Quarterly Report – Public Page

Date of Report: *5th Quarterly Report, December 28, 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*
Prepared by: *Pipeline Research Council International, Inc.*
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For quarterly period ending: *December 31, 2023*

1: Items Completed During this Quarterly Period:

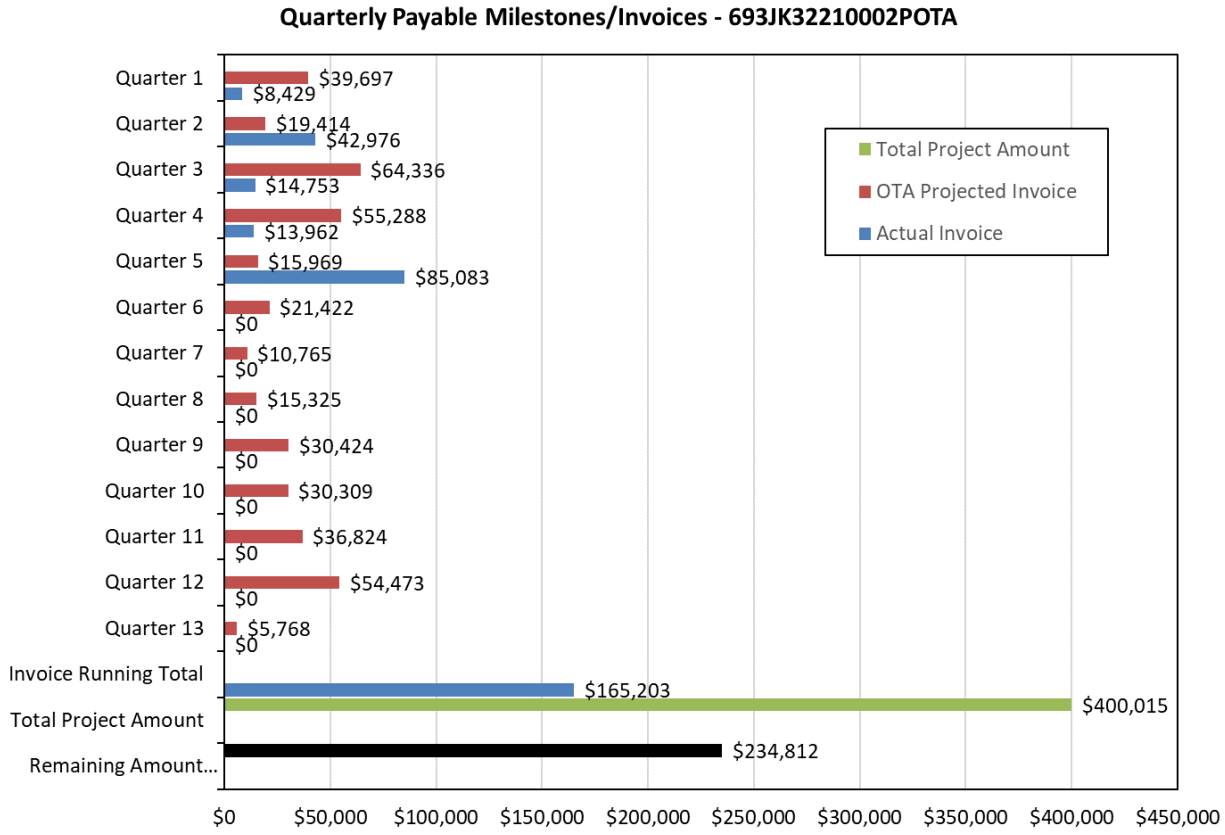
Item #	***Task #***	***Activity/Deliverable***	***Title***	***Federal Cost***	***Cost Share***
11	*2*	*Start field testing with the tanks that have been treated with VCIs, install ER probes and mass-loss coupons as needed*	*Summary to be included in quarterly report*	*$24,053*	*$24,053*
12	*2*	*Start 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*
14	*2*	*Setup and start large scale VCI dispersion experiments*	*Details of the experimental setup to be included quarterly report*	*$27,788*	*$27,788*
19	*5*	*Quarterly status report & project management*	*Submit 5th quarterly report*	*$6,954*	*$6,954*

