



IMPERIAL IRRIGATION DISTRICT

July 28, 2011

Mr. Doug Wylie
California Regional Water Quality Control Board
Colorado River Basin Region 7
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Subject: Cease and Desist Order No. R7-2009-0049 Deep Injection Well Project Timeline

Dear Mr. Wylie:

The IID is submitting a chronological time line representing the major events that have transpired during the evolution of the El Centro Generating Station Deep Injection Well Project and the development phase preceding the Project. The time line also contains scheduled dates for major events in the Project from today until the anticipated date of full compliance with the NPDES permit limits. Also included are schedules identifying the anticipated construction and testing activities of the deep wells and collection system. IID has requested a Cease and Desist Order (CDO) to reflect the selection of injection wells as a compliance solution and milestone dates representative of this project. Our understanding is that CRWQCB staff will present the new CDO at their September Board meeting.

IID is committed to remaining in full compliance with all of the provisions of the Cease and Desist Order going forward.

If you have any questions, feel free to contact me at (760) 339-0506.

Sincerely,

Michael Taylor
General Supt., Generation Plant
Energy Production

Cc: D. Kolk
H. Oistowski
W. Layne
M. Bogart

Imperial Irrigation District

Deep Injection Well Project Timeline

July 25, 2011

- Nov. 1, 2005 URS Corp. presented a Wastewater Compliance Strategy report to IID identifying reverse osmosis treatment with evaporation ponds as the preferred strategy to comply with CTR requirements. (URS waste water strategy report 11/1/05)
- Feb. 28, 2006 URS Corp. submitted to IID the Wastewater Compliance Strategy Final Report. This report identified treatment options as ion exchange, deep well injection, and water pretreatment with an RO. The report recommended deep well injection as the preferred option. (URS final report 3/1/06)
- Mar. 10, 2006 URS contracted to further evaluate deep well injection and the technical feasibility of RO treatment and evaporation ponds. (URS proposal 3/10/06)
- Apr. 11, 2006 IID received a proposal from URS to prepare the Class 1 deep injection well permit application. (URS Proposal 4/11/06)
- Nov. 13, 2006 IID sent a letter to the CRWQCB notifying the agency that IID had submitted a class 1 Underground injection Control permit application for 3 class 1 wells at the El Centro Generating Station. (IID ltr 11/13/06)
- Oct. 9, 2007 IID internal memo sent to the Supt. Of Project Management justifying the Deep Injection Well Project as a priority project. (Interoffice memo 100/9/07)
- Nov. 1, 2007 RFQ #613 ECGS Injection Wells bids received from 2 bidders. (Bid return pricing sheet 11/7/07)

Nov. 26, 2007 IID sent a letter to the CRWQCB identifying the cost of deep injection wells at more than twice the budgeted amount and the project was not financially feasible. (IID ltr 11/27/07)

Jan 17, 2008 URS contracted to respond to UIC Application EPA questions.

Mar. 17, 2008 General Electric Water Treatment began a pilot test treating cooling tower waters to determine the effectiveness of their chemicals in removing copper and other metals.

May 23, 2008 IID completed a Biological Assessment and report and requested the USEPA to reclassify the receiving water as fresh water. (Bioassessment ltr 5/27/08)

Sep. 15, 2008 GE pilot test ended. The treatment program was not successful in reducing copper below permit limits. (URS report 10/17/08)

Dec. 18, 2008 Siemens Water Technology performed effluent treatability study using ion exchange technology to reduce metals. The study determined that metals could not be reduced below permit limits.

May 12, 2009 RFP701 ECGS Wastewater Treatment Bids received

May 22, 2009 CDO R7-2009-0049 issued. (CRWQCB document)

Jun. 22. 2009 NPDES Permit R7-2009-0020 issued (CRWQCB document)

Jul. 6, 2009 Bidders made presentations for RO waste water treatment project to explain their respective process and comment on operations and maintenance.

Jul. 14, 2009 Qrtly. Report sent to CRWQCB. (IID ltr 7/14/09)

Jul. 2009 URS working on Discharge to Land permit for Evaporation Ponds.

Sep. 9, 2009 IID in talks with City of El Centro to accept IID waste water. The city ultimately could not accept IID effluent into their

system due to compliance issues with the City's NPDES Permit.

