June 19, 2007

Via Facsimile and Regular Mail

R. M. Seeley, Director, Southwest Region
United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration
8701 S. Gessner, Suite 1110
Houston, TX 777074

RE: CPF 4-2007-5019 – Response to NOPV

Dear Mr. Seeley,

This letter is intended as a response to the Notice of Probable Violation (NOPV) issued to NuStar Logistics L.P. ("NuStar") by the Pipeline and Hazardous Materials Safety Administration (PHMSA) on May 21, 2007. The NOPV concerned the results of inspections of NuStar's Corrosion Control manuals, records, and procedures during 2004 and a follow up inspection of the same conducted in August of 2005. The NOPV alleged a violation of §195.573 ("What must I do to monitor external corrosion control?") and proposed a $50,000 penalty and a compliance order related to that violation.

Allegation and Response

The regulation in question, §195.573(a)(2), states that in order to adequately monitor external corrosion control, one must identify "the circumstances in which a close-interval survey or comparable technology is practicable and necessary to accomplish the objectives of paragraph 10.1.1.3 of NACE Standard RP0169-96". The allegation made in the NOPV is that NuStar failed to identify the circumstances in which a close interval survey should be performed. The conclusion reached by PHMSA was that the failure to identify the circumstances in which a close interval survey should be performed indicated that NuStar was in fact not performing them.

NuStar acknowledges that its Corrosion Control manual in place during the initial inspection did not identify the circumstances in which a close-interval survey or comparable technology would be used. NuStar has since amended its Corrosion Control manual to directly address the circumstances in which a close-interval survey or comparable technology would be used. Section 9.2 of NuStar's current Corrosion Control manual is relevant to this issue and attached as Exhibit A.

With regard to whether close interval surveys were conducted despite no policy identifying the circumstances in which close-interval surveys were to be used, NuStar notes that it did conduct

close interval surveys prior to the follow-up interview conducted in 2005 and has continued since the adoption of its revised Corrosion Control manual to conduct close interval surveys on several of its pipelines in accordance with the guidance provided in that manual. Additionally, NuStar has historically and continues to monitor pipeline corrosion by other methods such as conducting a review of analysis leak repair and inspection records, corrosion monitoring records, exposed pipe inspection records, and the pipe environment. NuStar has always monitored its pipelines for corrosion out of concern for the integrity of its pipelines.

Penalty Assessment Factors

NuStar believes that the proposed penalty is excessive. NuStar notes that in assessing a penalty, PHMSA must consider the nature, circumstances and gravity of the violation, including adverse impact on the environment; the degree of the respondent's culpability; the respondent's history of prior offenses; the respondent's ability to pay; any good faith by the respondent in attempting to achieve compliance; and the effect on the respondent's ability to continue in business. PHMSA may also consider the economic benefit gained from violation, if readily ascertainable, without any reduction because of subsequent damages; and such other matters as justice may require.

In addressing the nature, circumstances, and gravity of the violation, including impact on the environment, NuStar notes that the violation alleged herein is a written procedure violation and did not result in any impact to the environment. NuStar acknowledges that its Corrosion Control manual did not specifically identify circumstances under which close-interval surveys should be conducted. However, NuStar did conduct close-interval surveys when its management felt such measures were warranted based on sound engineering judgment even in the absence of a manual setting out those circumstances. Moreover, NuStar took other measures (e.g. review of analysis leak repair and inspection records, corrosion monitoring records, exposed pipe inspection records, and the pipe environment) designed to monitor the status of the pipeline with regard to potential corrosion in an effort to ensure pipeline integrity. Finally and most importantly, there is no evidence of any leaks due to or related to corrosion on the pipelines subject to this investigation and, thus, no resulting environmental impact.

In addressing the degree of the respondent's culpability and good faith in attempting to achieve compliance, NuStar notes that its error in this case was not willful and that it acted proactively and aggressively to come into compliance once the issue was brought to NuStar's attention. Prior to the 2004 inspection, NuStar did not have a Corrosion Control manual separate from its Operations and Maintenance Manual. Subsequent to that inspection, NuStar recognized the need for such a manual and undertook the requisite effort to put one in place. NuStar employees continue after that time and up to the present time to work with PHMSA employees to ensure that the new manual is in full compliance. NuStar believes that its current manual is in compliance and is submitting the relevant portion to PHMSA for confirmation.

