

## DOCKETED

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# PETITION TO AMEND

COLUSA GENERATING STATION (06-AFC-9C)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION

SUBMITTED BY: **PACIFIC GAS & ELECTRIC  
COMPANY (PG&E)**

OCTOBER 2016



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## **Section 1 INTRODUCTION**

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### **1.1 INTRODUCTION TO PETITION**

Pursuant to Section 1769 of the California Energy Commission (Commission) regulations<sup>1</sup>, Pacific Gas & Electric Company (PG&E) files this Petition For Amendment (Petition) with the California Energy Commission (Commission) to modify the Colusa Generating Station (CGS). This Petition requests approval of the installation of rotating intake screens to control algae blooms at the water intakes for the Tehama Colusa Canal (TCC). This section describes the procedural background of the CGS and cites the authority for the Commission to process this Petition.

Section 2 of the Petition describes the modifications proposed to the CGS including an explanation of the need.

Sections 3, 4, 5 and 6 contain analysis of the proposed modifications comparing the potential environmental impacts from the modifications to the potential environmental impacts of the CGS as approved in the Commission Final Decision<sup>2</sup>. As discussed in these Sections, PG&E does not anticipate any significant environmental impacts from the proposed modifications and therefore is not proposing any modifications to the existing Conditions of Certification.

Section 7 contains an analysis demonstrating that the modifications do not increase any potential effects on nearby property owners or the public.

### **1.2 FINAL DECISION BACKGROUND**

E&L Westcoast, LLC filed an Application For Certification (AFC) with the Commission on November 6, 2006 to construct and operate the CGS, a nominal 660 megawatt (MW) combined cycle power plant. The CGS was proposed by E&L Westcoast, LLC in response to PG&E's 2004 Request For Offers and on January 11, 2008, PG&E became the Applicant and Project Owner. The Commission issued its Final Decision approving the CGS on April 23, 2008 (Order No. 08-0423-23, the "Final Decision", 06-AFC-9).

### **1.3 PRIOR PETITIONS FOR AMENDMENT**

On August 14, 2008, PG&E filed a Petition For Amendment to revise the general equipment arrangement, eliminate the diesel emergency generator, replace the diesel

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<sup>1</sup> Title 20 CCR Section 1769

<sup>2</sup> References to the Commission Final Decision include all amendments approved after issuance and prior to the date of this Petition For Amendment.

fire pump with an electric fire pump, eliminate the auxiliary boiler, relocate the natural gas metering station, and incorporate a natural gas water bath heater system and a wet surface air cooler. On July 15, 2009 the Commission approved the Petition For Amendment.<sup>3</sup>

On January 21, 2009, PG&E submitted a Petition For Amendment proposing slight modifications to the size and layout of the switchyard and the electric transmission interconnection route. On April 16, 2009 the Commission approved the Petition For Amendment.<sup>4</sup>

On November 13, 2013, PG&E submitted a Petition For Amendment proposing to modify its ultra-filtration system. The Commission approved the Petition For Amendment on December 13, 2013.<sup>5</sup>

On February 6, 2014 PG&E submitted a Petition For Amendment to store a spare generator step-up transformer at the CGS site. The Commission approved the Petition For Amendment on March 14, 2014.<sup>6</sup>

On March 14, 2014, PG&E submitted an Emergency Petition for Amendment to allow temporary withdrawal and trucking of water from the Glenn Colusa Canal in the same manner that was authorized during construction. On April 22, 2014, the Commission approved the Petition For Amendment.

On May 28, 2014, PG&E filed a Petition For Amendment to replace the temporary withdrawal and trucking of water from the Glenn Colusa Canal with a permanent water supply line. The Commission approved the Petition For Amendment on August 22, 2014.<sup>7</sup>

On February 6, 2015, PG&E filed a Petition For Amendment to add a fin fan cooling apparatus to dry cool the Heat Recovery Steam Generator (HRSG) Blowdown effluent water and a separate Petition For Amendment to install additional grating on the steam turbine deck to expand the useful area and make it safer for turbine and generator work. On March 25, 2015, the Commission approved both Petitions.<sup>8</sup>

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<sup>3</sup> Order No. 09-715-2, dated July 15, 2009, TN 522443