- Oct. 1, 2009 IID issued RFP for Deep Injection Well project. (IID documents 10/1/09)
- Oct. 14, 2009 Qrtly. Report sent to CRWQCB.
- Nov. 5, 2009 Deep Well Project Bids due to IID.
- Nov. 9, 2009 RO wastewater treatment bid evaluation complete by IID.
- Dec. 2, 2009 IID evaluated Deep Injection Well Project bid responses and internally selected Deep Injection Well as primary option.
- Dec. 22, 2009 IID submitted Pollution Prevention Plan, Milestone 1. The PPP identified both RO treatment and deep injection well as possible solutions. RO treatment was identified as the preferred method but "Further engineering design analysis of the proposed conceptual scheme will be needed to determine the design and construction feasibility, detailed capital and O&M cost, design specifications, and preliminary construction schedules". (IID PPP sec. 4.4 12/22/09)
- Jan. 2010 IID submitted Deep Injection Well Permit Application Amendment to the USEPA.
- Jan. 15, 2010 Qrtly. Report sent to the CRWQCB.
- Feb. 9, 2010 IID Board presentation on Deep Injection Well Project planned.
- Apr. 15, 2010 Qrtly. Report sent to the CRWQCB.
- Jun. 30, 2010 IID submitted design package for Deep Injection Well project to the CRWQCB, Milestone 2.
- July 2010 IID Board directed staff to review alternative options.
- July 2010 IID talked with City of El Centro, City of Imperial, Cal Energy, and Ormat concerning any interest in wastewater. Negative response from all parties was received.

July 2010 Crown Solutions study and testing began. This study included of various chemical treatments to reduce metals in the effluent water. The test determined that reliable control could not be achieved.

July 15, 2010 Qrtly. Report sent to the CRWQCB.

July 13, 2010 USEPA approved Deep Injection Well construction permit.

Oct. 2010 Crown Solutions approach proven not viable. Presentation made to the IID Board on the results of the study.

Oct. 15, 2010 Qrtly. Report sent to the CRWQCB.

Oct. 19, 2010 Deep Injection Well Major Work Authorization presented to IID Board for information.

Nov. 2, 2010 Deep Injection Well MWA presented to IID Board and approved.

Nov. 2010 Contract negotiations in progress with Kenai to construct well.

Dec. 17, 2010 IID submitted Final Design Drawings for the Deep injection Well Project, Milestone 3

Jan. 2011 Contract negotiations in progress with Subsurface Technologies to be Owner's Engineer.

Jan. 25, 2011 Qrtly. Report sent to the CDRWQB.

Mar. 3, 2011 IID signed contract with Subsurface for Owner's Engineer.

Apr. 15, 2011 Qrtly. Report sent to the CRWQCB.

Apr. 18, 2011 IID withdraws from Kenai contract negotiation.

May 2, 2011 IID met with EPA to discuss project.

May 12, 2011 IID signed drilling contract with Layne Christensen.

Jun. 1, 2011 IID requests time extension to complete Deep Injection Well Project.

Jun. 23, 2011 CRWQCB rejected the Special Board Order R7-2011-0043.
Jul. 19, 2011 Layne began site preparation work for well #1.

Anticipated Scheduled Activities:

Jul 22, 2011 EPA Approval to Drill well #1
Jul. 26, 2011 Installation of surface conductor for well #1.
Jul. 27, 2011 Mobilize drill rig to site for well #1.
Aug. 3, 2011 Well #1 drilled to depth of 1200 ft.
Aug. 30, 2011 Well #1 drilled to depth of 2280 ft.
Sep. 13, 2011 Well #1 drilled to depth of 2740 ft.
Sep. 22, 2011 Well #1 Installed 7" Liner.
Sep. 30, 2011 Submit Step-Rate Test procedure to EPA approval for Well #1.
Oct 02, 2011 Mobilize drill rig to site for well #2.
Oct. 5, 2011 Construct cellar for well #1.
Oct. 20, 2011 Complete testing of completed well #1. Determination of injection pump specifications complete.
Dec. 01, 2011 EPA issues temporary permit to inject for well #1
Dec. 16, 2011 Contract signed with surface piping contractor.
Dec. 27, 2011 Well #2 drilled to final depth.
Dec. 30, 2011 Issue notice to proceed for collection system and injection pumps.
Feb. 18, 2012 Complete testing of completed well #2.
Feb. 28, 2012 EPA issues temporary permit to inject for well #2