Penalty Precedent

One of the factors that PHMSA may consider in assessing a penalty is labeled "such other matters as justice may require". NuStar contends that one other matter that justice requires being considered is how similarly situated companies were treated in similar cases involving violations of §195.573. In investigating that issue, NuStar discovered that in similar cases recently adjudicated by PHMSA for violations of §195.573, the penalty assessed was significantly lower in every case. In fact, there was no penalty assessed for a violation of §195.573 in both the case most similar to the instant case and in the most recent case located, one where there were several other allegations and significant public and environmental concerns. Considering the penalty assessed against NuStar in light of the penalty assessment factors above and in comparison to the penalty assessed against similarly situated companies for violations of the same regulation in recent history, NuStar believes that the $50,000 assessed in this case is excessive and should be eliminated or at least reduced to $5,000 at a maximum.

A recent Final Order similar in fact to the instant allegation involved Kinder Morgan Energy Partners, L.P. violating §195.573(a) due to its failure to conduct tests on its cathodically protected pipelines. In a Final Order issued on December 16, 2003, PHMSA retracted the initially proposed $6,000 penalty on the basis that there were mitigating circumstances. One of the mitigating circumstances enunciated was that the respondent in that case would not likely have had considerable experience with the methods available for conducting the inspection and that the respondent's consultants did make an effort to analyze the state of the pipe line during the time in question.

Like Kinder Morgan Energy Partners, L.P., NuStar did not violate §195.573(a) willfully, but rather encountered some challenges in the process of ratcheting up its program to fully comply with the new regulations. Additionally, although the conditions under which close-interval surveys would be conducted were not specifically within a manual, efforts were made to analyze the state of the pipeline during the time in question (e.g. reviews of analysis leak repair and inspection records, corrosion monitoring records, exposed pipe inspection records, and the pipe environment to monitor pipeline corrosion). In retracting the penalty against Kinder Morgan Energy Partners, L.P, the Final Order notes that: "This concern on the part of Respondent for the integrity of the pipeline should not be discouraged." NuStar believes that PHMSA should echo that sentiment in this situation and similarly retract or at least reduce the assessed penalty so as to encourage NuStar's concern for the integrity of the pipeline.

The most recent Final Order NuStar located regarding a violation of §195.573 was issued on January 9, 2007 against ExxonMobil Pipeline Company regarding a NOPV containing over a dozen allegations—one of which was a violation of §195.573. In that Final Order, PHMSA resolved the entire matter for a mere $5,000 with no portion of that penalty attributable to the violation of §195.573. PHMSA assessed ExxonMobil Pipeline Company no penalty for violating §195.573 despite noting significant "public and environmental concerns" due to much of the pipeline in question overlaying Drinking Water Unusually Sensitive Areas, High Population Areas, and other environmentally sensitive areas. The complete lack of a penalty in this most recent case for a violation of §195.573 further supports NuStar's contention that the penalty assessed against NuStar is excessive and not consistent with PHMSA precedent.

There are many other examples that suggest that the penalty assessed against NuStar is excessive:

- In a Final Order issued against Marathon Pipeline L.L.C. on July 10, 2006, PHMSA assessed a penalty of only $2,000 for §195.573(a)(1) (failure to conduct annual test readings on protected pipelines to monitor external corrosion).
- In a Final Order issued against Sunoco Pipeline, L.P. on November 15, 2005, PHMSA assessed a penalty of only $11,000 for a violation of §195.573.
- In a Final Order issued against Alyeska Pipeline Service Company on May 19, 2005, PHMSA assessed a collective penalty of $8,500 for four separate violations of both §§195.571 and 195.573.
- In a Final Order issued against Shell Pipeline Co., L.P. on March 18, 2005, a collective penalty of $11,500 was issued for violation of both sections §§195.401 and 195.573.
- In a Final Order issued against Giant Industries, Inc. on January 5, 2005, PHMSA issued a collective penalty of $3,000 for violations of §§195.573 and 195.428.

Compliance Order

Following the August 2005 follow-up inspection, NuStar reviewed its corrosion protection data collection and evaluation methods to ensure that all regulatory requirements are currently being met. Specifically, NuStar revised its Corrosion Control manual to bring it into full compliance with §195.573(a)(2) regarding the identification of circumstances in which a close-interval survey or comparable technology is practicable and necessary to accomplish the objectives of paragraph 10.1.1.3 of NACE Standard RP0169-96. In addition, NuStar has performed close interval surveys on several pipelines in accordance with that manual's guidance and has a five year plan to conduct close interval surveys on all NuStar pipelines to establish a baseline to proactively identify areas within pipeline systems that may need additional attention.

