



Sacramento Regional County Sanitation District Sacramento Regional Wastewater Treatment Plant

Progress Report Method of Compliance Work Plan and Schedule for Ammonia Effluent Limitations and Title 22 or Equivalent Disinfection Requirements

Submitted: February 1, 2017

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- Appendix B. Work Plan Schedule for Compliance

Sacramento Regional County Sanitation District Contact Information

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1.0 Introduction

On June 9, 2011, the Sacramento Regional County Sanitation District (Regional San) submitted a Method of Compliance Work Plan and Schedule for Ammonia Effluent Limitations and Title 22 or Equivalent Treatment Requirements (Work Plan). This submittal was required by the compliance schedule contained in the waste discharge requirements Order No. R5-2010-0114 (2010 NPDES Permit¹) adopted by the Central Valley Regional Water Quality Control Board (Regional Board) on December 9, 2010 for the Sacramento Regional Wastewater Treatment Plant (SRWTP). The 2010 NPDES Permit imposed new final effluent limitations for ammonia and nitrate (requiring nutrient reduction facilities) and new requirements for Title 22 or equivalent disinfection requirements (requiring tertiary treatment facilities). The 2010 NPDES Permit required the submittal of annual progress reports following approval of the Work Plan. The Regional Board approved the Work Plan on July 8, 2011.

As a component of a Partial Settlement Agreement, Regional San stated that it will post on its website a second progress report on or before February 1 of each year until completion of the nutrient reduction facilities. Previous progress reports posted on Regional San’s website on or before February 1 provided a status of only the nutrient reduction facilities. At Regional San’s discretion, all future progress reports will also include an update on the tertiary treatment facilities in addition to the nutrient reduction facilities.

On April 21, 2016, Regional Board adopted Order R5-2016-0020 (2016 NPDES Permit) for the SRWTP which rescinds and replaces the 2010 NPDES Permit. The 2016 Permit also requires compliance with final effluent limitations for ammonia and nitrate and Title 22 or equivalent disinfection. The applicable requirements and schedules are reflected in the 2016 Permit and Tables 1 and 2 below.

2.0 Overall Compliance Schedule

The following compliance schedules for Ammonia Effluent Limitations and Title 22 or Equivalent treatment requirements are listed below in Table 1 and Table 2, respectively:

Table 1. Compliance Schedule for Ammonia Final Effluent Limitations

Task	Relevant Dates
i. Submit Method of Compliance Work Plan/Schedule	Due Date: 9 June 2011 Date Submitted: 9 June 2011 Date Approved: 8 July 2011 Status: Complete
ii. Submit and Implement PPP for Ammonia ¹	Due Date: 9 December 2011 Date Submitted: 8 December 2011 Revised Plan Submitted: 15 November 2012 Date Approved: 17 May 2013 Status: Complete
iii. Progress Reports ²	Progress report required by permit due 9 July, annually ³

¹ The 2010 NPDES Permit was amended several times. All the amendments were incorporated into Regional Board Order No. R5-2010-0114-04.

Method of Compliance Work Plan For Ammonia

Task	Relevant Dates
iv. Begin CEQA process for Compliance Project	Due Date: 19 May 2015 Process Initiated: 22 August 2012 Date EIR Approved: 24 September 2014 Status: Complete
v. Begin Construction of Compliance Project	Due Date: 19 May 2018 Status: Complete-Construction in Progress
vi. Full Compliance	Due Date: 11 May 2021

¹The Discharger shall continue to implement the PPP.

²The progress reports shall detail the steps implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

³Regional San will prepare an additional report annually, to be posted on the Regional San's website on or before February 1 of each year, beginning in 2014. This additional report is not required by the 2016 NPDES Permit, but is a report the Partial Settlement Agreement states that Regional San will prepare. Both reports will be posted on Regional San's website, but only the report required by July 9 will be transmitted directly to the Regional Board.

Table 2. Compliance Schedule for Title 22 or Equivalent Treatment Requirements

Task	Relevant Dates
i. Submit Method of Compliance Work Plan/Schedule	Due Date: 9 June 2011 Date Submitted: 9 June 2011 Date Approved: 8 July 2011 Status: Complete
ii. Progress Reports ¹	Progress report required by permit due 9 July, annually
iii. Begin CEQA process for Compliance Project	Due Date: 16 May, 2017 Process Initiated: 22 August 2012 Date EIR Approved: 24 September 2014 Status: Complete
iv. Begin Construction of Compliance Project	Due Date: 16 May 2020
v. Submit Seasonal Operations Plan ²	No later than 30 days prior to full compliance
vi. Full Compliance	Due Date: 9 May 2023

¹The progress reports shall detail the steps implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

²The plan shall incorporate as a goal to reasonably limit the amount of unfiltered discharge and describe anticipated operations of the Facility when flows in excess of filter design capacity occur considering influent flows to the entire Facility, available storage, river flows, impending meteorological conditions, and any other relevant operational considerations. This plan will be periodically updated, as necessary, based on accumulated operating data experience.