<sup>4</sup> Letter from Chris Davis, CEC Compliance Project Manager, dated April 16, 2009 to John Maring, PG&E, TN 51119

<sup>5</sup> Notice of Determination, dated December 13, 2013, TN 201431, no objections filed within 14 days

<sup>6</sup> Notice of Determination, dated March 14, 2014, TN 201878, no objections filed with 14 days

<sup>7</sup> Notice of Determination, dated August 22, 2014, TN 202974, no objections filed with 14 days

<sup>8</sup> Notice of Determination, dated March 25, 2015, TN 203959 and letter dated April 22, 2015 from CEC Compliance Project Manager Eric Veerkamp to Charles Price, PG&E, TN 204312

On June 25, 2015, PG&E filed a Petition For Amendment to conform the Air Quality Conditions of Certification to the Revised Title V Operating Permit. On July 27, 2015, PG&E revised the Petition For Amendment as requested by CEC Staff. The Commission approved the Petition For Amendment as revised on December 9, 2015.<sup>9</sup>

On June 28, 2016, PG&E filed a Petition For Amendment that included the TCC intake screen modifications (proposed again in this Petition) as well as a request to install a new warehouse and electrical equipment to enable the electric motors for the Air Cooled Condenser Fans to be operated with variable loading. During the processing of that Petition, the Commission Staff issued Cultural Resources data requests. One of the data requests required obtaining information from the Bureau of Reclamation relating to ongoing cultural resources studies relating to the TCC. This information has been difficult to obtain in a timely fashion and therefore PG&E filed a letter on September 30, 2016 requesting the Commission process that Petition for the Warehouse and ACC modifications only, and process the request for the TCC intake screens separately. The sole purpose of dividing the Petitions is to allow the Commission to rapidly approve the new warehouse and ACC electrical equipment as soon as possible.

On October 3, 2016, DayZen LLC delivered an additional \$5,000 check for separately processing the TCC intake screens petition. On that same day, the Compliance Project Manager (CPM), requested that the TCC intake screen information be compiled into this new Petition.

#### **1.4 SUMMARY OF ENVIRONMENTAL IMPACTS**

As described in Sections 3, 4, 5 and 6 of this Petition, the project modifications proposed herein, with implementation of the Conditions of Certification contained in the Final Decision and subsequent amendments will not result in significant environmental impacts and will comply with all applicable LORS.

#### **1.5 CONSISTENCY OF PROJECT MODIFICATIONS WITH LICENSE**

As demonstrated in Sections 3 through 6 the proposed modifications proposed in this Petition do not undermine any of the findings and conclusions contained in the Final Decision.

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<sup>9</sup> Order No. 15-1209-3, dated December 9, 2015, TN 207036

## **Section 2 DESCRIPTION OF PROJECT AMENDMENT**

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### **2.1 OVERVIEW OF PROPOSED MODIFICATIONS**

PG&E is proposing in this Petition For Amendment to install rotating intake screens to control algae blooms at the water intakes for the Tehama Colusa Canal (TCC). Detailed descriptions of this modification are provided below.

#### **2.1.1 ROTATING INTAKE SCREENS**

PG&E is proposing to install rotating intake screens and associated equipment to assist its approved use of water from the Tehama Colusa Canal (TCC). The TCC is owned by the U.S. Bureau of Reclamation and operated by the Tehama Colusa Canal Authority (TCCA). As described in the Final Decision and subsequent amendments, although the CGS is a “dry-cooled” facility, the Commission approved the pumping of water from the TCC for its primary water supply and water pumped from the Glenn Colusa Irrigation District (GCID) canal as a backup water supply. The proposed modifications are for the intake facilities at the TCC only and not for the facilities at the GCID.

Large algae blooms that occur near the pump intakes at the TCC result in the need for operators to manually clean the pump intake screens on a routine, sometimes daily basis. The modification proposed for use at the CGS TCC pump is an apparatus which will remove algae from the intake screens on an automated basis. The apparatus will use rotating, periodic blasts of compressed air to remove the attached algae.

