

# Memorandum

Date: May 26, 2006

To: Frank Wernette, Environmental Program Manager I  
Department of Fish and Game  
4001 North Wilson Way  
Stockton, CA 95205

From: Ted Frink, Chief, Resource Restoration Section  
Department of Water Resources

Subject: Internal Engineering Review of the Northern Pike Containment System at the Outlet of Lake Davis on Big Grizzly Creek

The Department of Water Resources conducted an internal engineering review of the 90% designs prepared for the Northern Pike Containment System at the Outlet of Lake Davis on Big Grizzly Creek. Internal engineering reviews are a part of every design effort that DWR completes, and are conducted according to the attached Division of Engineering Procedures (DWR 2002). The review was thorough; however, several of the verbal comments came in after the review period. Plans and specifications were reviewed by the staff April 1-7, 2006. Verbal and written comments were provided by

Tim Kennelly, P.E., Chief, Corrosion Engineering Services

- Mike Inamine, P.E., Chief, Construction Office
- Gary Mass, P.E., Division of Engineering Concrete Consultant
- Leslie Pierce, Senior Environmental Scientist
- Mike Hendrick, Environmental Scientist
- Tom Higgins, Division of Engineering-Construction Office (verbal)
- John Hickey, Division of Engineering-Safety Office
- Al Rock, S.E., Division of Engineering (verbal)
- T.C. Liu, P.E., Division of Engineering (verbal)
- Scott Hunt, P.E., Division of Operations and Maintenance (verbal)
- David Panec, P.E., Division of Operations and Maintenance (verbal)

Comments covered coating materials for steel pipe, valves and strainers; reinforced concrete, thrust and seismic-induced forces on pipe and strainers; and, clarification of environmental constraints on the project. Copies of the written comments are attached to this memorandum. The comments were addressed and incorporated into the final contract plans and specifications. No comments indicated any fatal flaws with the design.

If you have any questions about the engineering design review, please contact David Panec at (916) 653-0772 or by e-mail at [dpanec@water.ca.gov](mailto:dpanec@water.ca.gov), or myself at (916) 651-9618 or [tfrink@water.ca.gov](mailto:tfrink@water.ca.gov).

Attachments

cc. Tom Schroyer  
Department of Fish and Game  
Central Valley Bay Delta Branch  
830 S Street  
Sacramento, CA 95814

David Panec  
Gordon Enas  
Leslie Pierce

**Enas, Gordon**

**From:** Kennelly, Tim  
**Sent:** Thursday, April 06, 2006 8:24 AM  
**To:** Panec, David; Veres, Jim; Enas, Gordon  
**Cc:** Sutliff, Teresa; Peddy, Jim  
**Subject:** RE: Lake Davis Fish Containment Project Comments  
**Attachments:** 09970 Coatings.doc

Good morning all,

Please use the attached coating specification for the Lake Davis Fish Containment Project. It reflects the coatings that we are able to use and will be sufficient for a 5 or more year life.

Regards,

Tim

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**From:** Panec, David  
**Sent:** Tuesday, April 04, 2006 3:50 PM  
**To:** Kennelly, Tim  
**Cc:** Sutliff, Teresa; Veres, Jim; Enas, Gordon; Peddy, Jim  
**Subject:** RE: Lake Davis Fish Containment Project Comments

Tim,

Can you provide a coating recommendation with the understanding that the project is being designed for only a five year life?

Thanx

David L. Panec, P.E.  
Chief, Dam Safety Section  
Division of Operations and Maintenance  
California Department of Water Resources  
916-653-0772 (work phone)  
916-802-7678 (work cell)  
530-291-9571 (pager)  
916-654-5554 (fax)

*"Do all you can with what you have in the time you have in the place you are." Nkosi Johnson, age 11, deceased at age 12 from AIDS.*

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**From:** Kennelly, Tim  
**Sent:** Tuesday, April 04, 2006 3:06 PM  
**To:** Panec, David

5/5/2006

**Subject:** FW: Lake Davis Fish Containment Project Comments

Sorry I didn't cc you David. I just found out you are the O&M contact for the project.

