April 14, 2022

Mr. Richard Burrough
Director, Eastern Region
PHMSA, U.S. Department of Transportation
840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628

Re: CPF 1-2022-015-NOA, Explanation Relevant to NOA

Dear Mr. Burrough:

IMTT-Pipeline (IMTT) confirms receipt of Notice of Amendment (NOA) CPF 1-2022-015-NOA. IMTT respectfully submits the following information documenting completed actions.

Item 1. §194.107 General response plan requirements.

(a) ...

(c) Each response plan must include:

(1) A core plan consisting of-

(viii) Equipment testing,

IMTT's response plan was inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's Facility Response Plan Version 6, dated January 2021 (FRP) failed to include requirements for documenting equipment testing required by §194.107(c)(1)(viii).

During the inspection, PHMSA reviewed the FRP. The FRP Section E.2.1- Table 19 contained a listing of IMTT's spill response equipment, its location, and a defined frequency for inspection of each item. However, the FRP failed to contain any details on what these inspections entail and any requirements for documenting these inspections.

Therefore, IMTT's response plan was inadequate regarding §194.107(c)(1)(viii). IMTT must review its procedures to address the inadequacies described above regarding its equipment inspections and testing.

IMTT Response:

IMTT has revised its FRP to include more specific details on how truck and boom equipment inspections are handled, to include whether the inspections are done internally or by a qualified contractor. The revised FRP Section E.2.1 and added Appendix U are as follows:

Table 18: Spill Response Equipment

Description	***Location***	***Inspection Frequency***	***Responsible Party***
1 Vacuum truck (2100 gals)	*Hellers Warehouse*	*Every workday*	*IMTT*
1 Dump Truck	*East Maintenance Yard*	*As needed*	*IMTT*
1 Boom Truck	*East Maintenance Yard*	*Monthly*	*IMTT*
500 ft Deployable Boom	*Pier 9*	*Monthly*	*IMTT or Contractor*
700 ft Deployable Boom	*Pier 9T*	*Monthly*	*IMTT or Contractor*
700 ft Deployable Boom	*Pier 8*	*Monthly*	*IMTT or Contractor*
1300 ft Deployable Boom	*Pier A*	*Monthly*	*IMTT or Contractor*
800 ft Deployable Boom	*Pier 1W*	*Monthly*	*IMTT or Contractor*
700 ft Deployable Boom	*Pier 1E*	*Monthly*	*IMTT or Contractor*
600 ft Deployable Boom	*Pier 3W*	*Monthly*	*IMTT or Contractor*
500 ft Deployable Boom	*Pier 3E and 4W*	*Monthly*	*IMTT or Contractor*
600 ft Deployable Boom	*Pier 4E*	*Monthly*	*IMTT or Contractor*
900 ft Deployable Boom	*Pier 5B*	*Monthly*	*IMTT or Contractor*
Deployable Boom Reel, 1000 ft	*Pier 6N*	*Monthly*	*IMTT or Contractor*
Deployable Boom Reel, 1000 ft	*Pier 6N*	*Monthly*	*IMTT or Contractor*
1200 ft Deployable Boom	*Pier 7 berths 5,6*	*Monthly*	*IMTT or Contractor*
900 ft Deployable Boom	*Pier 7 berths 1,4*	*Monthly*	*IMTT or Contractor*
Sorbent Pads, Soft Boom, Sweep	*Foot of Piers 6, 7, 9, Mobil and 5th Street*	*Weekly*	*IMTT*
Sorbent Pads, Soft Boom, Sweep	*Chem-South Plant 2 Storage Building between tanks 14007 and 14008*	*Weekly*	*IMTT*
Sorbent Pads, Soft Boom, Sweep	*Delta Warehouse, Yd 8*	*Weekly*	*IMTT*
Sorbent Pads, Soft Boom, Sweep	*Pier 3 Warehouse*	*Monthly*	*IMTT*

The equipment listed in Table 18 is strategically positioned at the locations listed to facilitate prompt mobilization and deployment. Containment boom is stockpiled at the Westside and eastside piers to facilitate the immediate deployment within the Kill Van Kull and New York Bay. Sorbent materials are maintained and inspected on a monthly basis by IMTT EHS&S personnel. Permanent boom is inspected monthly. Contractor tasks are done in accordance with their written procedures. The vacuum truck is visually inspected daily by the IMTT operator per Department of Transportation (DOT) Federal Motor Carrier Safety Regulations. A Copy of the Driver's Vehicle Inspection Report *is included in Appendix M. Appendix U contains details of the IMTT inspection procedures for the*

trucks and booms. All documentation is housed in accordance with the IMTT Record Retention Policy.

Company vehicles (i.e., vacuum trucks, dump trucks) are staged in both the Heller's storage building and the Maintenance Building. The mobilization and deployment of response resources shall commence immediately upon recognition of a pollution event, depending upon the parameters of the spill scenario.