The system would require a small modification to the intake pumps and the addition of an air compressor. The compressor would reside across the canal access road from the canal, would have secondary containment to prevent any oil leakage into the canal, and would be checked during and after any rain event prior to releasing the stormwater. There will also be a downward facing light pole in the area for maintenance and operational checks. This automated system will remove the potential for personnel injury from the manual, repetitive, ergonomically-poor sweeping. The new light sources will also improve personnel safety around the water. The TCCA has approved screen modification to the pumps.

To accommodate the rotating intake screen modifications the following new equipment will need to be installed:

- Two rotating screens
- Covers over the pump inlet screens

- A new light pole at the location of the new compressor pad
- New Compressor Pad, Compressor, Compressor Switch and Compressor Junction Box
- A new underground compressed air pipeline
- New underground electric cabling within existing underground conduit

Figure 2-1 shows the new components including the new compressor (highlighted in yellow) to be installed to support the rotating intake screens. Figure 2-2 shows the locations, relative to the existing platform and intake structures, where the new intake screens will be installed. Additionally, a vendor brochure describing the rotating intake screens is provided in Appendix A.

## **2.2 CONSTRUCTION ACTIVITIES**

### **2.2.1 Rotating Intake Screens**

Crews will access the TCC pumps from the west canal access road from the west side of the CGS to the TCC. None of the work will take place within the TCC. The pumps will be removed and the screens installed and then placed back into the TCC.

Construction of the compressor pad, installation of the compressor and light fixtures, and hose and electrical will all be performed from the canal access road. See Figure 2-3 for the locations of the pull boxes.

## **2.3 PROJECT MODIFICATIONS SCHEDULE**

### **2.3.1 Rotating Intake Screens**

This project is estimated to be completed within 30 days. PG&E plans to perform the work when the TCC is out of service for annual maintenance. The TCC maintenance window is typically 30 to 60 days and is scheduled by the TCCA during the months of low usage. PG&E will coordinate with the TCCA to ensure this project does not interfere with annual TCC maintenance activities.

## **2.4 PURPOSE AND NEED FOR AMENDMENT**

During the time of licensing, PG&E did not envision the need for automatic rotating intake screens. Therefore, these components were not requested by PG&E at the time of the original licensing proceedings.

### **2.4.1 Rotating Intake Screens**

The purpose of installing the rotating intake screens is to remove the potential for personnel injury from the repetitive, ergonomically poor manually sweeping. It will also improve personnel safety around the water by increasing light after dark.

## **Section 3 ENGINEERING ASSESSMENT**

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This section contains an evaluation of the modifications proposed in this Petition to determine if they would result in modification of the findings, conclusions or conditions of certification for each technical discipline included within the Engineering Assessment section of the Final Decision.

### **3.1 FACILITY DESIGN**

#### **3.1.1 Proposed Modifications**

##### **3.1.1.1 Rotating Intake Screens**

Existing conditions of certification will ensure the Rotating Intake Screens will comply with all applicable laws, ordinances, regulations and standards (LORS) and therefore no modifications to the analysis, findings, conclusions or conditions to the certification contained in the Facility Design section of the Final Decision are necessary.

##### **3.1.2 Changes in LORS Conformance and Other Permits**

There are no changes in Facility Design LORS or required permits necessary to construct and operate the modifications proposed in this Petition.

##### **3.1.3 Conditions of Certification**

No modifications to the any of the existing Facility Design conditions of certification are necessary.

### **3.2 POWER PLANT EFFICIENCY AND RELIABILITY**

The proposed modifications do not result in any negative affect on power plant efficiency or reliability. The rotating intake screens may slightly increase reliability since the intake pumps will not be dependent on manual cleaning.

### **3.3 TRANSMISSION SYSTEM ENGINEERING**

None of the proposed modifications require changes to the switchyard or the transmission line. Therefore the proposed modifications will have no effect on the findings, conclusions or conditions of certification contained in the Transmission System Engineering section of the Final Decision.

### **3.4 TRANSMISSION LINE SAFETY AND NUISANCE**

None of the proposed modifications require changes to the switchyard or the transmission line. Therefore the proposed modifications will have no effect on findings, conclusions or conditions of certification contained in the Transmission Line Safety and Nuisance section of the Final Decision.