The proposed compliance order requires NuStar to review its corrosion protection data collection and evaluation to ensure that data meets the regulatory requirements, including IR drop considerations and that the pipelines are protected. In areas that the pipelines are not adequately protected, NuStar is instructed to develop a plan and time table to improve the corrosion protection systems to bring NuStar into compliance. As all these aspects of the compliance order have already been complied with fully, NuStar does not believe it is necessary to include these compliance order provisions in the Final Order.

The proposed compliance order also requires NuStar to maintain documentation of the safety improvement costs associated with fulfilling this requirement and to submit those costs in two categories: (1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and (2) total cost associated with replacements, additions and other changes to pipeline infrastructure. NuStar is in the process of gathering cost data responsive to this request and respectfully requests a thirty-day extension to provide that information.

Conclusion and Hearing Request

NuStar hopes that its responses to the allegations and the proactive measures that NuStar has taken will be considered by PHMSA as a basis for eliminating or reducing the proposed penalty to a maximum of $5,000. NuStar additionally hopes that the documentation submitted with this response coupled with the response to the allegations above and the proactive measures described herein are sufficient to provide PHMSA with a level of comfort that NuStar is taking the necessary measures to comply with the regulations such that the proposed compliance order is deemed not necessary. Should PHMSA concur with NuStar on these two points, then NuStar will waive its right to a hearing. After considering the points made above, if PHMSA maintains either that a penalty in excess of $5,000 or the compliance order is necessary, then NuStar respectfully requests that a hearing be held on this matter. NuStar has had a positive experience working with PHMSA recently and hopes that a formal hearing will not be necessary. If you have any questions in this matter, please call Hector Gonzalez at 361-696-7562. Thank you very much for your time and attention to this response to the NOPV.

By: NuStar GP, Inc., its General Partner
By: Todd Denton, its Vice President

cc: Hector Gonzalez
Mark Arguelles
Rebecca Fink

9. External Corrosion Control Monitoring (§CFR 195.573)

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9.1. ANNUAL PIPE-TO-SOIL SURVEYS

9.1.1. INITIALIZING PIPE-TO-SOIL SURVEYS

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 8a	Initiate the annual pipe-to-soil surveys as close as possible to the beginning of the month that the survey is due in. **NOTE:** Valero obtains annual pipe-to-soil surveys using the Allegro field computer. Copper/Copper Sulfate reference electrodes will be used for obtaining the pipe-to-soil information. *NCCER Pipeline Corrosion Control Trainee Guide* (Level One, Module 61108-02, Page 8.3, Paragraph 2.2.0) describes the techniques for obtaining pipe-to-soil potentials.	
Step 8b	**1**	Complete the annual pipe-to-soil surveys before the once a year not to exceed 15 months date, insuring regulatory compliance is maintained.
	2	Complete a pipe-to-soil survey on separately protected short sections of bare ineffectively coated pipelines every three years not to exceed 39 months.
Step 8c	Report any Abnormal Operation Conditions (AOC) as defined in the Operator Qualification (OQ) program.	
Step 8d	Unprotected buried or submerged pipe, in which active corrosion is found, must be evaluated and cathodically protected.	
	1	Before 12/29/2003, once every five years not to exceed 63 months.
	2	Beginning 12/29/2003, once every three years not to exceed 39 months.
Step 8e	Determine areas of active corrosion by closely spaced pipe-to-soil survey. If pipe-to-soil survey is impractical, seek other methods which may include: review of analysis leak repair and inspection records, corrosion monitoring records, exposed pipe inspection records, or the pipe environment. Refer to the IMP Manual Section 6: *P & M Measures*.	
Step 8f	When you complete an annual pipe-to-soil survey, upload the Allegro data immediately into the Cathodic Protection Data Management (CPDM).	

9.1.2. REVIEWING PIPE-TO-SOIL DATA

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 9a	Review all data uploaded into the CPDM program to insure that it completed the data transfer and that it accurately depicted all information electronically moved into the CPDM program.
Step 9b	Synchronization/verification with the administrative computer is to be done the same day the Allegro is uploaded and data printed out.
Step 9c	Notify the Corrosion Control Managers via e-mail at the completion of the data synchronization process.
Step 9d	**[Corrosion Control Managers]** Within 30 working days of e-mail notification from the OQ qualified corrosion personnel, review the annual pipe-to-soil survey data.