Installation of advanced treatment technologies is needed to meet the new discharge permit requirements. To construct the required treatment facilities, Regional San identified other major activities needed to achieve compliance with the NPDES Permit requirements, including:

- Treatment Technology Identification - Completed
- Pilot Study Implementation
 - ❖ Phase 1 - Treatment Technology Selection - Completed
 - ❖ Phase 2 - Design Criteria Optimization - Completed
 - ❖ Phase 3 - Process optimization and additional operator training - In planning (but not required to operate nutrient reduction facilities)

- Establishment of the Program Management Office (PMO) - Completed
- Select treatment technologies for environmental review, design, and implementation - Completed
- Design full-scale treatment systems - In progress (complete for nutrient reduction facilities)
- Environmental Analysis - Completed
- Construction Phase - In progress (for nutrient reduction and related facilities)
- Startup and Commissioning - In planning for nutrient reduction facilities

3.0 Progress towards Compliance

The following is a summary of the various activities associated with complying with the Ammonia Effluent Limitations and Title 22 or Equivalent requirements. The summary provided here is the information required as part of the permit requirements.

3.1 Pilot Study Implementation

The Phase 2 pilot system was completed in December 2014. A final report was completed in December 2015.

The goal of the Phase 3 Pilot Study is to further optimize the biological process and provide training to operators. This phase is not required to successfully commission the new facilities.

3.2 Design of Treatment Systems

Design consultants have been procured to provide pre-designs and final designs of various individual treatment systems and project features. Table 3 lists the major projects required to meet nutrient-related (i.e., final ammonia and nitrate) limitations and Title 22 or Equivalent treatment requirements. Major design projects, as defined in the Partial Settlement Agreement, are those with a design contract in excess of \$1 million. Dates in bold are actual dates of accomplishment. Other dates are planned dates. Regional San has determined that construction completion will be designated as when nutrient reduction facilities and the Title 22 or Equivalent treatment facilities are commissioned respectively as systems. Additional project information is included in Appendix A.

Table 3. Major EchoWater Projects

Major Project	Design Contract Award	Construction Contract Award	Construction Completion
Biological Nutrient Removal	22 Feb 2013	27 Apr 2016	14 Jan 2021
Flow Equalization	28 Aug 2013	25 Feb 2015	11 Apr 2018
RAS Pumping System	13 Nov 2013	25 May 2016	31 May 2019
Building Relocations	25 Sep 2013	19 Mar 2015	29 Feb 2016
Site Preparation	11 Dec 2013	25 Feb 2015	11 Nov 2016
Main Electrical Substation Expansion	In House Design	01 Jan 2016	30 Dec 2016
Disinfection Chemical Storage	11 Dec 2013	22 Jul 2015	01 Mar 2017
Nitrifying Sidestream Treatment	26 Mar 2014	13 Jan 2016	31 Oct 2018
Tertiary Treatment Facilities	27 May 2015	20 Jun 2018	09 Nov 2022
Channel Air Blowers	11 Nov 2016	23 May 2018	01 Sep 2019

3.3 Environmental Analysis

The CEQA process was initiated on August 22, 2012 and the Final Environmental Impact Report (EIR) was certified by the Regional San Board of Directors on September 24, 2014.

3.4 Construction Phase

Construction of major projects supporting the key ammonia and nitrate and Title 22 or Equivalent treatment facilities was initiated in February 2015. Three major projects have been completed as of December 30, 2016. There are currently five major projects under construction. The key project needed to meet ammonia and nitrate treatment requirements is the Biological Nutrient Removal project and is under construction.

3.5 Startup and Commissioning

Startup and commissioning for each project will occur as major treatment processes are completed and existing processes are cut over as required. Additional time is required to start up and commission the new facilities together to ensure stable process operation. Regional San is defining full compliance as completion of this phase of the last project (the Tertiary Treatment Facilities). This phase is anticipated to be accomplished before May 2023.