## **Section 4 PUBLIC HEALTH AND SAFETY**

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This section contains an evaluation of the modifications proposed in this Petition to determine if they would result in modification to the findings, conclusions or conditions of certification for each technical discipline included within the Public Health and Safety section of the Final Decision.

### **4.1 AIR QUALITY, GREENHOUSE GASES AND PUBLIC HEALTH**

#### **4.1.1 Proposed Modifications**

##### **4.1.1.1 Rotating Intake Screens**

The Rotating Intake Screens are powered by electricity and will not produce any emissions during operation. Construction activities do involve limited trenching to install a new compressed air line from the compressor skid to the intake locations. However, these emissions are negligible and certainly much less than the emissions from construction of the plant. The construction work to install the rotating intake screens and necessary support equipment will comply with the existing conditions of certification and therefore will not undermine any of the findings and conclusions of the Air Quality, Public Health and Greenhouse Gases sections of the Final Decision.

##### **4.1.2 Changes in LORS Conformance and Other Permits**

There are no new Air Quality, Public Health, or Greenhouse Gases LORS or required permits for the modifications proposed in this Petition.

##### **4.1.3 Conditions of Certification**

No modifications to the any of the existing Air Quality and Public Health conditions of certification are necessary.

### **4.2 HAZARDOUS MATERIALS MANAGEMENT**

The modifications proposed in this Petition will not affect the findings and conclusions contained in the Hazardous Materials Management section of the Final Decision as none of the modifications will involve the use of hazardous materials.

### **4.3 WORKER SAFETY/FIRE PROTECTION**

The proposed modifications will not expose workers to any additional risks not evaluated in the Worker Safety/Fire Protection section of the Final Decision. PG&E will require the contractors to comply with its various safety plans during construction. Ultimately the installation of the rotating intake screens will reduce potential injuries to

workers by reducing the repetitive, ergonomically poor manual and cleaning currently required. In addition, installation of the lighting will improve worker safety.

None of the modifications proposed in this Petition will affect the findings and conclusions of the Final Decision relating to fire protection.

Since the work for all of the proposed modifications will be performed in accordance with the Conditions of Certification, the proposed modifications do not undermine any finding or conclusion of the Worker Safety/Fire Protection section of the Final Decision.

## **Section 5 ENVIRONMENTAL ANALYSIS**

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This section contains an evaluation of the modifications proposed in this Petition to determine if they would result in modification to any of the findings, conclusions or conditions of certification for each technical discipline included within the Environmental Assessment section of the Final Decision.

### **5.1 BIOLOGICAL RESOURCES**

#### **5.1.1 Proposed Modifications**

##### **5.1.1.1 Rotating Intake Screens**

Construction of the Rotating Intake Screens will involve limited ground disturbance related to the trenching of the compressed air pipeline and installation of the compressor skid and associated electrical equipment. There will be no construction or disturbance in the TCC or its banks. The pumps will be lifted from the TCC and the rotating intake screens installed and lowered back into the TCC. The construction work to install the rotating intake screens and necessary support equipment will comply with the existing conditions of certification and therefore will not undermine any of the findings and conclusions of the Biological section of the Final Decision.

##### **5.1.2 Changes in LORS Conformance and Other Permits**

There are no new Biological Resource LORS or required permits for the modifications proposed in this Petition.

##### **5.1.3 Conditions of Certification**

No modifications to the any of the existing Biological Resource conditions of certification are necessary.

### **5.2 SOIL AND WATER RESOURCES**

The only potential impact that may affect soil or water resources is related to the addition of an air compressor which would reside across the canal access road from the TCC. The compressor would have secondary containment and would be checked during and after any rain event prior to releasing the stormwater. With this design feature and the existing conditions of certification the modifications proposed in the Petition will not undermine any of the findings or conclusions contained in the Soil and Water Section of the Final Decision. No modification to any Soil and Water Resource condition of certification is necessary.

### **5.3 CULTURAL RESOURCES**

Since all of the construction will take place within previously graded areas, the modifications proposed in this Petition will not have any effect on the findings, conclusions or will not require any modification to the conditions of certification contained in the Cultural Resources Section of the Final Decision.