Tim

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**From:** Kennelly, Tim  
**Sent:** Tuesday, April 04, 2006 1:25 PM  
**To:** Liu, T. C.; Veres, Jim  
**Cc:** Behnam, Banafsheh; Sutliff, Teresa  
**Subject:** Lake Davis Fish Containment Project Comments

Good afternoon,

I reviewed the preliminary plans and specifications for the Lake Davis Fish Containment project and have the following comments:

- 1) The coating specification is outdated and the coating types are wrong for some of the exposures. The coating spec will need to be rewritten.
- 2) Also, the coating specification is placed in the wrong section. The coating specification should be in Division 9 Section 09970.

If you have any questions, please let me know.

Regards,

***Tim Kennelly, Chief***

***Corrosion Engineering Services***

***Department of Water Resources***

**SPECIFICATION NO. 06-XX  
CONTRACT NO. C513XX  
LAKE DAVIS FISH CONTAINMENT PROJECT  
UPPER FEATHER RIVER DIVISION**

**COMMENTS BY: Gary R. Mass, P.E.  
April 6, 2006**

**GENERAL**

Drawings:

1. No comment on concrete work on the drawings as they were incomplete.

Technical Specifications:

1. Section 01330, pages 01330-11 to 01330-17: The submittal register needs to be revised to be consistent with these documents.

**SPECIFIC**

1. Page 01570-5, Paragraph 1.07,B.,3., last sentence: This sentence does not make sense?
2. Page 01570-7, Paragraph 1.11,A.: first sentence: Update the contact for Plumas County
3. Page 02200-3, Paragraph 3.02,A.,1., 3<sup>rd</sup> line: Change "in Paragraph 3.01 A." to "hereinafter."
4. Page 02200-3, Paragraph 3.02,A.,2., 3<sup>rd</sup> line: Change "in Paragraph 3.01 B." to "hereinafter."
5. Page 03006-1, Paragraph 1.02,A.,1.: Section 02300 – Earthwork was not included in these documents.
6. Page 03006-1, Paragraph 1.02,A.: Are Sections 13423, 15105, and 16050 relevant to concrete work?
7. Page 03006-2, Paragraph 1.03,A.,3.: Start the listing with the following two specifications to be in chronological order:

ASTM A 185 – Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.

ASTM A 615 – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

8. Page 03006-2, Paragraph 1.03,A.,3.,e.: Change title to "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete."
9. Page 03006-2, Paragraph 1.03,A.,3.,j.: After j insert a new standard as follows:

ASTM C 260 – Standard Specification for Air-Entraining Admixtures for Concrete.

10. Page 03006-3, Paragraph 1.03,A.,3.,m.: Delete this as ASTM A 615 was moved to the front of the list

Page 03006-3, Paragraph 1.03,A.,3.,p.: After this standard insert the following three standard that are mentioned in the text:

ASTM D 1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Bituminous Types).

ASTM D 1752 – Standard Specification for Preformed Sponge Rubber, Cork, and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.

ASTM D 5249 – Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints.

12. Page 03006-3, Paragraph 1.03,A.,4.: After paragraph 4. insert a new paragraph as follows and re-number remaining paragraphs:

5. Federal Specifications (FS):

- a. FS TT-S-00227E (COM-NBS) – Interim Federal Specification for Sealing Compound: Elastomeric Type, Multi Component (for Caulking, Sealing, and Glazing in Buildings and Other Structures).

13. Page 03006-4, Paragraph 1.04,A.,2.,b., 2<sup>nd</sup> line: After “sources for” insert “reinforcement”

14. Page 03006-4, Paragraph 1.04,A.,2.,d.: After paragraph d. insert a new paragraph as follows:

- e. Submit product data for joint materials, curing compound, sealants, bonding agents, nonshrink grout and all other miscellaneous concrete related materials that are required or proposed.

