

Quarterly Report – Public Page

Date of Report: 3rd Quarterly Report, June 29, 2023

Contract Number: 693JK32210002POTA

Prepared for: Government Agency: DOT and Co-funders

Project Title: Monitoring the Long-Term Compatibility of Vapor Corrosion Inhibitor and Cathodic Protection Associated Components

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For quarterly period ending: June 30, 2023

1: Items Completed During this Quarterly Period:

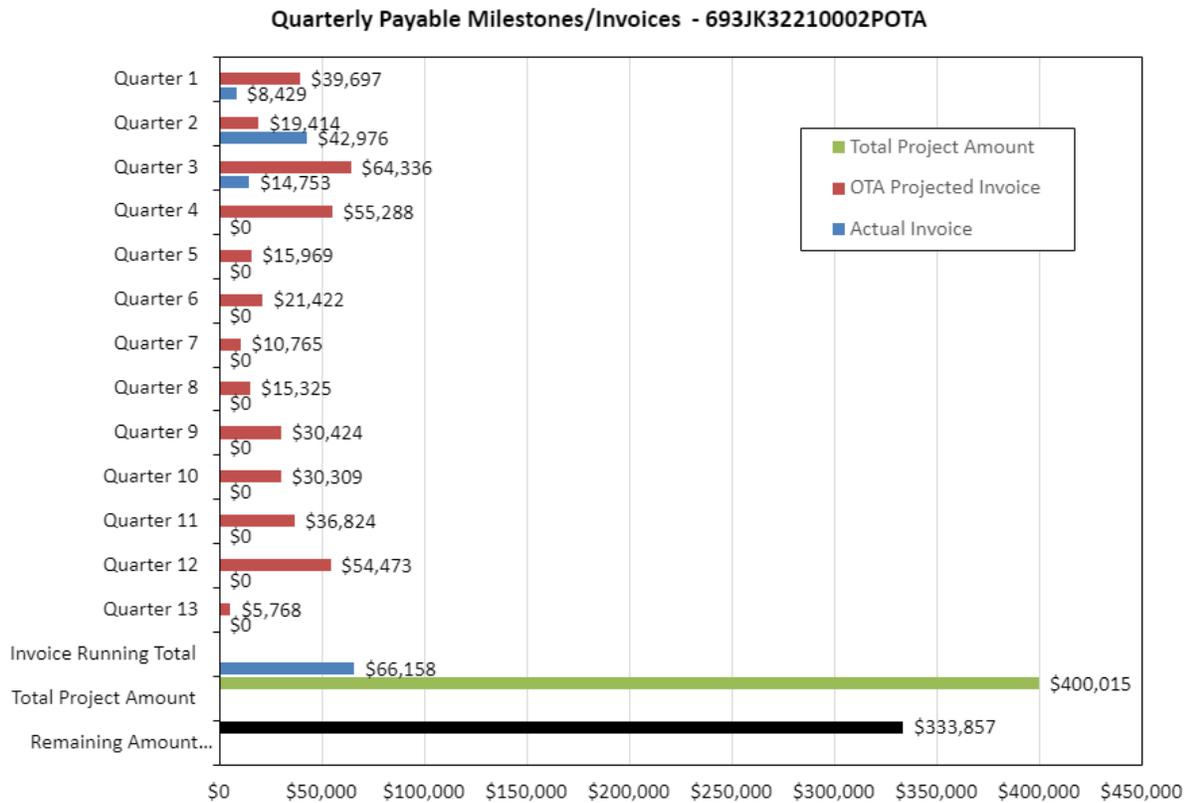
<i>Item #</i>	<i>Task #</i>	<i>Activity/Deliverable</i>	<i>Title</i>	<i>Federal Cost</i>	<i>Cost Share</i>
6	2	Obtain VCI dosage information for tank pad chemical compositions and tank bottom characteristics	Summarize the dosages for a range of conditions to be include in quarterly report	\$4,508	\$4,508
7	1	Collect and start analyzing environmental well water samples	To be summarized in quarterly report	\$3,258	\$3,258
13	5	Quarterly status report & project management	Submit 3rd quarterly report	\$6,987	\$6,987

2: Items Not Completed During this Quarterly Period:

<i>Item #</i>	<i>Task #</i>	<i>Activity/Deliverable</i>	<i>Title</i>	<i>Federal Cost</i>	<i>Cost Share</i>
10	1	Complete analysis of the environmental well water samples	Results to be included in quarterly report	\$7,008	\$7,008
11	2	Start field testing with the tanks that have been treated with VCIs, install ER probes and mass-loss coupons as needed	Summary to be included in quarterly report	\$24,053	\$24,053
12	2	Start field testing with the tanks that are to be treated with the VCIs during the project course, install mass-loss coupons and ER probe in a dense configurations	Summary to be included in quarterly report	\$26,288	\$26,288

3: Project Financial Tracking During this Quarterly Period:

Note that this chart reflects Federal share only.



4: Project Technical Status:

The following activities were undertaken:

Item 6, Task 2 — Obtain VCI dosage information for tank pad chemical compositions and tank bottom characteristics, Summarize the dosages for a range of conditions to be include in quarterly report: VCI dosage information was collected from two VCI vendors. The vendors are using the following formula to calculate the VCI dosages.