We understand that the TCC may be a potential significant cultural resource and that the Bureau of Reclamation (Bureau) has been coordinating with the State Historical Preservation Office (SHPO) on determining its eligibility for listing or protection under federal historical preservation laws. Commission Staff requested information from PG&E relating to any cultural resource studies of the TCC by the Bureau as part of Staff's analysis of PG&E's June 28, 2016 Petition. PG&E is working closely with the Bureau to obtain information sufficient for Commission Staff to complete its analysis. PG&E will submit additional information as it becomes available.

### **5.4 GEOLOGICAL AND PALEONTOLOGICAL RESOURCES**

Since all of the construction will take place within previously graded areas, the modifications proposed in this Petition will not have any effect on the findings, conclusions or will not require any modification to the conditions of certification contained in the Geological and Paleontological Resources Section of the Final Decision.

### **5.5 WASTE MANAGEMENT**

The construction of the modifications proposed in this Petition will create minor amounts of construction related waste materials. However, compared to the amount of construction waste created during construction of the plant, the amounts are negligible. No new waste streams will be created during operations of the Rotating Intake Streams. Therefore, the proposed modifications will not undermine any findings or conclusions of the Waste Management section of the Final Decision. No modifications to the Waste Management conditions of certification are required.

## **Section 6 LOCAL IMPACT ANALYSIS**

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This section contains an evaluation of the modifications proposed in this Petition to determine if they would result in modification to any findings, conclusions or conditions of certification for each technical discipline included within the Local Impact Assessment section of the Final Decision.

### **6.1 LAND USE**

The modifications proposed in this Petition will not affect the findings and conclusions contained in the Land Use section of the Final Decision as none of the modifications will involve the use of new land areas.

### **6.2 NOISE AND VIBRATION**

The modifications proposed in this Petition will not affect the findings and conclusions, nor require any modifications to the existing conditions of certification, contained in the Noise and Vibration section of the Final Decision as none of the modifications will create new sources of noise or vibration.

### **6.3 SOCIECONOMICS**

The modifications proposed in this Petition will not affect the findings and conclusions, nor require any modifications to the existing conditions of certification, contained in the Socioeconomic Resources section of the Final Decision as none of the modifications will burden existing public services.

### **6.4 TRAFFIC AND TRANSPORTATION**

The modifications proposed in this Petition will not affect the findings and conclusions, nor require any modifications to the existing conditions of certification, contained in the Traffic and Transportation section of the Final Decision as none of the modifications will significantly increase traffic on local roads.

### **6.5 VISUAL RESOURCES**

The modifications proposed in this Petition will not affect the findings and conclusions, nor require any modifications to the existing conditions of certification, contained in the Visual Resources section of the Final Decision as none of the modifications will create significant visual impacts.

## **Section 7 POTENTIAL EFFECTS ON PROPERTY OWNERS**

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The Commission's Power Plant Siting Regulations require a Petition For Amendment to include 1) a discussion of how the modification affects the public; 2) a list of property owners potentially affected by the modification; and 3) a discussion of the potential effect on nearby property owners, the public and the parties in the application proceedings.

As described in technical area evaluated in Sections 3, 4, 5 and 6 of this Petition, with implementation of the existing conditions of certification the impacts of the proposed modifications are less than significant and therefore would not affect the public differently than the identified in the Final Decision.

PG&E has not included a list of property owners for this Petition because the property owners are the same as provided for the Commission during previous Petitions For Amendment.

## **Appendix A**

Rotating Intake Screen Vendor Brochure



# JOHNSON SCREENS® PASSIVE INTAKE SYSTEMS

## ADVANTAGES

- Highly efficient
- Custom-designed and engineered
- Low operating costs
- Low capital costs
- Environmentally-friendly:  
EPA Rule 316b-compliant and also compliant  
with UK fish protection laws
- Low head loss
- Proven technology for shallow water  
resources
- No waste stream

JOHNSON SCREENS® high capacity passive intake screens provide uninterrupted water withdrawal from lakes, rivers and oceans. With over 30 years of intake screen experience and thousands of installations covering a variety of conditions, application engineers from Bilfinger Water Technologies can provide design and application assistance. From shallow rivers to deep oceans, the passive intake screen systems can meet site requirements anywhere in the world.