3.6 Regional San Project Acceptance

This milestone of the project is a contractual step to formally close out the construction project and is subject to Regional San Board action. Treatment facilities will have already been commissioned and will be fully operational. This date is subject to the nearest Board meeting after all contractual issues have been resolved and is not the measure of full compliance.

3.7 Ammonia Pollution Prevention

As stated in the November 2012 revised Ammonia PPP, domestic waste contributes the majority of ammonia in the treatment plant influent. Most of the ammonia found in domestic waste is derived from urea, which breaks down rapidly to ammonia in the wastewater conveyance system. Therefore, the primary source of ammonia to the sewer system is considered uncontrollable.

The measured average influent concentration was 37 milligrams per liter (mg/L) for the period July 1 to December 31, 2016, compared to the 35 mg/L reported in the last progress report.

Regional San continues to monitor industrial ammonia and total Kjeldahl nitrogen contributions from permitted users through its pretreatment program pollutant accounting activities. Two industries, CleanWorld and Mitsubishi Rayon Carbon Fiber and Composites, Inc., have been permitted and screened as point sources for ammonia. However, industrial point sources remain a relatively insignificant source of ammonia. Regional San will continue to monitor existing point source dischargers of ammonia and will screen potential new point source dischargers for the presence of ammonia in their discharge.

Further, Regional San has continued the implementation of interim operational changes, namely the cessation of solids storage basin (SSB) flushing since May 2009, which has resulted

in reductions in effluent ammonia discharged to the river by approximately 10 percent. Regional San is committed to continuing those interim operational changes as long as feasible, pending any process concerns that may develop due to algal blooms, odor generation or struvite accumulation. Short-term sporadic flushing may be implemented during winter to mitigate any process concerns noted above or to reduce the potential of any wet weather induced slug loads from the SSBs.

4.0 Schedule

Regional San has been making progress and is on schedule to meet the compliance dates for ammonia and nitrate and Title 22 or Equivalent permit requirements. Designs have been completed or in progress for all of the projects required to construct the necessary treatment facilities to meet the ammonia and nitrate reduction requirements. The current schedule indicates that full system commissioning of the nutrient reduction facilities is on schedule to be accomplished before May 2021. Design is underway for the treatment facilities needed to meet the Title 22 or equivalent requirements. Regional San staff continues to identify and evaluate means by which compliance can be accelerated without unacceptable risks or costs.

A Program schedule (updated in December 2016) is included in Appendix B showing the major projects as well as other projects and work efforts required to comply with the final effluent limitations for ammonia and nitrate limitations and for Title 22 or Equivalent requirements. The high level schedule shown in Table 3 may reflect more recent updates to key project milestones.

Appendices

- A. Status of Ammonia and Nitrate Reduction and Title 22 or Equivalent Projects
- B. Work Plan Schedule for Compliance

Appendix A

Status of Ammonia and Nitrate Reduction and Title 22 or Equivalent Projects

Status of Ammonia and Nitrate Reduction and Title 22 or Equivalent Projects

Biological Nutrient Removal

The project advertised for bids on October 28, 2015. A construction contract was awarded on April 27, 2016 and Notice to Proceed was issued on May 27, 2016. Construction is underway and is expected to be completed by January 2021. The project is on schedule to meet this date.

Flow Equalization

A construction contract was awarded on February 25, 2015 and Notice to Proceed was issued on March 4, 2015. Construction is underway and is expected to be completed by April 11, 2018. The project is on schedule to meet this date.

RAS Pumping System

A construction contract was awarded on May 25, 2016. Notice to Proceed was issued on June 15, 2016. Construction is underway and is expected to be completed by May 31, 2019. The project is on schedule to meet this date.

Building Relocations

A construction contract was awarded on March 19, 2015, Notice to Proceed was issued on April 7, 2015. Construction was completed on February 29, 2016.

Site Preparation

A construction contract was awarded on February 25, 2015 and Notice to Proceed was issued on March 11, 2015. Construction was completed on November 11, 2016 and is scheduled to be issued final acceptance on March 22, 2017.

Main Electrical Substation Expansion

A construction contract was awarded on January 7, 2016 and Notice to Proceed was issued on January 8, 2016. Construction was completed on December 30, 2016 and is scheduled to be issued final acceptance on February 22, 2017.

Disinfection Chemical Storage

A construction contract was awarded on July 22, 2015 and Notice to Proceed was issued on August 20, 2015. The project is in the commissioning phase and expected to be completed by March 1, 2017. The project is on schedule to meet this date.