Step 9e	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Upon completion of the 30 working day review, discuss the data and promptly initiate work orders, as deemed necessary, to insure cathodic protection is functional and NACE/Regulatory Criteria is maintained on the subject facility. Any deficiencies found in corrosion control must be corrected as required by 195.401(b). Refer to section 8.4 of this manual.

9.1.3. INITIATING WORK FROM PIPE-TO-SOIL DATA

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 10a	If you cannot schedule and initiate any required work, adjustments, or repair within a four-week period from the initiation of the work order, assign the schedule, and prioritize the task(s) with a preferred contractor.
Step 10b	**[Corrosion, Qualified, or Contract Personnel]** Complete the work within a six-month period if possible.
Step 10c	**[Corrosion, Qualified, or Contract Personnel]** Upon completion of work, adjustments, or repair, perform pipe-to-soil surveys as needed to insure cathodic protection is functional and meeting NACE/Regulatory Criteria.

9.1.4. FOLLOWING UP ON WORK

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 11a	Make corrections or additions to data/information with notes/remarks in the CPDM program.
Step 11b	Synchronization/verification with the administrative computer is to be done the same day the corrections with notes/remarks are completed.
Step 11c	Notify the CCM by e-mail at the completion of the data synchronization process for the corrected or additional data/information.

9.1.5. VERIFYING COMPLETED WORK

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 12a	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Within 20 working days of e-mail notification to the CCM, review the corrected or adjusted data.
Step 12b	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Upon completion of the 20 working day review, discuss the corrected or additional data/information and take any additional actions deemed necessary to insure cathodic protection is functional and NACE/Regulatory Criteria is maintained on the subject facility.
Step 12c	When verification of work, adjustments, corrections, or repair is completed, functional, and meeting NACE/Regulatory criteria, complete and close out work orders. The work orders include all relevant work history and a list of all personnel performing any OQ covered task.

9.2. CLOSE INTERVAL SURVEYS

A close interval survey is performed to maintain the efficient operation of the cathodic protection system.

Since only a small fraction of the pipeline length provides the potentials that are measured at the test stations, a close interval survey is needed to assess the effectiveness of the cathodic protection over the entire length of the pipe.

A detailed close interval survey should be conducted to:

- Provide a base line operating data
- Locate areas of inadequate protection levels
- Identify locations likely to be adversely affected by construction, , or other unusual environmental conditions
- Identify interference from a neighboring source that could otherwise be missed during annual pipe-to-soil surveys

A close interval survey will be performed along with hydrostatic integrity test once every five years.

The techniques for conducting close interval surveys are in *NCCER Pipeline Corrosion Control Trainee Guide* (Level Two, Module 61205-02, Pages 5.1 through 5.13).

9.2.1. INITIALIZING CLOSE INTERVAL SURVEYS

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 13a	Before 12/29/2003 or not more than 2 years after the cathodic protection system is installed, a close interval survey must be performed to achieve the objectives of paragraph 10.1.1.3. of NACE RP0169-96.
Step 13b	To perform a close interval survey, an electrical connection must be made to the pipeline using trailing wire. The trailing wire is normally coated copper.
Step 13c	A set of electrodes is positioned directly over the pipeline at approximately 3 foot intervals.
Step 13d	Attach appropriate leads to the high resistance voltmeter or data logger and the reference electrode. Note: Ensure that good contact has been made with the test leads.
Step 13e	Measure the voltage and current output of all company rectifiers and foreign rectifiers and document the results on the survey form.
Step 13f	Take a pipe-to-soil potential reading.
Step 13g	Measure the potential drop in the pipe between the adjacent test point locations each time a new connection to the test point is made.
Step 13h	On/off intervals should be twelve seconds on and three seconds off.
Step 13i	Measure the current in all bonds during the survey.
Step 13j	Record information and description of all rectifiers and test points.