To provide maximum efficiency, the JOHNSON SCREENS® passive intake screens are custom designed and engineered to each unique environment, resulting in a system which costs less to install, operate and requires less maintenance.

The JOHNSON SCREENS® high capacity passive intake screens are constructed using non-plugging vee-Wire® with a patented internal dual flow modifier that creates a nearly uniform low flow velocity through the entire screen surface. This significantly reduces impingement and entrainment of debris while protecting aquatic life. Passive screens are designed to meet regulatory requirements for a maximum slot velocity for both entrainment and impingement. This velocity is typically 0.15 m/s which is the maximum velocity at which a juvenile fish can turn around, swim away and not be impinged onto a passive screen but the screens can be designed to the velocity requirements of the application. This, combined with a wide range of slot sizes (typically between 2 - 10 mm) determines our screen sizing. Furthermore, the large open area and low velocities result in a very low headloss in all applications, providing low overall operating costs.

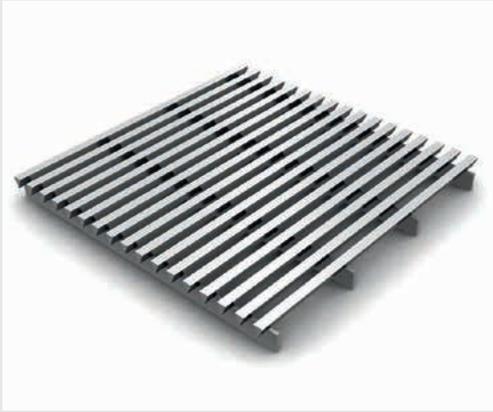
## Key Features

- Low capital costs and no moving parts, no power consumption, and low maintenance needs.
- Environmentally-friendly – this approach meets the US EPA's 316b regulations for fish protection.
- No waste stream – there is no debris brought to the surface to be handled or disposed of.
- Easy cleaning – with a periodic blast of compressed air using our Hydroburst™ system.
- Three standard configurations – drum, tee and half screens.
- Selection of materials – 304 stainless steel for fresh water and Z-alloy (CuNi) for repelling zebra mussel attachment and anti-bio fouling in seawater.
- Seawater applications – higher corrosion-resistant materials such as 316L, along with cathodic corrosion protection and duplex steels.
- Dual-flow modifier – provides low and even slot velocity (CFD modelling is available on demand).
- Patented internal flow modifier.

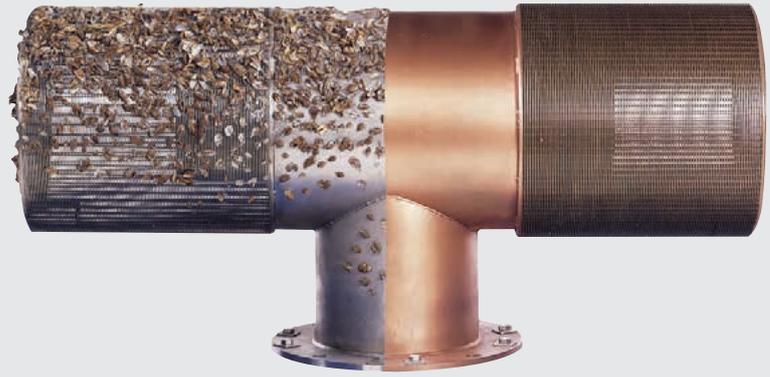


**BILFINGER**

**WATER  
TECHNOLOGIES**



JOHNSON SCREENS® Vee-Wire®



JOHNSON SCREENS® Passive Intake Screen Z-Alloy (CuNi) to avoid zebra mussel growth

## Internal Dual Flow Modifier

Early flow modifier designs, which included restrictive pipes using slots and holes, plugged easily and experienced a very high pressure drop across the screen surface area. The JOHNSON SCREENS® passive intake screen systems have an open pipe design that is much more effective, and is now the industry standard. The key component of an intake screen system is the internal dual flow modifier. The even flow raises the overall efficiency of the screen to over 90 percent, which means more compact screen cylinders and Hydroburst™ components can be used.