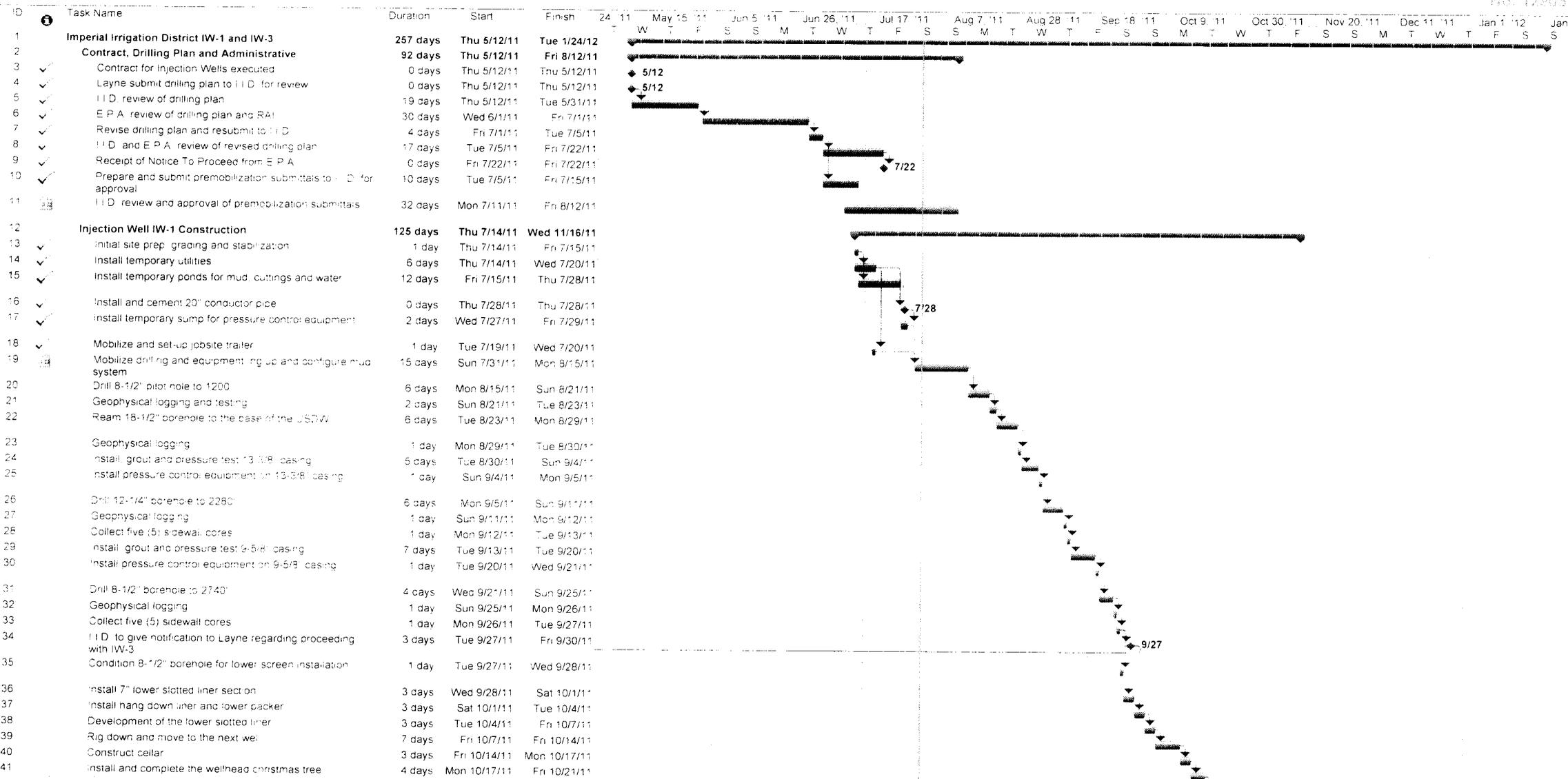
Apr. 26, 2012	Collection and Injection System complete.
May 18, 2012	Collection system Engineering complete.
Jul. 3, 2012	Begin construction of collection system.
May 3, 2013	Obtain EPA Approval to Perform Fall-Off Pressure Test (FOT)
May 24, 2013	Collection system construction complete.
Oct. 18, 2013	Perform Six Month Fall-Off Pressure Test (FOT)
Dec. 30, 2013	EPA Approves FOT and Licenses IW-1 and IW-3. Plant begins injecting in deep injection wells
Dec. 30, 2013	Plant ceases discharge to Central Drain #5.