15. Page 03006-4, Paragraph 2.01,C.,1., 2<sup>nd</sup> line: Delete “including the optional physical requirements for false set” as false set is not a problem with ready-mixed concrete.

16. Page 03006-5, Paragraph 2.01,C.,3.: After paragraph 3. insert a new paragraph as follows and re-number remaining paragraphs:

4. Air-entraining admixture shall conform to ASTM C 260.

17. Page 03006-5, Paragraph 2.01,D.,1., 2<sup>nd</sup> line: Change “admixture” to “admixtures”

18. Page 03006-6, Paragraph 2.01,D.,5., 2<sup>nd</sup> line: Add the following sentences: “The strength of concrete will be considered acceptable if the moving average of three consecutive strength tests is above the specified design strength and no individual test is more than 500 psi below the specified design strength. A test will be the average of the test results on two cylinders from the same sample tested at the same age. Low strength concrete shall be investigated in accordance with procedures contained in ACI 301, as directed, and at the Contractor expense.”

19. Page 03006-6, Paragraph 2.01,E.: After paragraph E. insert a new paragraph as follows and re-number the remaining paragraphs:

F. Air Content: The air content of concrete as placed in the work shall be between 3.5 and 5.5 percent, as determined by ASTM C 231, for concrete with a 1-1/2 inch

nominal maximum size aggregate. If 1 inch or ¾ inch nominal maximum size aggregate concrete is permitted for any portion of the work the air content of concrete as placed shall be between 5.5 and 7.5 percent.

20. Page 03006-8, Paragraph 2.04,A.: Change paragraph to read as follows:  
A. Nonshrink Grout: Grout shall conform to ASTM C 1107, Type B or C.
21. Page 03006-8, Paragraph 2.04,B.,1.: Change to read as follows:  
"Expansion/contraction joint filler shall conform to ASTM D 1751 or ASTM D 1752, Type 1, as shown on the Drawings or as directed."
22. Page 03006-9, Paragraph 2.04,D.: Change "Bond breaker" to "Backer rod"
23. Page 03006-10, Paragraph 3.02,C., 2<sup>nd</sup> line: Delete the 2<sup>nd</sup> sentence as this is already stated in Paragraph 3.01,A.
24. Page 03006-12, Paragraph 3.04,B.,1.,e.: Since there is no "U4" finish, change to read: "Finish class is designated by Symbols U1, U2, and U3."
25. Page 03006-12, Paragraph 3.04,B.,2.,a., 2<sup>nd</sup> line: Delete "in Table 03300 A"
26. Page 03006-13, Paragraph 3.04,B.,3.,a., 3<sup>rd</sup> line: Delete "in Table 03300 A"
27. Page 03006-15, Paragraph 3.07: After Paragraph 3.07 insert a new paragraph as follows:

### 3.08 JOINTS

- A. Joints shall be installed where shown on the Drawings or approved.
  - B. Expansion/contraction joint materials shall be installed in accordance with the manufacturer's recommendations. Expansion/contraction joint material shall completely cover the joint surface.
  - C. Bond breaker shall consist of curing compound and shall be applied where directed.
  - D. Joints to receive sealant shall be dry and shall be cleaned by sandblast or wire brushing to remove all loose material and laitance. Backer rod shall be installed where required.
  - E. Joint sealant shall be applied according to the manufacturer's instructions.
28. Page 05515-1, Paragraph 1.02,A.,2.: Delete, or include Section 09970 in these documents
  29. Page 05515-8, Paragraph 2.08,B.,1.: Section 09970 – Coatings was not included in these documents. If galvanizing is needed add requirements.
  30. Page 13423-1, Paragraph 1.02,A.,2.: Why was Section 03006 included as a related section?
  31. Page 15105-1, Paragraph 1.02,A.,2.: Why was Section 03006 included as a related section?