The low pressure drop across the screen surface and through the screen body (lower head loss) reduces the amount of energy required to pull water through the screen, creating significant savings on operating costs.



## Half Intake Screens: For Shallow Water

As water demands increase for cities, towns and industry, shallow water resources previously hard to withdraw from due to their lack of depth, have become a more viable option.

Our patented half screen has all the same attributes (low slot velocity, Hydroburst™ option, Vee Wire®, dual flow modifier, etc.) as the standard passive intake screens but can operate in a much lower depth of water. Our standard passive screens require approximately half a diameter clearance around the screen. The half screen sits flat on the bottom and only needs the top clearance.



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## Hydroburst™ Air-Backwash System: Maximizes Intake System Efficiency

Bilfinger Water Technologies developed the Hydroburst™ backwash system especially for conditions in which intake screens may need regular cleaning due to areas with high concentrations of debris or areas that are difficult to access.



Hydroburst™ with Surface Blast

The process flushes the debris away from the screen surface by releasing a large volume of compressed air through the bottom of the screen within a few seconds. The typical backwash procedure cleans each water intake either sequentially or at regular intervals.

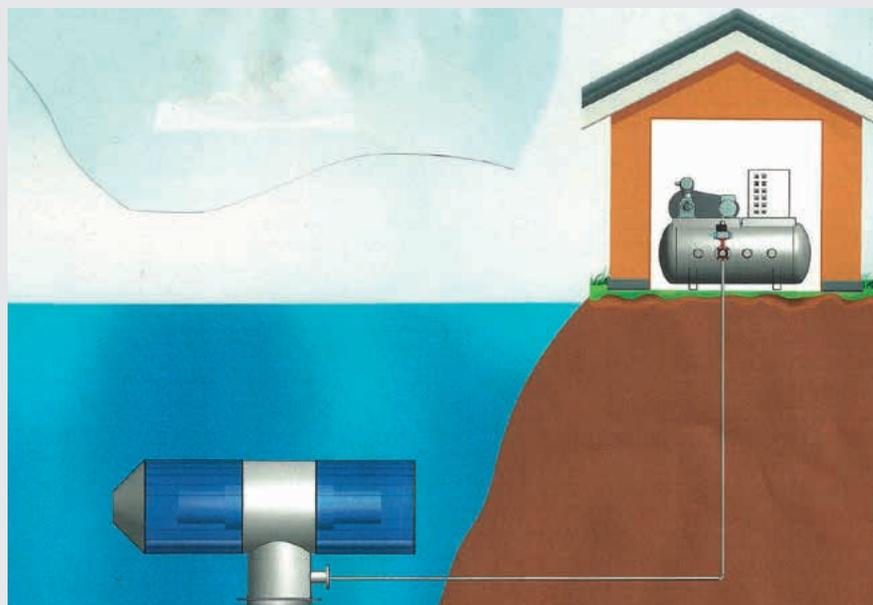
The Hydroburst™ basically consists of four main components typically pre-assembled on a skid:

1. A modern control panel, for manual or automatic operation.
2. A high-capacity receiver tank that stores the compressed air.
3. A high-capacity compressor, which supplies compressed air, needed to recharge the receiver tank.
4. Valves.
5. An optimized air distribution pipe assembly and nozzles inside the screen for even and efficient air distribution.

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## Hydroburst™ Air-Backwash System: Mode of Operation

With time, general debris will gather on the outer screen surface and will need periodic cleaning to keep the screen functioning continuously and properly. Our Hydroburst™ system offers an efficient method of regular cleaning without having to send divers in to clean the screens.



The Complete Hydroburst™ System

Our Hydroburst™ system is designed to deliver a sufficient volume of air in 3 – 5 seconds time – a real solid blast of air that has proven to work in all types of applications and conditions. This volume of air comes out from the bottom of the screen, and as it rises and expands, grabs and carries impinged debris away from the screen surface, returning the screen to a clean and efficient operating condition. Our application engineers evaluate screen size, depth and distance away in order to deliver the correct amount of air. Systems vary from operating a manual valve, to using a programmable timer system or automated PLC system that communicates to a central data control system / SCADA system for control.