Nitrifying Sidestream Treatment

The contract was awarded on January 13, 2016 and Notice to Proceed was issued on February 19, 2016. Construction is underway and expected to be completed by October 31, 2018. The project is on schedule to meet this date.

Tertiary Treatment Facilities

The Filtration, Filter Influent Pumping Station, and Disinfection Contact Basin projects have been combined into a single project called the Tertiary Treatment Facilities. A design contract was awarded on May 27, 2015 and preliminary design was completed in April 2016. Final design efforts are underway and design is expected to be completed by January 2018. The project is on schedule to meet this milestone.

Channel Air Blowers

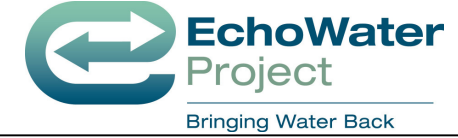
Aeration for the existing and new mixed liquor channels feeding the biological nutrient removal system is required. A design contract was awarded on November 9, 2016 and preliminary design has been initiated. Final design is expected to be completed by March 2018. The project is on schedule to meet this milestone.

Appendix B

Work Plan Schedule for Compliance

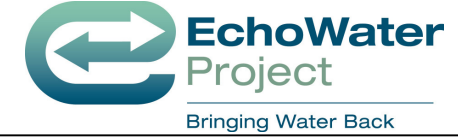
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■ Actual Level of Effort
 ■ Critical Remaining Work
◆ Gates
■ Actual Work
▬ Summary



Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	2012				2013				2014				2015				2016				2017				2018				2019				2020				2021				2022				2023			
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
	SM-Site Preparation Closeout	94	41	01-Aug-16 A	11-Jan-17																																																
	Misc Site Buildings (MSB)	381	124	11-Aug-15 A	08-Feb-17																																																
	Misc Site Buildings Design	0	0	11-Aug-15 A	11-Aug-15 A																																																
	Misc Site Buildings Bid & Award	124	0	12-Aug-15 A	30-Dec-15 A																																																
	Misc Site Buildings Construction	263	36	30-Dec-15 A	16-Jan-17																																																
	Misc Site Buildings Commissioning	87	87	12-Aug-16 A	16-Dec-16																																																
	Misc Site Buildings Closeout	88	50	24-Oct-16 A	08-Feb-17																																																
	Fiber Optic Network Replacement (FOR)	452	3	10-Jun-14 A	02-Mar-16																																																
	Fiber Optic Network Replacement Design	194	0	10-Jun-14 A	30-Jan-15 A																																																
	Fiber Optic Network Replacement Bid & Award	73	0	11-Feb-15 A	20-May-15 A																																																
	Fiber Optic Network Replacement Construction	165	0	20-May-15 A	27-Jan-16 A																																																
	Fiber Optic Network Replacement Commissioning	87	0	07-Oct-15 A	27-Feb-16 A																																																
	Fiber Optic Network Replacement Closeout	3	3	29-Feb-16	02-Mar-16																																																
	Flow Equalization (FEQ)	1711	571	16-Apr-12 A	23-May-18																																																
	Flow Equalization Planning	395	0	16-Apr-12 A	23-Oct-13 A																																																
	Flow Equalization Contractor Prequalification Process	165	0	23-Apr-14 A	09-Dec-14 A																																																
	Flow Equalization Bid and Award	65	0	10-Dec-14 A	11-Mar-15 A																																																
	Flow Equalization Construction	972	541	24-Nov-14 A	11-Apr-18																																																
	Flow Equalization Commissioning	604	369	26-May-15 A	11-Apr-18																																																
