

**Trip Report  
Guam GWA  
Oct 1 - 7, 2005  
Skeet Arasmith**

**Contacts**

**GWA**

Mark Miller, Anita Matanae, Paul Kemp

**Activities**

**Oct1 & 2, 2005**

Depart Albany, OR 5:00 AM for Portland, OR. Depart Portland, OR on Hawaii Airlines at 8:45 PM for Honolulu. Depart Honolulu on Continental Airlines at 2:00 P M for Guam. Arrive in Guam on Oct 2, 2005 at 5:30 PM.

**Tom**

Depart Pago Pago 12 AM. Depart Honolulu on Continental Airlines at 2:00 P M for Guam. Arrive in Guam on Oct 2, 2005 at 5:30 PM.

**Oct. 3, 2005**

Arrived at the GWA office at 8:15 AM to organize for the class that was scheduled to start at 8:30 AM. This was to be a 1-day class on operation and PM of Cla-Val pressure reducing stations (PRVs), the CRD and CRL pilot and the Hytrol 100 (the Cla-Val main valve).

No students were available. All of the management staff except Mark Miller were out of the office. Mark worked with the field crews and obtained 3 field people. Two of these were involved in the same training in June of 2005.

Started class at 9:30 AM. After a short discussion it became apparent that GWA does not have the repair kits needed for the PM training or the special tools needed to disassemble and assemble the Cla-Val Hytrol 100. As a result, I changed to course format and spent the morning answering question the participants had about the functions and uses of the Hytrol 100 as a PRV, altitude valve, and check valve. This resulted in an excellent discussion on how the valve works, its various functions and how to determine if it has been installed correctly.

Reviewed the inventory procedure -that is the data required - to determine the spare parts requirements. In the past several months an inventory of the PRV stations has been completed. GWA has documented the existence of 50 stations. However, during the inventory, the needed data from the pilot valves was not obtained.

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We finished the morning with a review of the confined space entry and traffic control requirements for working on PRV stations.

**PM**

After lunch we reviewed, based on questions from the participants, the differences between using the Hytrol 100 as a PRV and as a check valve.

We then went to the field to gather data and inspect two PRV stations and a booster station. We visited the Carnation and Dairy Road PRV stations and gathered needed pilot valve data. However, the Carnation station uses a Ames Co. PRV main valve which is no longer manufactured. I was not able to determine if parts are available for this valve. The Ames Co. was acquired by the Watts Co. in 1999. The valve is no longer on their product list.

The Dairy station utilizes two different valves. The main valve is a 12 inch Cla-Val working as a pressure reducing and a pressure sustaining valve. The station includes a 4" valve for low flows. This valve is an OCV. No data could be obtained from the pilot valve.

**Tom PM**

Anita Matanae provided Tom with a list of all employees of the water and wastewater divisions, with their GWA job titles. Information needed to begin developing training plans for various job titles.

**Oct. 4, 2005**

Spent the morning with the with the maintenance crew visiting various booster stations and PRV stations. Was able to provide answers to a number of questions and offer suggestions for improvements. In general the facilities are in poor condition. For example, at one 3 pump booster station only one pump was operating.

**Tom am**

Meet with Mark Miller and Anita Matanae to discuss the training plan Tom is drafting for GWA. In keeping with the skills based approach, Mark asked for specific training plans for each water and wastewater operator based on their job title/position. He wanted plans to identify the specific skills training needed according to the actual job performed by each operator. Mark discussed some specific training needs of various positions. Also discussed how the numerous GWA job titles could be divided into several broad categories, as GWA has too many titles to provide separate plans for each.

In the afternoon we met in the classroom. Reviewed the photos and conditions from the morning and answered a number of additional questions..

**Oct. 5, 2005**

Spent the day at the motel working on the training plan and developing a numbering system for the storeroom inventory.

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**Tom**

Spent the day working on individual skill based training plans for various categories of GWA operators. Completed a draft of 18 different training plans, based on an operator's division (water/wastewater), competency or certification level, and specific job duties (i.e., system operation, preventive maintenance, treatment plant, etc.).

**Oct. 6, 2005**

Arrived at the office for an 8:00 AM meeting, to discuss the training plan that was developed on Wednesday. The meeting didn't get underway until 9:30AM. Two of the managers had other tasks to complete before the meeting. At 10:00 AM some of the managers had to leave for another meeting so we switched topics.

