure; [GA] [ \_\_\_\_ ]

1020

ENCL 1

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS**

(Submit a separate form in quadruplicate for each report)

(ER 1110-345-100)

OFFICE SYMBOL AND DATE

CESPK-ED-M  
18 Jun 1997

DOCUMENT NUMBER AND DATE

CEGS-15951  
January 1994

DOCUMENT TITLE

Direct Digital Control for HVAC

DOCUMENT TYPE

- DRAWING ((STANDARD) [DEFINITIVE])       SPECIFICATION ((GUIDE) [STANDARD])
- DESIGN GUIDES       TECHNICAL MANUAL
- ENGINEER MANUAL       ENGINEER REGULATION       OTHER

MILITARY

CIVIL WORKS

SUBJECT

"GA" Contractor Submittals

ROUTING (Check)

ACTION RECOMMENDED BY DISTRICT COMMANDER

FROM:

District Commander  
U.S. Army Engineer District,  
  
Sacramento  
CESPK-ED-M

(See Sheet 2)

OFFICE SYMBOL

CESPK-ED

NAME AND TITLE (Print or Type)

Brian W. Doyle, Chief, Engineering Division

DATE

20 June 97

SIGNATURE



1a. TO:

HQUSACE (CEMP-EA)  
WASH DC 20314-1000

INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT

23 June 1997

(Date)

1b. TO:

Division Commander  
U.S. Army Engineer Division,  
South Pacific  
CESPD-ED

COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER

RECOMMEND APPROVAL.

OFFICE SYMBOL

CESPD-ET-E

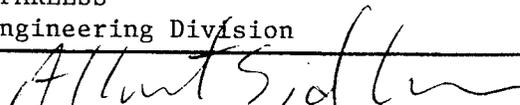
NAME AND TITLE (Print or Type)

JACK E. FARLESS  
Chief, Engineering Division

DATE

7/21/97

SIGNATURE



2. TO:

HQUSACE (CEMP-EA)  
WASH DC 20314-1000

COMMENTS OR ACTION BY COMMANDER, USACE

See Attached Sheet

OFFICE SYMBOL

CEMP-ET

NAME AND TITLE (Print or Type)

Kisuk Cheung, P.E., C, Engr. Div., D/MP

DATE

6/97

SIGNATURE



3. TO:

Division Commander  
U.S. Army Engineer Division,  
South Pacific  
  
ATTN: CESPD-ED  
333 Market St.  
San Francisco CA  
94105

COMMENTS BY DIVISION COMMANDER

OFFICE SYMBOL

NAME AND TITLE (Print or Type)

DATE

SIGNATURE

4. RETURN TO:

District Commander  
U.S. Army Engineer District,  
Sacramento  
CESPK-ED-M (ET&S)

COPY FURNISHED

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997

## PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-01: Training Data "GA"

SD-01: Data Entry Forms "GA"

SD-08: Factory Testing "GA"

SD-08: Site Testing "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

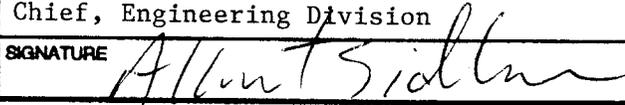
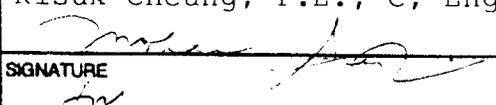
Gene Ernst  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

CO-C

WORK TELEPHONE NUMBER (Optional)

( 916 ) 557-7296

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15995 January 1993	DOCUMENT TITLE Commissioning of HVAC Systems	CESPK-ED-M 18 Jun 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittals		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)
		OFFICE SYMBOL CESPK-ED
		NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division
		DATE 20 June 97
		SIGNATURE 
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ 23 June 1997 (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ED	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER  RECOMMEND APPROVAL.	
		OFFICE SYMBOL CESPD-ET-E
		NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
		DATE 7/21/97
		SIGNATURE 
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See Attached Sheet	
		OFFICE SYMBOL CEMP-ET
		NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP
		DATE 11 June 97
		SIGNATURE 
3. TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ED 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL
		NAME AND TITLE (Print or Type)
		DATE
		SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997

## PROBLEM DISCRPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though they do not appear to fall under the "Government Approval" submittals of CEGS-01330, Paragraph 1.1.1.