9.2.2. REVIEWING CLOSE INTERVAL SURVEY DATA

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 14a	Review all data uploaded into the CPDM program to insure that it completed the data transfer and that it depicted all information electronically moved into the CPDM program.
Step 14b	Provide an electronic version of the data in excel format that is compatible with the existing CPDM program.
Step 14c	**[Corrosion Control Manager]** Review the close interval survey report for any unusual areas such as: ♦ OFF potentials higher than ON potentials ♦ Potentials lower than company criteria ♦ Sudden change in potential over a short distance ♦ Poor correlation between near ground, far ground, and potential (IR) drop in pipe ♦ Greater pipe potential (IR) than permitted in specifications
Step 14d	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Discuss the data and promptly initiate work orders, as deemed necessary, to insure cathodic protection is functional and NACE/Regulatory Criteria is maintained on the subject facility. Any deficiencies found in corrosion control must be corrected as required by 195.401(b). Refer to section 8.4 of this manual.

9.2.3. INITIATING WORK FROM CLOSE INTERVAL SURVEY DATA

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 15a	If you cannot schedule and initiate any required work, adjustments, or repair within a four-week period from the initiation of the work order, assign the schedule, and prioritize the task(s) with a preferred contractor.
Step 15b	**[Corrosion, Qualified, or Contract Personnel]** Complete the work within 180 days from the work order generation.
Step 15c	**[Corrosion, Qualified, or Contract Personnel]** Upon completion of work, adjustments, or repair, perform close interval surveys as needed to insure cathodic protection is functional and meeting NACE/Regulatory Criteria.

9.2.4. VERIFYING COMPLETED WORK

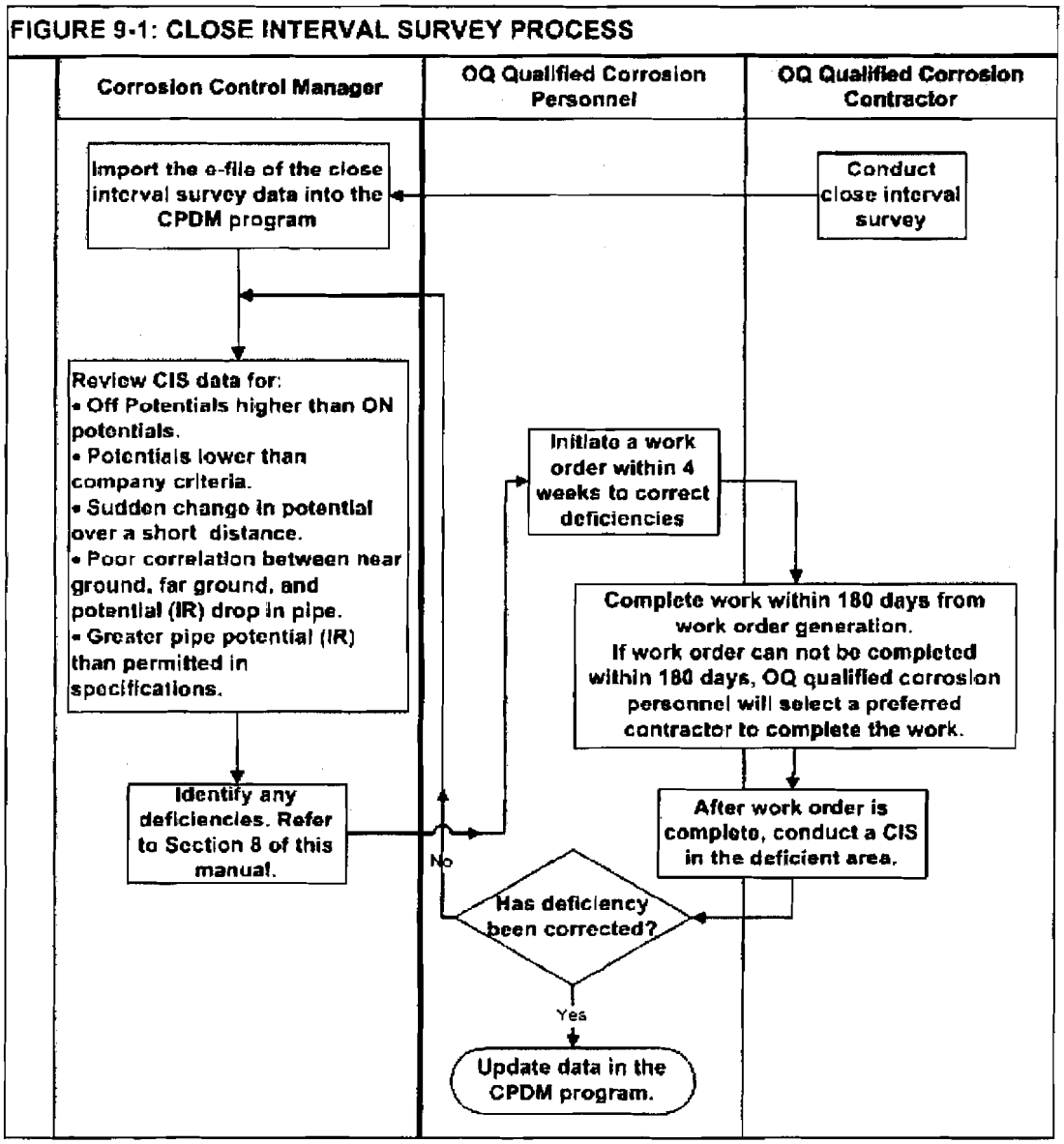
NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 16a	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Within 20 working days of e-mail notification to the CCM, review the corrected or adjusted data.
Step 16b	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Upon completion of the 20 working day review, discuss the corrected or additional data/information and take any additional actions deemed necessary to insure cathodic protection is functional and NACE/Regulatory Criteria is maintained on the subject facility.