Revised Drilling Schedule
August 3, 2011



LAYNE CHRISTENSEN COMPANY

Layne Project No. 12905



PROJECT:
Imperial Irrigation District
Injection Wells IW-1 and IW-3

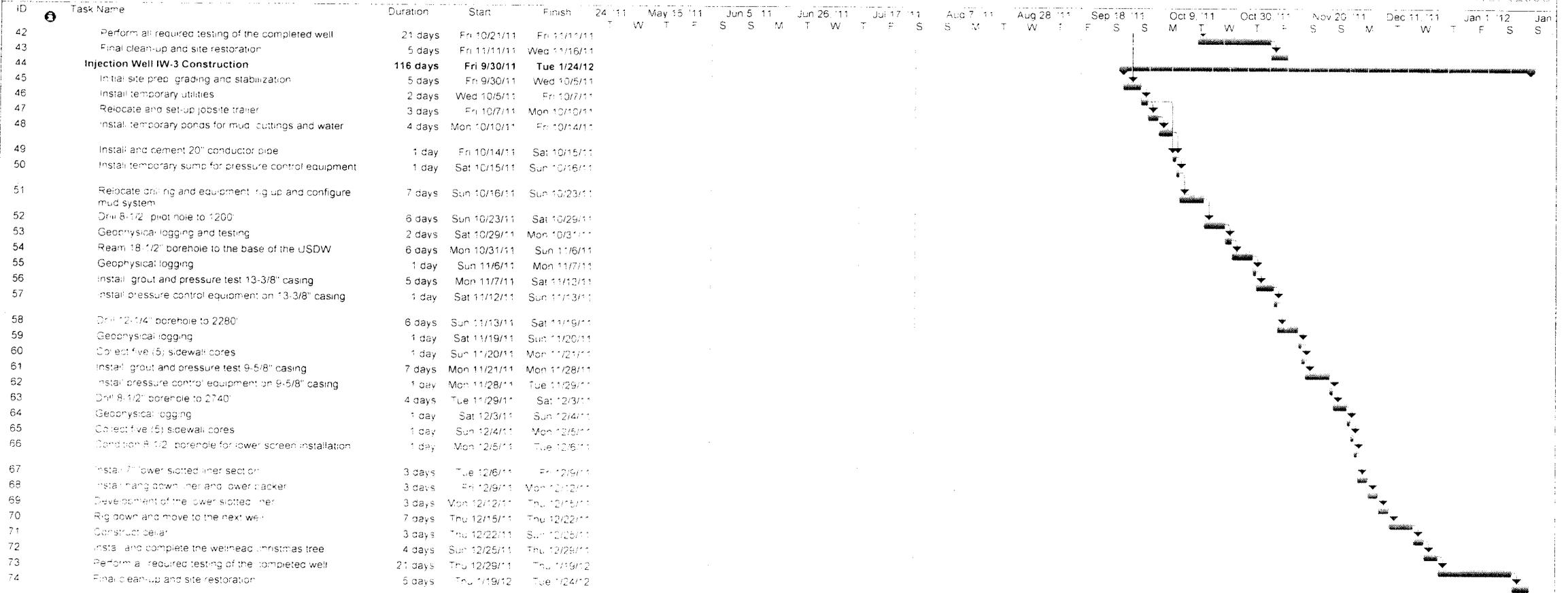
Rev 6 - 08/02/11 - CJB

Task		Split		Inactive Summary		Finish-only	
Milestone		External Tasks		Manual Task		Progress	
Summary		Project Summary		Duration-only		Deadline	
Rolled Up Task		Group By Summary		Manual Summary Rollup			
Rolled Up Milestone		Inactive Task		Manual Summary			
Rolled Up Progress		Inactive Milestone		Start-only			



LAYNE CHRISTENSEN COMPANY

Layne Project
No. 12905



PROJECT:
Imperial Irrigation District
Injection Wells IW-1 and IW-3

Rev. 6 - 08/02/11 - CJB

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