JOHNSON SCREENS® Passive Intake Installation: Drinking Water Plant in South Carolina, USA



JOHNSON SCREENS® Passive Screen Installation for WE Power at Lake Michigan



Transport of JOHNSON SCREENS® Passive Screens to the Santa Maria Power Plant at a Site in Chile

## Water Technologies

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## Figures





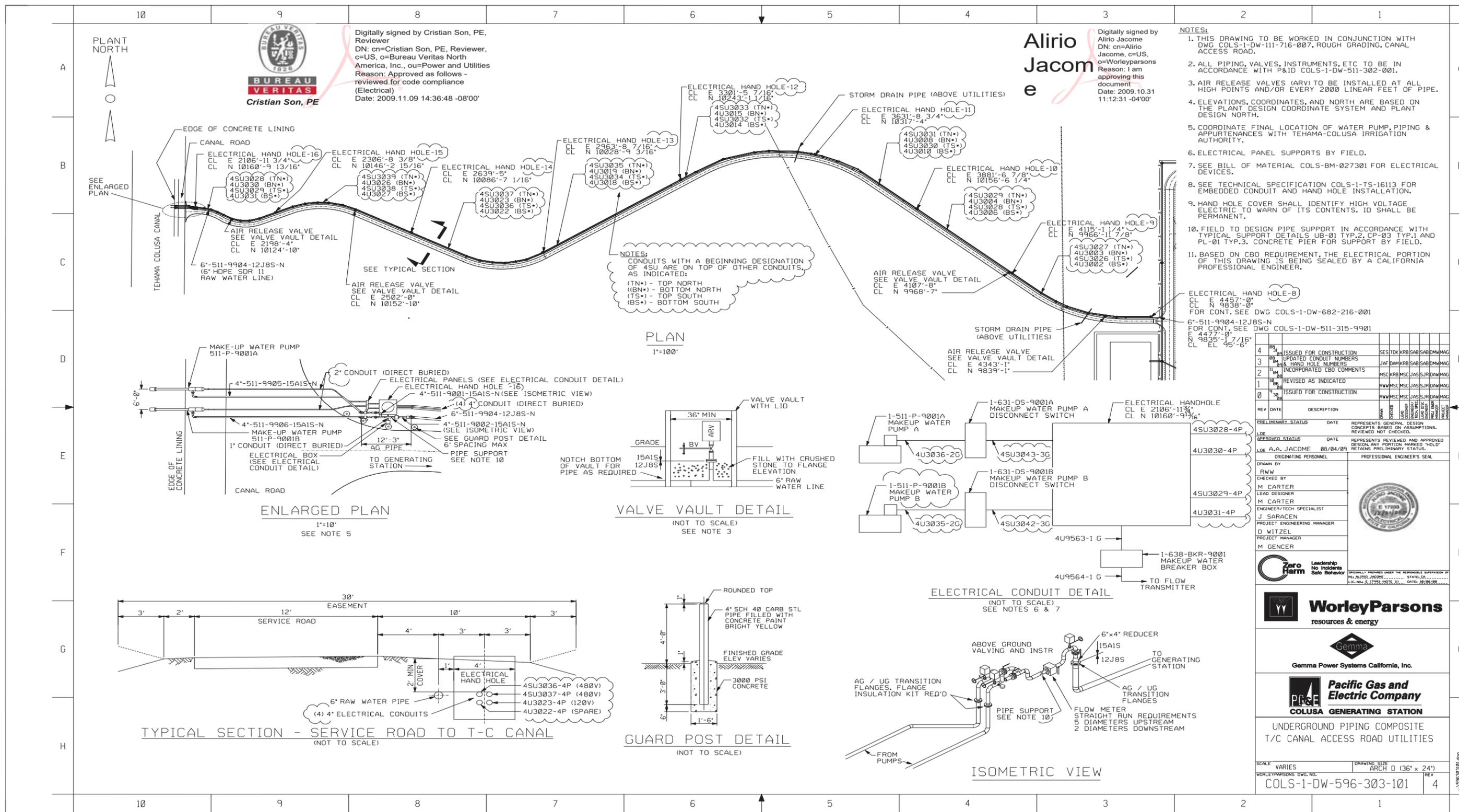


FIGURE 2-3 Location of the Pull Boxes