Step 16c	When verification of work, adjustments, corrections, or repair is completed, functional, and meeting NACE/Regulatory criteria, complete and close out work orders. The work orders include all relevant work history and a list of all personnel performing any OQ covered task.

Refer to Figure 9-1 to insure all steps for the close interval survey has been met.

FIGURE 9-1: CLOSE INTERVAL SURVEY PROCESS



9.3. RECTIFIERS AND OTHER DEVICES

9.3.1. REVIEWING INITIAL RECTIFIER AND OTHER DEVICE READINGS

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 17a		**[Corrosion Department]** Initiate rectifier and critical bond readings six times a year not to exceed a 2 $^{1}/_{2}$ month period. Initiate interference bond, reverse current switch, and diodes once each a calendar year not to exceed 15 months. Techniques for obtaining rectifier critical bond readings are in *NCCER Pipeline Corrosion Control Trainee Guide* (Level One, Module 61108-02, Pages 8.4 and 8.5, Paragraphs 2.3.0 – 2.5.0).
Step 17b	**1**	Take the rectifier/bond voltage/amperage readings using the Allegro field computer or a remote monitor.
	2	Take an on/off polarized pipe-to-soil potential with each rectifier reading.
	3	Include the off potential reading in the Rectifier Report (shown in Appendix G).
	4	Include the epolarity of the current read as well as a pipe-to-soil reading for the Valero pipeline and the Foreign Company pipeline on the Bond Report (shown in Appendix G).
Step 17c	**1**	Upload data in the field lap top computer as soon as practical.
	2	Review all data uploaded into the CPDM program to insure that it completed the data transfer and that it accurately depicts all information electronically moved into the CPDM program.
Step 17d		Synchronization/verification with the administrative computer is to be done the same day the Allegro is uploaded and data printed out.
Step 17e		Notify the CCM via e-mail at the completion of the data synchronization process.
Step 17f		Generate and send to the CCM an e-mail report noting: variances in voltage or amperage outputs, missed readings, readings that will be out of compliance if missed again, and rectifier/bonds that are broken or non functional within the first ten work days of each month following the rectifier/bond readings.
Step 17g		**[Corrosion Control Managers (CCM) and OQ Qualified Corrosion Personnel]** Discuss the data and promptly initiate work orders, as deemed necessary, to insure cathodic protection is functional, and NACE/Regulatory Criteria is maintained on the subject facility. Any deficiencies found in corrosion control must be corrected as required by 195.401(b). Refer to section 8.4 of this manual.

9.3.2. INITIATING WORK FROM RECTIFIER/BOND DATA

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 18a	If you cannot schedule and initiate required work, adjustments, or repairs within a two-week period after the review, then assign the schedule and prioritizes the task(s) with a preferred contractor.
Step 18b	**[Corrosion, Qualified, or Contract Personnel]** Complete the work concerning rectifier/bonds within a five-week period if possible.

Step 18c	**[Corrosion, Qualified, or Contract Personnel]** Upon completion of work, adjustments, or repair, perform pipe-to-soil surveys as needed to insure cathodic protection is functional and meeting NACE/Regulatory Criteria.