## Lake Davis Fish Containment Project Specification Comments

Pg 01110-3 section 1.06 Outages, part A.

Tell them 2 outages (one for bar racks and one for bypass line installation). May be 4 additional, but goal is two only.

Pg 01330-8 section 1.04 Contractor's Roads and Construction Plants, part A-2.

No seeding will be done by contractor

Pg 01520-1, section 1.02 Power and Water, part A

The contractor shall provide electrical power and **clean non-chlorinated** water for construction activities at the work site.

Pg 01570-1, section 1.01 Description, part A

In the following sentence: Environmental protection affects several resources areas, including biological resources, hydrology, and water quality.

We took out the air quality and replaced it w/ hydrology to make it consistent with the initial study.

Pg 01570-2, section 1.02 Related Sections, part A-4.

Section 02925 – Seeding, delete this section

Pg 01570-2, section 1.03 References, Part A should read as follows:

1. CEQA- California Environmental Quality Act. Mitigated Negative Declaration and Initial Study
2. CWA 404 - Clean Water Act 404. Nationwide Permits 3 and 33
3. CWA 401 – Clean Water Act. Water Quality Certification
4. DFG 1600 – California Department of Fish and Game Compliance
5. ESA - Letter of concurrence for Endangered Species Act
6. NOD – Notice of Determination

Pg 01570-2, section 1.04 Submittals, part A

Should add a number for “coordination w/ Plumas County Public works

Pg 01570-3, section 1.05 Delivery, Storage, etc, Part A – 1,

Should add something that reads “In the event of an oil spill, the contractor will notify the DWR inspector immediately.

Pg 01570-4, section 1.06 Sensitive Species, Part B should read

Known sensitive resources at the work sited include: American peregrine falcon, bank swallow, greater sandhill crane, fisher, southern bald eagle, willow flycatcher, mountain yellow-legged frog, California wolverine, and Serra Nevada red fox. A notable wild trout fishery exists in Big Grizzly Creek.



Pg 01570-4, section 1.07 Environmental Training Session, Part A

At the end of the last sentence add the following: , and will include northern pike education.

Pg 01570-5, section 1.07 Environmental Training Session, Part B

At a section about education on northern pike, and a section to “notify DWR inspector immediately in the event of an oil spill”.

Pg 01570-9, section 1.12 Traffic Control Plan, Part A-2

Be sure Plumas Count is aware of schedule, they have some guard rail work on top of the dam for this year

Pg 01640-3, section 1.04 Delivery, Storage, etc, Part B

Somewhere add the storage to occur in designated areas only

Pg 02200-2, section 3.01 Selective Demolition, Part C

Add a new number for “use clean non-chlorinated off-site water

Pg 03006-5, section 2.01 Concrete, Part C-5

Start should read, “Clean offsite water for washing...”

Pg 03006-9, section 2.04 Accessories, Part E -2

Again make sure that water reads as clean offsite water, unless location where truck gets Lake Davis water is cleared by a DWR Environmental Scientist.

Pg 03006-13, section 3.05 Curing, Part A

Again, clean offsite water

Pg 16050-8, section 2.11 Area Lighting, Part A-7

Should we mention the lights are to be pointed downward?

**OFFICE MEMO**

<b>TO:</b> Mike Inamine Chief, Construction Office	<b>DATE:</b> April 4, 2006
<b>FROM:</b> Al Romero Project Safety Office	<b>SUBJECT:</b> Specification No. 06-XX- Review of Preliminary Contract Drawings and Specifications for Lake Davis Fish Containment Project, Upper Feather River Division

I have reviewed the Preliminary Contract Drawings and Specifications for the Lake Davis Fish Containment Project and have the following comments and recommendation:

**Comments:**

In Section 01110, Part 1, Paragraph 1.01 A.1 (Miscellaneous Sitework), the summary of work includes demolition of existing concrete structures and removal of existing steel piping. I recommend that these features be investigated for the presence of lead-based paint and asbestos. I am available to conduct the bulk sampling and shipping the samples off for analysis.