	Flow Equalization Closeout	82	82	30-Jan-18	23-May-18																																																
	ESB-D Rehabilitation	1193	777	25-Jul-14 A	19-Feb-19																																																
	ESB-D Rehabilitation Planning	623	207	25-Jul-14 A	13-Dec-16																																																
	ESB-D Rehabilitation Design	392	392	14-Dec-16	14-Jun-18																																																
	ESB-D Rehabilitation Bid and Award	87	87	15-Jun-18	15-Oct-18																																																
	ESB-D Rehabilitation Construction	662	662	03-Aug-16	15-Feb-19																																																
	ESB-D Rehabilitation Commissioning	5	5	11-Feb-19	19-Feb-19																																																
	BNR (w PEPS Construction)	2239	1278	16-Mar-12 A	23-Dec-20																																																
	BNR Planning	294	0	16-Mar-12 A	03-May-13 A																																																
	BNR Design	865	77	24-Jan-13 A	13-May-16																																																
	BNR/PEPS Bid and Award	175	103	26-Oct-15 A	13-May-16																																																
	BNR/PEPS Construction	1177	1149	13-May-16 A	15-Nov-20																																																
	BNR/PEPS Commissioning	985	985	06-Jan-17	13-Nov-20																																																
	BNR/PEPS Closeout	28	28	16-Nov-20	23-Dec-20																																																
	Primary Effluent Pump Station (PEPS) (Plan & Design Only)	1000	29	14-May-12 A	08-Apr-16																																																
	Primary Effluent PS Planning	413	0	14-May-12 A	16-Dec-13 A																																																
	Prim Effluent PS Design	627	1	24-Oct-13 A	07-Apr-16																																																
	Prim Effluent PS Bid and Award	115	0	27-Oct-15 A	08-Apr-16																																																
	Return Activated Sludge Pump Station (RAS)	1839	796	14-May-12 A	30-Jul-19																																																
	RAS PS Planning	447	0	14-May-12 A	31-Jan-14 A																																																
	RAS PS Design	693	0	15-Nov-13 A	12-Jul-16																																																
	RAS PS Bid and Award	110	0	13-Jan-16 A	15-Jun-16 A																																																
	RAS PS Construction	733	733	15-Jun-16 A	30-Apr-19																																																
	RAS PS Commissioning	527	527	23-Mar-17	16-Apr-19																																																
	RAS PS Closeout	75	75	17-Apr-19	30-Jul-19																																																
	Filter Influent Pump Station (FIPS) (Planning Only)	889	0	28-Sep-12 A	29-Feb-16																																																
	Filt Influent Pump Station Planning	889	0	28-Sep-12 A	29-Feb-16																																																
	Tertiary Treatment Facilities (TTF) (Filtration, FIPS, DCB)	2710	1748	21-May-12 A	21-Dec-22																																																
	Tertiary Treatment Facilities Planning (TTF)	862	0	21-May-12 A	09-Jul-15 A																																																
	Tertiary Treatment Facilities (TTF) Design	755	561	27-May-15 A	09-May-18																																																
	Tertiary Treatment Facilities (TTF) Bid and Award	104	102	14-Dec-17	09-May-18																																																
	Tertiary Treatment Facilities (TTF) Construction	1121	1121	21-May-18	29-Sep-22																																																
	Tertiary Treatment Facilities (TTF) Commissioning	482	482	11-Jan-21	15-Nov-22																																																
	Tertiary Treatment Facilities (TTF) Closeout	59	59	30-Sep-22	21-Dec-22																																																