9.3.3. FOLLOWING UP ON WORK

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 19a	Make corrections or additions to data/information with notes/remarks in the CPDM program.
Step 19b	Synchronization/verification with the administrative computer is to be done the same day the corrections with notes/remarks are completed.
Step 19c	Notify the CCM by e-mail at the completion of the data synchronization process.
Step 19d	**[Corrosion Control Managers]** Within 15 working days of e-mail notification, review the corrected or adjusted data.

9.3.4. VERIFYING COMPLETED WORK

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 20a	**[Corrosion Control Managers and OQ Qualified Corrosion Personnel]** Upon completion of the 15 working day review, discuss the data and promptly initiate work orders, as deemed necessary, to insure cathodic protection is functional and NACE/Regulatory Criteria is maintained on the subject facility.
Step 20b	When verification of work, adjustments, or repair is completed, functional, and meeting NACE/Regulatory criteria, complete the work orders to include work history and a list of all personnel performing OQ covered task.

9.3.5. RESPONDING TO REMOTE MONITOR ALARMS ON RECTIFIER/BONDS

Alarms are set to trip on a high or low current output on the negative leads of rectifiers and high or low current output on bonds. Rectifiers that are shared or have more than one pipeline attached to them with a negative lead are to be a high priority when an alarm is received via remote monitor notification. Alarms are set to reoccur on 24-hour intervals until repaired or proper adjustments made.

9.3.5.1. MULTIPLE PIPELINE OR SHARED RECTIFIERS

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 21a	**1**	Address an alarm that is received via remote monitor notification with a high priority.
	2	**[Corrosion, Qualified, or Contract Personnel]** Schedule and assign the rectifier for inspection within ten workdays of receipt of the alarm.
Step 21b	If you cannot schedule the inspection within a ten-workday period, assign and schedule the inspection as high a priority with a preferred contractor.	

Step 21c	**[Corrosion, Qualified, or Contract Personnel]** If the inspection reveals a situation that requires adjustment or repair, then take the steps outlined in Section 9.3: *Rectifiers and Other Devices.*
Step 21d	**[Qualified Personnel on Site]** During the process of inspection if a situation is found that is detrimental to the pipeline, then lock out and/or tag out the rectifier until the situation is resolved.

9.3.5.2. BONDS

Bonds monitored with remote monitors would be bonds that are mitigating interference corrosion on the pipeline system. Bonds attached to the pipeline that are mitigating interference corrosion are to be a high priority. When an alarm is received via remote monitor notification showing a deviation outside of a set parameter of current flow or direction, then the alarm is to be addressed as a high priority. Alarms are set to reoccur on 24-hour intervals until repaired.

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 22a	**1**	Address an alarm that is received via remote monitor notification with a high priority.
	2	**Corrosion, Qualified, or Contract Personnel]** Schedule or assign the bond for inspection within ten workdays of receipt of the alarm.
Step 22b	If you cannot schedule the inspection within a ten-workday period, then assign and schedule the inspection as a high priority with a preferred contractor.	
Step 22c	**[Qualified Personnel on Site]** If the inspection reveals a situation that requires adjustment or repair, then take the steps outlined in Section 9.3: *Rectifiers and Other Devices* .	
Step 22d	**[Qualified Personnel on Site]** During the process of inspection if a situation is found that is detrimental to the pipeline, then repair or adjust the bond immediately and notify the Foreign Company as necessary or required.	

9.3.5.3. RECTIFIERS

NOTE: OQ qualified corrosion personnel complete all of the steps in this procedure unless stated otherwise.

Step 23a	Schedule for inspection alarms received on rectifiers within a two-week period.
Step 23b	If you cannot schedule the inspection within a ten-workday period, then assign and schedule the inspection as a priority with a preferred contractor.
Step 23c	**[Qualified Personnel on Site]** If the inspection reveals a situation that requires adjustment or repair, then take the steps outlined in Section 9.3: *Rectifiers and Other Devices.*
Step 23d	**[Qualified Personnel on Site]** During the process of inspection if a situation is found that is detrimental to the pipeline, then lock out and/or tag out the rectifier until the situation is resolved.