SD-01: Commissioning Team "GA"

SD-06: Test Procedures "GA"

SD-07: Test Schedule "GA"

SD-09: Test Reports "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittals to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst  
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

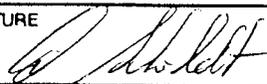
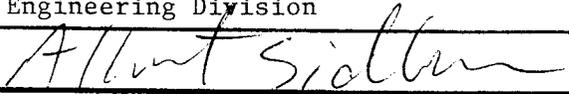
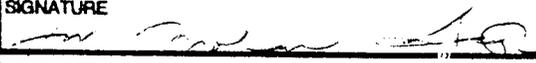
CO-C

WORK TELEPHONE NUMBER (Optional)

916, 557-7296

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Submit a separate form in quadruplicate for each report) (ER 1110-345-100)		OFFICE SYMBOL AND DATE
DOCUMENT NUMBER AND DATE CEGS-15895 February 1994	DOCUMENT TITLE Air Supply Distribution, Ventilation and Exhaust System	CESPK-ED-M 18 Jun 1997
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> CIVIL WORKS
SUBJECT "GA" Contractor Submittal		
ROUTING (Check)		ACTION RECOMMENDED BY DISTRICT COMMANDER
FROM: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M		(See Sheet 2)  OFFICE SYMBOL CESPK-ED      NAME AND TITLE (Print or Type) Brian W. Doyle, Chief, Engineering Division  DATE 20 June 97      SIGNATURE 
1a. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ 23 June 1997 (Date)	
1b. TO: Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ED	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL.  OFFICE SYMBOL CESPD-ET-E      NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division  DATE 7/21/97      SIGNATURE 	
2 TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See Attached Sheet  OFFICE SYMBOL CEMP-E      NAME AND TITLE (Print or Type) Kisuk Cheung, P.E., C, Engr. Div., D/MP  DATE 11 June 97      SIGNATURE 	
3. TO: Division Commander U.S. Army Engineer Division,  South Pacific ATTN: CESPD-ED 333 Market St. San Francisco CA 94105	COMMENTS BY DIVISION COMMANDER  OFFICE SYMBOL  NAME AND TITLE (Print or Type)  DATE  SIGNATURE	
4. RETURN TO: District Commander U.S. Army Engineer District,  Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

OFFICE SYMBOL AND DATE  
CESPK-ED-M  
18 JUN 1997

## PROBLEM DISCRPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

## 1. PROBLEM:

Instruction from HQ is to minimize the quantity of contractor submittals that require Government approval, "GA" action. But the CEGS specifies the following as "GA" even though it does not appear to fall under the "Government Approved" submittals of CEGS-01330, Paragraph 1.1.1.

SD-06: System Diagrams "GA"

## 2. RECOMMENDED SOLUTION:

Change the "GA" submittal to "FIO" (For Information Only) for the above.

NAME OF SUBMITTER (Optional)

Gene Ernst

CO-C

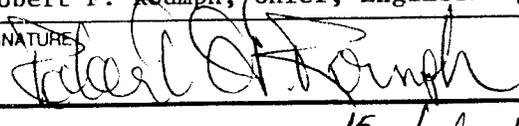
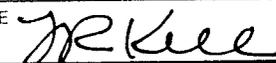
thru Steve Freitas; ED-M, CRITERIA MANAGEMENT UNIT

WORK TELEPHONE NUMBER (Optional)

( 916, 557-7296 )

COMMENT

Concur with intent to limit the need for government approval of submittals to the most critical features. We have recently completed a review of the guide specifications to confirm the need for government approval and eliminate the requirement where not considered essential. The guide specifications have or are being revised to reflect these changes. In many cases we are giving the designer the option of determining the review level depending on the project specific requirements.

RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS <i>(Submit a separate form in quadruplicate for each report)</i> <small>(ER 1110-345-710, 720 and ER 1110-2-1200)</small>		OFFICE SYMBOL AND DATE <b>CEMRO-ED-DJ</b> <b>11 June 1997</b>
DOCUMENT NUMBER AND DATE <b>CEGS 02720</b> <b>(June 1991)</b>	DOCUMENT TITLE <b>STORM-DRAINAGE SYSTEM</b>	
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) [DEFINITIVE]) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) [STANDARD]) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> ARCHITECT-ENGINEER INSTRUCTION MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT <b>VARIOUS PROBLEMS</b>		
ROUTING (Check) FROM: <b>CEMRO-ED</b> District Commander U.S. Army Engineer District, <b>1612 USPO &amp; Courthouse</b> <b>215 N. 17th Street</b> <b>Omaha, NE 68102-4978</b> 		ACTION RECOMMENDED BY DISTRICT COMMANDER  <i>(See Sheet 2)</i>
		OFFICE SYMBOL      NAME AND TITLE (Print or Type) <b>CEMRO-ED</b> <b>Robert F. Rounph, Chief, Engineering Division</b>
		DATE      SIGNATURE <b>15 July 1997</b> 
<b>1a.</b> TO: HQUSACE (CEEC-ES) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>15 July 1997</u> <i>(Date)</i>	
<b>1b.</b> TO: <b>CEMRD-ET-E</b> Division Commander U.S. Army Engineer Division, <b>Missouri River</b> <del>RXXOX Box 103 DTS</del> <del>Omaha, NE 68101-0103</del> <b>565 W. Center Rd</b> <b>Omaha, NE 68144-3869</b>	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER  See attached comments	
		OFFICE SYMBOL      NAME AND TITLE (Print or Type) <b>CEMRD-ET</b> <b>KRISTINE L. ALLAMAN, P.E.</b> Director, Engineering & Tech Services
		DATE      SIGNATURE <b>24 Jul 97</b> 
<b>2.</b> TO: HQUSACE <del>CEMRO-ED</del> <b>CEMP-EA</b> WASH DC 20314-1000	COMMENTS OR ACTION BY CHIEF OF ENGINEERS  Concur	
		OFFICE SYMBOL      NAME AND TITLE (Print or Type) <b>CEMP-EA</b> <b>Kisuk Cheung, P.E., C, Engr. Div., D/MP</b>
		DATE      SIGNATURE <b>8 Jul 97</b> 
<b>3.</b> TO: <b>CEMRD-ET-E</b> Division Commander U.S. Army Engineer Division, <b>Missouri River</b> <b>P. O. Box 103 DTS</b> <b>Omaha, NE 68101-0103</b>	COMMENTS BY DIVISION COMMANDER	
		OFFICE SYMBOL      NAME AND TITLE (Print or Type)
		DATE      SIGNATURE
<b>4.</b> RETURN TO: <b>CEMRO-ED-DI</b> District Commander U.S. Army Engineer District, <b>1612 USPO &amp; Courthouse</b> <b>215 N. 17th Street</b> <b>Omaha, NE 68102-4978</b>	COPY FURNISHED	

12  
Of

ENG Form 3078  
 Document: CEGS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

The various problems and recommended solutions for specific items in CEGS 02720, Storm-Drainage System, are as follows:

**1. Paragraph 1.1. References**

**a. Problem.** Publications referenced in recommended revisions are not included in the specification.

**b. Recommended Solution:**

Add the following additional references to Paragraph 1.1 REFERENCES:

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
 (AASHTO)

\-AASHTO MP6-\ (1995) Corrugated Polyethylene Pipe 1050 and 1200  
 mm Diameter

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

\-ASTM C 828-\ (1990) Low-Pressure Air Test of Vitrified Clay  
 Pipe Lines

\-ASTM C 924-\ (1989) Concrete Pipe Sewer Lines by Low-Pressure  
 Air Test Method

\-ASTM C 1103-\ (1994) Joint Acceptance Testing of Installed  
 Precast Concrete Pipe Sewer Lines

\-ASTM F 1417-\ (1992) Installation Acceptance of Plastic Gravity  
 Sewer Lines Using Low-Pressure Air

ENG Form 3078  
Document: CFCG-02720, Storm-Drainage System  
Subject: Various Problems

CEMRO-ED-DJ  
11 July 1997

## 2. Paragraph 1.4.1 Delivery and Storage

a. **Problem:** Plastic materials are required to be protected from exposure to direct sunlight over extended periods. HDPE pipe is not prone to brittleness if stored above ground and exposed to long-term sunlight because of the carbon black content. Also, the requirements for delivery and storage should be consistent with Section 02730 SANITARY SEWERS.

b. **Recommended Solution:** Revise paragraphs as indicated below.

Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Gasket materials and plastic materials shall be protected from exposure to the direct sunlight over extended periods. Before, during, and after installation, plastic pipe and fittings shall be protected from any environment that would result in damage or deterioration to the material. The Contractor shall have a copy of the manufacturer's instructions available at the construction site at all times and shall follow these instructions unless directed otherwise by the Contracting Officer. Solvents, solvent compounds, lubricants, elastomeric gaskets, and any similar materials required to install plastic pipe shall be stored in accordance with the manufacturer's recommendations and shall be discarded if the storage period exceeds the recommended shelf life. Solvents in use shall be discarded when the recommended pot life is exceeded.

ENG Form 3078  
Document: CEGS-02720, Storm-Drainage System  
Subject: Various Problems

CEMRO-ED-DJ  
12 July 1997

**3. Paragraph 2.1.3.5 Concrete-Lined**

**a. Problem:** The option for aluminum-coated and aluminum-zinc alloy coated pipe is permitted for concrete lined pipe. The aluminum coating may react adversely with and damage the concrete lining. Also, the option for type IR corrugated steel pipe is permitted. Since type IR pipe has a manning's n value equivalent to concrete pipe, it isn't necessary to line this type of pipe with concrete.

**b. Recommended Solution:** Delete option for aluminum-coated and aluminum-zinc coated pipe. Also, delete option for type IR pipe.

ENG Form 3078  
 Document: CEGS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

5. Paragraph 2.1.9.2 Corrugated PE Pipe

- a. **Problem:** Corrugated PE pipe is currently being manufactured in 42 inch and 48 inch diameters.
- b. **Recommended Solution:** Add requirements for 42 inch and 48 inch pipe.

6. Paragraph 2.1.9.2 Corrugated PE Pipe

- a. **Problem:** Metric pipe sizes are inconsistent with AASHTO M 294.
- b. **Recommended Solution:** Revise metric pipe sizes to agree with AASHTO M 294.

\-AASHTO M 294-\, Type S, for pipes  $\wedge^{300}$  to  $900$  mm $\wedge$  \-12 to 36 inches-\ and  
\-AASHTO MP6-\, Type S or D, for pipes  $\wedge^{1050}$  to  $1200$  mm $\wedge$  \-42 to 48 inches-\,  
 produced from PE certified by the resin producer as meeting the requirements of  
 \-ASTM D 3350-\, minimum cell class 315412C or 324420C. Pipe walls shall have  
 the following properties:

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Nominal Size (mm)	Minimum Wall Area (square mm/m)	Minimum Moment of Inertia of Wall Section (mm to the 4th/mm)
<u>300</u> <u>5</u>	3200	390
<u>375</u> <u>80</u>	4000	870
<u>450</u> <u>5</u>	4900	1020
<u>600</u> <u>10</u>	6600	1900
<u>750</u> <u>60</u>	8300	2670
<u>900</u> <u>15</u>	9500	3640
<u>1050</u>	<u>9900</u>	<u>8900</u>
<u>1200</u>	<u>10900</u>	<u>8900</u>

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ENG Form 3078  
 Document: CEGS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

6. Paragraph 2.1.9.2 Corrugated PE Pipe (CONTINUED)

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Nominal Size (in.)	Minimum Wall Area (square in/ft)	Minimum Moment of Inertia of Wall Section (in to the 4th/in)
12	1.50	0.024
15	1.91	0.053
18	2.34	0.062
24	3.14	0.116
30	3.92	0.163
36	4.50	0.222
<u>42</u>	<u>4.69</u>	<u>0.543</u>
<u>48</u>	<u>5.15</u>	<u>0.543</u>

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ENG Form 3078  
 Document: CEGS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

7. Paragraph 3.3 \\*PLACING PIPE\*\

**a. Problem:** Section 02720 STORM-DRAINAGE SYSTEM specifies a maximum allowable deflection of 4.5 percent for plastic pipe. Section 02730 SANITARY SEWERS permits a maximum deflection of 7.5 percent. The maximum allowable deflection for flexible storm drain pipe should not be less than that for sanitary sewer pipe. Also, there are no deflection requirements for other types of flexible pipe such as corrugated metal and ductile iron.

**b. Recommended Solution:** Revise maximum allowable deflection for plastic pipe from 4.5% to 7.5%. Add maximum allowable deflection requirements for corrugated metal and ductile iron pipe.

Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Plastic pipe shall be protected from exposure to the direct sunlight prior to laying as needed if necessary to maintain adequate pipe stiffness and meet installation deflection requirements. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Lifting lugs in vertically elongated metal pipe shall be placed in the same vertical plane as the major axis of the pipe. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. Deflection of installed plastic pipe shall not exceed 4.5 percent of the nominal inside diameter. After backfilling has been completed, the Government may perform a deflection test on the entire length of installed plastic pipeline using a mandrel or other suitable device. Any plastic pipe showing deflections in excess of 4.5 percent shall be removed and replaced at the Contractor's expense. All pipe in place shall be inspected before backfilling, and those pipes damaged during placement shall be removed and replaced. Deflection of installed flexible pipe shall not exceed the following limits:

Type of Pipe	Maximum Allowable Deflection (%)
Corrugated Steel and Aluminum Alloy Pipe	5
Concrete-Lined Corrugated Steel Pipe	3
Ductile Iron Culvert Pipe	3
Plastic Pipe	7.5

ENG Form 3078  
Document: CEGS-02720, Storm-Drainage System  
Subject: Various Problems

CEMRO-ED-DJ  
11 July 1997

7. Paragraph 3.3 \\*PLACING PIPE\*\ (CONTINUED)

Not less than 30 days after the completion of backfilling, the Government may perform a deflection test on the entire length of installed flexible pipe using a mandrel or other suitable device. Installed flexible pipe showing deflections greater than those indicated above shall be retested by a run from the opposite direction. If the retest also fails, the suspect pipe shall be replaced at no cost to the Government.

ENG Form 3078  
 Document: CEGS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

8. Paragraph 3.8 \+\**\*PIPELINE TESTING\***\+\

a. **Problem:** Leakage testing is limited to only the exfiltration test. The contractor should have the option to air test pipelines as specified in Section 02730 SANITARY SEWERS. Also, determining watertightness of large diameter pipelines using exfiltration test is not practical. The Contractor should have the option to air/water test individual joints in larger diameter pipes to determine watertightness.

b. **Recommended Solution:** Include option for air testing pipeline and air/water testing individual joints.

9. Paragraph 3.8 \+\**\*PIPELINE TESTING\***\+\

**Problem:** The metric leakage rate per kilometer is incorrect.

**Recommended Solution:** 250 gallons per inch in diameter per mile is equivalent to 60 liters per mm per kilometer. The second metric leakage rate option should be changed from kilometers to 100 meters for use in testing shorter pipe lengths and consistency with Section 02730 SANITARY SEWERS. Revise paragraph as indicated below.

Lines shall be tested for leakage by low pressure air or water testing or exfiltration tests, as appropriate. Low pressure air testing for vitrified clay pipes shall conform to \-ASTM C 828-\. Low pressure air testing for concrete pipes shall conform to \-ASTM C 924-\. Low pressure air testing for plastic pipe shall conform to \-ASTM F 1417-\. Low pressure air testing procedures for other pipe materials shall use the pressures and testing times prescribed in \-ASTM C 828-\ or \-ASTM C 924-\, after consultation with the pipe manufacturer. Testing of individual joints for leakage by low pressure air or water shall conform to \-ASTM C 1103-\. Lines shall be tested for leakage by exfiltration tests. Prior to exfiltration tests testing for leakage the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is  $\wedge 600 \text{ mm} \wedge$   $\wedge 2 \text{ feet} \wedge$  or more above the top of the pipe at the upper end of the pipeline section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Contracting Officer. An exfiltration test shall be made by filling the line to be tested with water so that a head of at least  $\wedge 600 \text{ mm} \wedge$   $\wedge 2 \text{ feet} \wedge$  is provided above both the water table and the top of the pipe at the upper end of the pipeline to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not

ENG Form 3078  
 Document: CPCS-02720, Storm-Drainage System  
 Subject: Various Problems

CEMRO-ED-DJ  
 11 July 1997

**9. Paragraph 3.8 \+\*\PIPELINE TESTING\*\+ (CONTINUED)**

less than 4 hours. After absorption, the head shall be reestablished. The amount of water required to maintain this water level during a 2-hour test period shall be measured. Leakage as measured by the exfiltration test shall not exceed [~~23.2~~ 60 liters per mm in diameter per kilometer (250 gallons per inch in diameter per mile)] ~~^~~ \-250 gallons per inch in diameter per mile-\ of pipeline per day] [~~0.98~~ 9 mL per mm in diameter per kilometers 100 meters (0.2 gallons per inch in diameter per 100 feet)] ~~^~~ \-0.2 gallons per inch in diameter per 100 feet-\ of pipeline per hour]. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished. Testing, correcting, and retesting shall be made at no additional cost to the Government.