■ Remaining Level of Effort
 ■ Remaining Work
 ◆ Milestone
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 ◆ Gates
 ■ Actual Work
 ▾ Summary



Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	2012												2013												2014												2015												2016												2017												2018												2019												2020												2021												2022												2023											
						Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4																																																														
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																																																																																				
Effluent Disinfection - Ph1 Chemical Storage (DCS)		1345	259	09-Jul-12 A	24-May-17	Effluent Disinfection : Ph1 Chemical Storage (DCS)																																																																																																																																															
Disinfection Planning - Ph1 Chemical Storage		412	0	09-Jul-12 A	07-Feb-14 A	Disinfection Planning - Ph1 Chemical Storage																																																																																																																																															
Disinfection Design - Ph1 Chemical Storage		443	0	12-Dec-13 A	30-Jun-15 A	Disinfection Design - Ph1 Chemical Storage																																																																																																																																															
Disinfection Bid and Award - Ph1 Chemical Storage		96	0	14-May-15 A	20-Aug-15 A	Disinfection Bid and Award - Ph1 Chemical Storage																																																																																																																																															
Disinfection Construction - Ph1 Chemical Storage		549	236	20-Aug-15 A	21-Apr-17	Disinfection Construction - Ph1 Chemical Storage																																																																																																																																															
Disinfection Commissioning - Ph1 Chemical Storage		207	166	18-Apr-16 A	22-Feb-17	Disinfection Commissioning - Ph1 Chemical Storage																																																																																																																																															
Disinfection Closeout - Ph1 Chemical Storage		126	126	28-Nov-16	24-May-17	Disinfection Closeout - Ph1 Chemical Storage																																																																																																																																															
Nitrifying Sidestream Treatment (NST)		1481	572	06-May-13 A	25-Feb-19	Nitrifying Sidestream Treatment (NST)																																																																																																																																															
Nitrifying Sidestream Planning		332	0	06-May-13 A	14-May-14 A	Nitrifying Sidestream Planning																																																																																																																																															
Nitrifying Sidestream Design		455	0	26-Mar-14 A	15-Jun-16 A	Nitrifying Sidestream Design																																																																																																																																															
Nitrifying Sidestream Bid and Award		137	0	16-Sep-15 A	31-May-16 A	Nitrifying Sidestream Bid and Award																																																																																																																																															
Nitrifying Sidestream Construction		719	496	19-Feb-16 A	27-Nov-18	Nitrifying Sidestream Construction																																																																																																																																															
Nitrifying Sidestream Commissioning		612	510	10-May-16 A	27-Nov-18	Nitrifying Sidestream Commissioning																																																																																																																																															
Nitrifying Sidestream Closeout		31	31	14-Jan-19	25-Feb-19	Nitrifying Sidestream Closeout																																																																																																																																															
Channel Air Blower System (CAB)		736	736	16-Nov-16 A	11-Sep-19	Channel Air Blower System (CAB)																																																																																																																																															
CAB Planning		123	123	16-Nov-16 A	05-May-17	CAB Planning																																																																																																																																															
CAB Design		222	222	08-May-17	13-Mar-18	CAB Design																																																																																																																																															
CAB Bid and Award		50	50	14-Mar-18	22-May-18	CAB Bid and Award																																																																																																																																															
CAB Construction		312	312	23-May-18	01-Aug-19	CAB Construction																																																																																																																																															
CAB Commissioning		67	67	01-May-19	01-Aug-19	CAB Commissioning																																																																																																																																															
CAB Closeout		29	29	02-Aug-19	11-Sep-19	CAB Closeout																																																																																																																																															
Reliability Centered Design Analysis (RCD)		2284	1734	04-Feb-13 A	20-Oct-22	Reliability Centered Design Analysis (RCD)																																																																																																																																															
RCD Project Initiation		18	0	04-Feb-13 A	28-Feb-13 A	RCD Project Initiation																																																																																																																																															
RCD Project Definition and Planning		33	0	18-Feb-13 A	04-Apr-13 A	RCD Project Definition and Planning																																																																																																																																															
RCD Consultant Selection		98	0	01-Apr-13 A	16-Aug-13 A	RCD Consultant Selection																																																																																																																																															
RCD Project Plan Development		712	52	19-Aug-13 A	10-May-16	RCD Project Plan Development																																																																																																																																															
RCD Project Support		1925	1734	23-Jun-14 A	20-Oct-22	RCD Project Support																																																																																																																																															
Plant Computer Control System (PCCS)		1950	1625	02-Jun-14 A	20-May-22	Plant Computer Control System (PCCS)																																																																																																																																															
PCCS Project Management		60	1565	02-Jun-14 A	25-Feb-22	PCCS Project Management																																																																																																																																															
PCCS Programming Standards & Guidelines		260	0	31-Jul-14 A	04-Jan-16 A	PCCS Programming Standards & Guidelines																																																																																																																																															
PCCS Training for Programmers		155	23	31-Aug-15 A	01-Jul-16	PCCS Training for Programmers																																																																																																																																															
PCCS Design Review		399	40	10-Oct-14 A	09-Jun-16	PCCS Design Review																																																																																																																																															
PCCS Project Meetings		1730	1620	19-Aug-15 A	13-May-22	PCCS Project Meetings																																																																																																																																															
PCCS Programming		1586	1535	01-Oct-15 A	14-Jan-22	PCCS Programming																																																																																																																																															
PCCS Bench Test Programs		1166	1166	13-May-16	30-Oct-20	PCCS Bench Test Programs																																																																																																																																															
PCCS Field Test Programs		1521	1521	22-Jul-16	20-May-22	PCCS Field Test Programs																																																																																																																																															
PCCS Training & Documentation		1890	1441	02-Jun-14 A	25-Feb-22	PCCS Training & Documentation																																																																																																																																															
Program Float		127	127	15-Nov-22	10-May-23	Program Float																																																																																																																																															
Discharge Permit Compliance Ammonia (5/11/21)		0	0	13-Nov-20	13-Nov-20	Discharge Permit Compliance Ammonia (5/11/21)																																																																																																																																															
Discharge Permit Compliance Title 22 Equiv (5/11/23)		0	0	11-May-23	11-May-23	Discharge Permit Compliance Title 22 Equiv (5/11/23)																																																																																																																																															

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