9.4. BREAKOUT TANKS

Aboveground breakout tanks should be inspected for cathodic protection to ensure that operation and maintenance of the system are in accordance with API RP 651: *Cathodic Protection of Aboveground Petroleum Storage Tanks.*

Electrical measurements and inspections are necessary to determine that protection has been established. False information could be produced if care is not exercised in selecting the appropriate location, number, and the type of electrical measurements used to determine the adequacy of cathodic protection. Misleading information may appear if for example the tanks are empty, there may be large areas of the bottoms which are not in contact with the underlying soil providing false potential survey readings.

A system should be re-energized as soon as possible in order to avoid corrosion damage if the cathodic protection devices are shut off while working with storage tanks.

Refer to Appendix M: *Above-Ground Tank Procedures*, for tank pad specifications and an illustration of Zinc Tank Anodes.

9.4.1. SAFETY

To ensure safety, all cables for impressed currents should be protected from physical damage and the possibility of arcing. To prevent arcing while working on breakout piping attached to tanks with cathodic protection, sufficient time must be allowed for depolarization before opening the connections when cathodic systems are turned off. Bonding cables must be used when parting breakout piping joints.

With safety in mind, the installation of rectifiers and junction boxes must be located to meet regulatory requirement for the particular location and environment where they are installed.

9.4.2. SURVEYS

As soon as any cathodic protection system is energized or repaired, a survey should be performed to determine that it functions properly. It may take several months for the polarization to reach a steady state once the system is energized. An initial survey should be conducted after adequate polarization has occurred to verify that it complies with applicable criteria. This survey should include one or more of the following types of measurements:

- Structure-to-soil potential.
- Anode current.
- Native structure-to-soil potentials.
- Structure-to-structure potential.
- Structure-to-soil potential on adjacent structures.
- Continuity of structures if protected as a single structure.
- Piping-to-tank isolation if protected separately.
- Rectifier DC volts, DC amps, efficiency, and tap settings.

The following inspections and tests of the cathodic system are recommended to ensure its effectiveness:

- Annual cathodic protection surveys.
- All sources of impressed current should be checked at intervals not exceeding two months.
- All impressed current protective facilities should be inspected annually as part of a preventative maintenance program.
- Isolating devices, continuity bonds, and insulators should be evaluated during the periodic surveys.
- Tank bottoms should be examined for evidence of corrosion whenever access to the bottom is possible.

Remedial measures should be taken once periodic tests and inspections indicate that protection is no longer sufficient.

9.4.3. RECORDS

A record of the surveys, inspections, and tests should be maintained to demonstrate that cathodic protection has been met in accordance with API RP 651.

The following information should be documented to maintain corrosion control records:

- Repair of rectifiers and other DC power sources.
- Repair of replacement of anodes, connections, and cable.
- Maintenance, repair, and replacement of coating, isolating devices, test leads, and other test facilities.

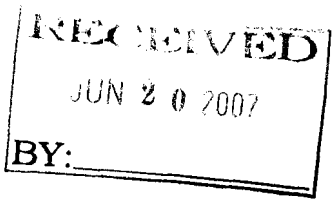
Records should be retained for as long as the facility remains in service.

Records which are related to the effectiveness of the cathodic protection should be kept for a period of five years unless a shorter time is specifically permitted by regulation.

All records are maintained in the Cathodic Protection Data Management (CPDM) program.

9.5. IR FREE READINGS

Valero will run on/off surveys every three years to obtain IR Free Readings on the pipelines. Techniques for running on/off surveys are in *NCCER Pipeline Corrosion Control Trainee Guide* (Level 2, Module 61205-02, Page 5.3, Paragraph 2.3.0). Recommended interruption standards are a time cycle of 55 seconds on and three seconds off. The intent of the cycle would be to minimize loss of polarization and to help define an off cycle.
Since the sacrificial anodes are being directly connected to pipelines, coupon test stations will be evaluated on annual pipe-to-soil surveys with IR Free Readings obtained from coupon test stations and the on/off surveys.



FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
R.M. Seeley – Director	Rebecca Fink
COMPANY:	DATE/TIME:
US Dept. of Transporation – Pipeline & Hazardous Materials Safety Admin.	June 20, 2007
FAX NUMBER: 713.272.2831	TOTAL NO. OF PAGES INCLUDING COVER: 17
PHONE NUMBER: 713.727.2820	PHONE NUMBER: 210.918.3222

Comments:

Attached is a copy of the Response to NOPV regarding CPF 4-2007-5019. The original will be delivered to you by overnight mail tomorrow. Please let me know if you have any questions. Thank you!