2: Items Not Completed During this Quarterly Period:

Item #	***Task #***	***Activity/Deliverable***	***Title***	***Federal Cost***	***Cost Share***
15	*4*	*Setup and start laboratory scale experiments to determine VCI and non-sand pad material compatibility*	*Details of the laboratory scale experiments to be included in the quarterly report*	*$16,288*	*$16,288*
16	*3*	*Collect initial field data to evaluate VCI and CP compatibility*	*Summary to be included in quarterly report*	*$3,258*	*$3,258*
18	*2*	*Collect quarterly field data for the field testing started under items 10 & 11*	*Summary to be included in quarterly report*	*$9,015*	*$9,015*

3: Project Financial Tracking During this Quarterly Period:

Note that this chart reflects Federal share only.



4: Project Technical Status:

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 has been started with 21 tanks that have been previously treated with VCIs. Summary of the field testing is following: (i) 9 tanks with UT-based probes, targeted monitoring. Field testing started on all 9 tanks and sand samples have been received. (ii) 3 tanks with ER and UT-based probes, targeted monitoring. UT and ER probes could not be replaced, jammed in sand. Data from the existing monitoring tools will be collected and reported. (iii) 3 tanks with ER probes, targeted monitoring. Field testing started with 3 tanks, field sand samples have been received. (iv) 5 tanks with ER probes, no targeted monitoring. Field testing started with 5 tanks, field sand samples have been received. (v) 4 tanks with no monitoring. Field testing started on all four tanks, sand samples have been received, three tanks' sand samples have been analyzed. This item has been completed, and it satisfies item 8 in Attachment 2 Project Deliverables. It also links to item 6 as listed in Attachment 1 Project Team Activities.

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 field testing has been started with 4 tanks. Sand sampling done prior to VCI

injection. VCI injection and monitoring through same ports. Monitoring will be installed three months after VCI injection. This item has been completed, and it satisfies item 9 in Attachment 2 Project Deliverables. It also links to item 7 as listed in Attachment 1 Project Team Activities.

Item 14, Task 2 —Setup and start large scale VCI dispersion experiments, Details of the experimental setup to be included quarterly report: The project plan was to start two large-scale VCI dispersion experiments. The first large-scale experiment was started in 4th quarter, and the second large-scale experiment was started in early 5th quarter. The second large-scale consists of a 30-ft x 2-ft x 1-ft sand box, and a A36 carbon-steel plate on the top of the sand box. Anode are laid at the bottom, and anode and plate are interconnected using a power supply. Mass-loss coupons and ER probes have been placed every 5 ft. This item has been completed, and it satisfies item 10 in Attachment 2 Project Deliverables. It also links to item 9 as listed in Attachment 1 Project Team Activities.

Item 19, Task 5 —Quarterly status report & project management, Submit 5th quarterly report: The 5th quarter project meeting was held on December 14, 2023. This item has been completed, and it partly satisfies item 25 in Attachment 2 Project Deliverables. It also links to item 13 as listed in Attachment 1 Project Team Activities.

5: Project Schedule:

Item 15, Task 4 —Setup and start laboratory scale experiments to determine VCI and non-sand pad material compatibility, Details of the laboratory scale experiments to be included in the quarterly report: The direction of this experiments has been changed compared to the initial plans. It was initially decided to use a clay pad as non-sand pad material for VCI migration, but since then it has been determined that most operators do not use clay pads. Therefore, new plans include using a concrete pad for the VCI migration studies. Because of the change in direction, start of this experiment has been delayed. This experiment has been redesigned, and will be started during the next quarter.

Item 16, Task 3 —Collect initial field data to evaluate VCI and CP compatibility, Summary to be included in quarterly report: The field data for this item is still not available and is expected to become available in early 6th quarter. For this reason, this item was not completed in the 5th quarter.

Item 18, Task 2 —Collect quarterly field data for the field testing started under items 10 & 11, Summary to be included in quarterly report: The field testing for the VCI-treated tanks and tanks recently treated with VCIs was started in the 5th quarter. The monitoring data from these tanks will become available in the next quarter. For this reason, this item was not completed in the 5th quarter.

The project is behind schedule due to the various reasons explained above.