Spent the remainder of the morning working with the supervisors on asset data collection and PM programs. The wastewater manager has collected most of the asset information from the southern plants and is ready to get started on the PM program. I provided him with a copy of the two spreadsheets needed to gather the needed data. In addition, he promised to get me a copy of the asset data before our departure.

Reviewed the PRV data spreadsheet. Found it lacked any data on the pilot valves. In addition, four data elements on the main valve are placed in one column making it impossible to import into the database.

The distribution and collection system staff are interested in starting the asset collection with the booster stations. I provided them with the spreadsheet for the data collection.

After lunch, had a brief discussion with Mark and determined that providing training or technical assistance on the work order and inventory control systems was not appropriate at this time.

**Tom pm**

Met briefly with Mark to discuss the draft training plans. Provided information on how the plans were developed, skill packages identified, etc. Mark agreed to review and provide feedback before plans are finalized for inclusion in the comprehensive training plan to be delivered to EPA at the end of the month.

Also met with Paul Kemp briefly to explain the training plan drafts, and modifications to be made prior to submission to EPA. Discussed the draft narrative section Tom was working on for the comprehensive training plan.

**Oct 7, 2005**

Arrived at 9:00 AM for a meeting with Joaquin "Danny" Santos to discuss the proposed organizational changes resulting from the consolidation of GWA and GPA. We emphasized the

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need for a division of labor at the division level between operation, PM, and repair. The focus of Mr. Santos is in consolidation of the areas that are common between the two companies.

At 10:00 AM met with the distribution and collection planners to go over how to use the labor calculation spreadsheet.

### Tom AM

Met briefly with Paul Kemp to deliver the draft of the narrative section of the training plan, as well as a revised version of the 18 individual training plans, with changes suggested by Mark and others on Thursday.

Departed at 12:00 Noon as there was no interest at this time in additional on the work order of storeroom inventory systems.

## Conclusion

The largest roadblock to making improvements and implementing training at this facility is the lack of a single person in charge of the change or the training.

In addition, the organizational structure along with the lack of focus makes implementing improvements in the organization very difficult. As of this data there is essentially no routine operation, scheduled inspections, data collection, data analysis, or preventive maintenance conducted at any of the facilities. The entire organizational focus is on emergency response.

Unless there is a change in the organizational structure and a change in the focus of the organization, major improvements in water quality, and facility condition may not be possible.

Rather than waiting on the 20 year capital plan, we strongly recommend two actions:

- Change the organizational structure as recommended in the attached organizational chart.
- Use existing staff to review every facility. From the review, develop a "Bent, Broken, Doesn't work list." From the list, use the MPS Work Order system and develop estimates of repair for each item that is on the list. This will allow the engineering staff to determine if a facility should be repaired or replaced.

## Products

### Products Produced

The following products were produced and/or provided as a result of this visit:

- Spreadsheet for documenting asset data from the booster stations.

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- Spare parts number system was developed but not delivered as there was no interest at this time.

### Follow-up

#### GWA

The recommended follow-up for GWA is as follows:

- Continue with the name plate data collection for the wastewater treatment plants and water system booster stations.
- Once completed, forward the asset data spreadsheets to ACR for numbering and importing into the asset database.

#### Training

We recommend the next step in OMIP training for GWA include the following skill packages:

- SP-05 – Clarification of roles, responsibilities, and accountability.
- SP-02 & SP-04 – How to organize crews and determine work load
- SP-03 – Pre-job planning
- SP-06 – Identification of required tools
- SP-07 – Determining spare parts requirements

#### ACR

ACR has agreed to number the assets once the spreadsheets are received and import them into the asset database.

ACR has agreed to obtain, where possible, manufactures data on the assets listed in the asset spreadsheets.

### Recommendations

In order for training and technical assistance to be effective with this organization we recommend the following next steps.

1. Change the organizational structure by separating the operations/inspection crews from the repair crews and the PM crews.
2. Establish separate crews for water and wastewater
3. Provide the basic supervision course provided by Palau CC to all field supervisors.
4. Change the organizational focus to one of routine operation and maintenance rather than emergency response.