The contractor should be informed that this is a remote site and that communications may be difficult and that emergency response might be slower.

Cc: T. C. Liu  
J. Veres  
J. Hickey

**From:** Panec, David  
**Sent:** Monday, April 17, 2006 10:24 AM  
**To:** Enas, Gordon  
**Cc:** Peddy, Jim; Pennington, Bill  
**Subject:** DSOD comments on Lake Davis Strainer  
Gordon,

DSOD had a few comments about the strainer design.

Make sure there are a sufficient number of dresser couplings to accommodate pipe strain that may occur and change with the differing flow configurations.

Make sure there is an adequate air-pressure release D/S of the existing 30-inch valve.

Make sure the differential strain between the two new outlet pipes are considered and addressed.

Thanx

David L. Panec, P.E.  
Chief, Dam Safety Section  
Division of Operations and Maintenance  
California Department of Water Resources  
916-653-0772 (work phone)  
916-802-7678 (work cell)  
530-291-9571 (pager)  
916-654-5554 (fax)

*"Do all you can with what you have in the time you have in the place you are." Nkosi Johnson, age 11, deceased at age 12 from AIDS.*

Final (03/12/02)

State of California  
The Resources Agency  
Department of Water ResourcesDOE PROCEDURES  
VOLUME 2.– Design ManualSECTION 11 – Review of Drawings and Specifications

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## 2.11.1 INTRODUCTION

The purpose of this section is to assure uniformity and control over distribution of drafts of construction drawings and specifications to the various offices for review and comment. Construction drawings and specifications for every project shall be distributed for review unless otherwise approved by the Division Chief.

## 2.11.2 POLICY

The Contract Services Branch, Contract Development Section, Specifications Unit will initiate a memorandum transmitting review sets of drawings and specifications to participants and the various offices of the Department. The review drawings and specifications shall be 80 to 90 % complete so that a meaningful review can be made. The memorandum shall include the cost object number and a maximum number of hours that may be charged. The memorandum, together with copies of the specifications will be routed for sign-off by designers and delivered to the Division Program Manager by the Specifications Unit. The Division Program Manager or Job Manager will distribute review material.

The memorandum will specify the date written comments are due and request that a copy of the review comments be furnished to the Division Program Manager and the Specifications Unit. On expedited projects the memorandum will specify a date and time for a meeting to discuss and resolve.

### 2.11.3 DISTRIBUTION

On expedited projects the distribution list shall be to the necessary participants and client. Generally, the distribution shall be as follows:

- Division Chief (without attachments)
- Deputy Division Chief
- Civil Engineering Branch Chief
- Contract Services Branch Chief
- Mechanical and Electrical Engineering Branch Chief\*
- Contract Development Section Chief (5)
- Contract Administration Chief (2)
- Supervising Engineering Geologist \*
- Supervising Architect \*
- Supervising Civil Engineer\*
- Supervising Mechanical Engineer \*
- Supervising Electrical Engineer \*
- DSOD\*
- Supervisor of Equipment and Materials Section (2)\*
- Chief Counsel (2)
- Field Division Chief (3 – Express Mail)
- Project Headquarters, Sacramento or Lancaster (2)
- O & M Water and Plant Engineering Office (5)\*
- Division of Land and Right of Way Chief \*
- Administrative Officer (without attachments)
- Senior Specifications Writer
- Safety Officer
- Soils and Concrete Lab (2) \*
- Concrete Consultant \*
- Division Environmental Specialist \*
- Other participants

\*Only if a participant

The Division Program Manager will initiate separate correspondence to distribute review material to outside agencies, where necessary.

### 2.11.4 RESPONSE TO COMMENTS

The Division Job Manager shall review the comments for incorporating into the project. Written comments that are not incorporated into the project shall have a written response to the sender, stating the reason why they were not used.

END OF SECTION