1. This office agrees that all of the references used in the text should be reflected in 1.1 REFERENCES.
2. Paragraph 1.4.1 Delivery and Storage should include protection of plastic pipe. Current guidance requires government specifications, including CEGS, to use commercial standards where available. The following publications address plastic pipe handling and storage.

ANSI Z400.1 (1993) Hazardous Industrial Chemicals-Material Safety Data Sheets-Preparation

ASTM D 3892 (1993) Packaging/Packing of Plastics

ASTM F 402 (1993) Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings

NFPA 49 (1994) Hazardous Chemicals Data

NFPA 325M (1991) Fire Hazard Properties of Flammable Liquids, Gases, and Volatile Solids

For what it is worth, the following is abstracted from the draft of GS 02150 PIPING: OFF-GAS.

#### 1.7 DELIVERY AND STORAGE

##### 1.7.1 Packaging

Plastic pipe shall be packed, packaged and marked in accordance with \-ASTM D 3892-\.

##### 1.7.2 Cleaners, Solvents and Glues

A material safety data sheet in conformance with \-ANSI Z400.1-\ shall accompany each chemical delivered for use in pipe installation. Handling shall be in accordance with \-ASTM F 402-\.

##### 1.7.3 Storage

Storage facilities shall be classified and marked in accordance with \-NFPA 704-\, with classification as indicated in \-NFPA 49-\ and \-NFPA 325M-\.

This draft paragraph may be more elaborate than necessary to meet the intent. Consider the commercial standards.

3. This office agrees that the deletions from Paragraph 2.1.3.5 Concrete-Lined are appropriate. (a) Combination of either [aluminum coated] or [aluminum-zinc alloy coated] steel and concrete is not appropriate. (b) The implied assumptions for deletion of type IR pipe (1) adding a concrete lining to type IR

pipe would increase the cost of type IR beyond the competitive range and (2) there is no reason for concrete lining type IR pipe other than smoothing the invert might be challenged if paragraph 2.1.3.1 did not allow type IR pipe.

Verification was not thorough because the 1995 revisions of ASTM A 849-95, ASTM A 760-95b and A762-95a were not included in the 1997 printing of Volume 01.01 Steel - Piping, Tubing, Fittings. The revisions are current and summarized at <http://www.astm.org>.

4. This office agrees that the deletion of AASHTO M304 from Paragraph 2.1.8 is appropriate. Moving the AASHTO M304 to 2.1.8.2 Profile PVC pipe, to which it is applicable, should be considered. ASTM D 1784, referred to by 2.1.8.1, 2.1.8.2, 2.1.8.3 and 2.1.8.4, specifically excludes rigid PVC compounds intended for pipe, fittings and other piping appurtenances by referring to D 3915 for pressure pipe and D 3496 for nonpressure pipe.
5. This office agrees that paragraph 2.1.9.2 should be updated to include 42-inch and 48-inch polyethylene pipe as shown. The notes should be expanded to include any additional special precautions for use of polyethylene in the larger diameters.
6. This office agrees that the metric equivalents for AASHTO paragraph 2.1.9.2 should be corrected as suggested.
7. The inconsistency in requirements between sanitary sewers and storm drains appears to result from the use of percentage of the nominal diameter to derive the deflection allowance. The greater diameter storm drain will normally allow greater vertical deflection than the lesser diameter sanitary sewer. 7.5% deflection is acceptable only for pipe with diameters less than 15 inches. For pipe greater than 36-inch deflection greater than 4.5% may be excessive.
8. The function of the exfiltration test is satisfied by air testing. Air testing should be allowed as an option.
9. Suggested changes to paragraph 3.8 would improve the specification.

ENG Form 3078  
Document: CEGS-02720, Storm-Drainage System  
Subject: Various Problems

CEMRO-ED-DJ  
11 July 1997

**4. Paragraph 2.1.8 PVC Pipe**

**a. Problem:** The paragraph indicates that all PVC pipe should be manufactured in accordance with AASHTO M 304. AASHTO M 304 specifies profile wall and corrugated PVC pipe. These types of pipes are already specified in paragraphs 2.1.8.2 and 2.1.8.4. Paragraphs 2.1.8.1 and 2.1.8.3 specify smooth wall pipe and AASHTO M 304 is not applicable to these types of pipe.

**b. Recommended Solution:** Delete reference to AASHTO M 304.