- Vendor 1: The dosages range between 80-100 lb/ft² of the tankpad surface area. Following is a list of dosages for the various tanks.

Tankpad Diameter (ft)	Vendor 1 VCI dosage (lb)
100	650
125	1,200
150	1,400
200 and 202	2,500
213	2,850
227	3,250

- Vendor 2: potable water being 2.5 volume percent of the sand pad volume, 5 wt % in the calculated water.

Item 7, Task 1 — Collect and start analyzing environmental well water samples, To be summarized in quarterly report: Environmental water well samples have been collected from a storage terminal where approximately 25 percent of the tanks have been treated with VCIs. The initial data collected from the water analysis show no presence of VCI chemistry in the water samples, the initial data are presented in the figure below.

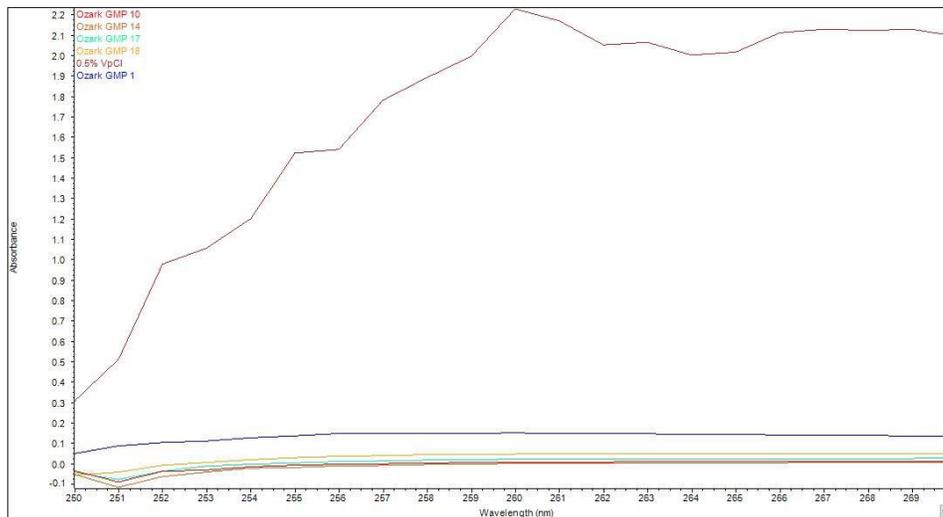


Figure 1. UV-vis absorbance of environmental well water samples and 0.5% VCI solution.

This item has been completed, and it satisfies item 5 in Attachment 2 Project Deliverables. The above links to item 5 as listed in Attachment 1 Project Team Activities.

Item 13, Task 5 — Quarterly Project Management & Status Update Reporting, Submit 3rd quarterly report: The 3rd quarter project meeting was held on June 22, 2023. This item has been completed. This item links to item 10 in Attachment 2 Project Deliverables. The item also links to item 12 as listed in Attachment 1 Project Team Activities.

Item 10, Task 1 — Complete analysis of the environmental well water samples, Results to be included in quarterly report: The water samples have been received, and been partially analyzed. The water samples will also be analyzed for the chemical markers such as dissolved ammonia and ammonium ions. The sensors for the chemical markers were received towards end of June 2023. The water sample analysis will be completed during the 4th quarter of the project.

Item 11, Task 2 — Start field testing with the tanks that have been treated with VCIs, install ER probes and mass-loss coupons as needed, Summary to be included in quarterly report: The field testing plans have been developed, and various materials and supplies have been procured. The field testing will be started during the 4th quarter of the project.

Item 12, Task 2 — Start field testing with the tanks that are to be treated with the VCIs during the project course, install mass-loss coupons and ER probe in a dense configurations, Summary to be included in

quarterly report: The project team is still in discussion with tank operators who plan to introduce VCI in their tanks. It is anticipated that this activity will start sometime during the next two quarters.

5: Project Schedule:

The following items were not completed in the third quarter due to various reasons.

Item 10, Task 1 — Complete analysis of the environmental well water samples, Results to be included in quarterly report: The water samples have been received, and been partially analyzed. The water samples will also be analyzed for the chemical markers such as dissolved ammonia and ammonium ions. The chemical marker sensors were received only towards end of June 2023. The water sample analysis will be completed during the 4th quarter of the project.

Item 11, Task 2 — Start field testing with the tanks that have been treated with VCIs, install ER probes and mass-loss coupons as needed, Summary to be included in quarterly report: The field testing plans have been developed, and various materials and supplies have been procured. The field testing will be started during the 4th quarter of the project. The late start of this activity is due to contracting delays between PRCI and BSRA.

Item 12, Task 2 — Start field testing with the tanks that are to be treated with the VCIs during the project course, install mass-loss coupons and ER probe in a dense configurations, Summary to be included in quarterly report: This task is depended on the tank operators' schedule for VCI treatment of the existing tanks. The project team is in discussion with the tank operators. It is anticipated that this activity will start sometime during the next two quarters.

The project has caught up considerably compared to the first two quarters but is still behind schedule.