Appendix U Fire Equipment Inspection

U.1 Rapid Attack Trucks

IMTT personnel inspect all rapid attack trucks in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Number of miles*
- *Fuel level*
- *Emergency light functionality*
- *Battery (volts)*
- *Windshield wiper functionality*
- *Oil level and quality*
- *Antifreeze level*
- *Transmission Fluid level*
- *Brake fluid level*
- *Power steering fluid level*
- *Tires (air level) and tread*
- *Engine start*
- *Monitors*
- *Purple K unit*
- *Interior damage*
- *Exterior damage*

All comments are noted on the Rapid Attack Truck Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

U.2 Engine 13 Truck

IMTT personnel inspect all fire trucks in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Number of miles*
- *Fuel level*
- *Battery (volts)*
- *Air pressure*
- *PTO hours*
- *PTO engages*
- *Pump engages*
- *Windshield wiper functionality*
- *Oil level and quality*

- *Antifreeze level*
- *Transmission Fluid level*
- *Brake fluid level*
- *Hydraulic fluid level*
- *Power steering fluid level*
- *Tires (air level) and tread*
- *Emergency light functionality*
- *Water gauge*
- *Foam gauge*
- *Engine start*
- *Wheel Chocks*
- *Monitors*
- *Outrigger plates*
- *Auto eject*
- *Interior damage*
- *Exterior damage*

All comments are noted on the Engine 13 Truck Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

U.3 Ladder Truck

IMTT personnel inspect ladder trucks in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Number of miles*
- *Fuel level*
- *Battery (volts)*
- *Air pressure*
- *PTO hours*
- *PTO engages*
- *Pump engages*
- *Windshield wiper functionality*
- *Oil level and quality*
- *Antifreeze level*
- *Transmission Fluid level*
- *Brake fluid level*
- *Hydraulic fluid level*
- *Power steering fluid level*
- *Tires (air level) and tread*
- *Emergency light functionality*
- *Water gauge*
- *Foam gauge*
- *Engine start*
- *Wheel Chocks*
- *Monitors*
- *Outrigger plates*
- *Auto eject*

- *Diesel exhaust fuel*
- *Cab tilt*
- *Aerial hours*
- *Interior damage*
- *Exterior damage*

All comments are noted on the Ladder Truck Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

U.4 Tanker Truck

IMTT personnel inspect tanker trucks in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Number of miles*
- *Fuel level*
- *Battery (volts)*
- *Front and rear break air pressure*
- *Windshield wiper fluid level and functionality*
- *Oil level and quality*
- *Antifreeze level*
- *Transmission Fluid level*
- *Brake fluid level*
- *Hydraulic fluid level*
- *Power steering fluid level*
- *Tires (air level) and tread*
- *Emergency light functionality*
- *Horn functionality*
- *Fire extinguisher*
- *Foam gauge*
- *Engine start*
- *Valve condition*
- *Hose condition*
- *Air brake tanks with bleeder valves*
- *Interior damage*
- *Exterior damage*

All comments are noted on the Tanker Truck Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

U.5 Hose Truck

IMTT personnel inspect hose trucks in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Number of miles*
- *Fuel level*
- *Battery (volts)*
- *Air pressure*

- *PTO hours*
- *PTO engages*
- *Pump engages*
- *Windshield wiper functionality*
- *Oil level and quality*
- *Antifreeze level*
- *Transmission Fluid level*
- *Brake fluid level*
- *Hydraulic fluid level*
- *Power steering fluid level*
- *Tires (air level) and tread*
- *Hose reel engine start*
- *Engine start*
- *Interior damage*
- *Exterior damage*

All comments are noted on the Hose Truck Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

U.6 Boom Reels

IMTT personnel inspect boom reels in their inventory as listed in Table 18 of this FRP. As part of this inspection, they verify the following:

- *Hydraulic pump motor oil*
- *Hydraulic pump HYD fluid*
- *Hydraulic pump HYD fuel level*
- *Hydraulic pump test run*
- *Hydraulic pump battery*
- *Hydraulic pump hoses*
- *North boom reel HYD hoses*
- *North boom reel controls (deploy and retract)*
- *North boom issues*
- *South boom reel HYD hoses*
- *South boom reel controls (deploy and retract)*
- *South boom issues*

All comments are noted on the Boom Reel Checklist, along with the inspector name and date. Any required repairs or corrective actions are handled immediately to ensure equipment is prepared to deploy in an emergency.

Item 2. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) *General.* Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normaloperations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

IMTT's procedures for normal operations and maintenance activities and handling abnormal operations and emergencies were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's FRP failed to include adequate details for reviewing the emergency manual at intervals not exceeding 15 months, but at least once each calendar year, and make appropriate changes as necessary to ensure it is effective, in accordance with §195.402(a).

During the inspection, PHMSA requested IMTT's procedure regarding the emergency response annual review. IMTT provided the FRP. Section 2.4.3 of the FRP stated in part, '"[t]he Director of EH&S or designee is responsible for formally reviewing, updating, revising, and distributing revisions to this plan on an annual basis, or as required. The Director of EH&S will record all plan reviews on the IMTT Annual Review Form... "

However, the FRP failed to include details that the emergency manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and make appropriate changes as necessary to ensure it is effective.

Therefore, IMTT's procedures failed to include adequate details for reviewing the emergency manual at intervals not exceeding 15 months, but at least once each calendar year, and make appropriate changes as necessary to ensure it is effective in accordance with §195.402(a). IMTT must revise its procedures to stipulate the correct review interval.

IMTT Response:

IMTT has revised Section 3.4.3 of the FRP as follows:

3.4.3 Plan Submission, Review, and Update Procedures

To ensure that the information contained in this plan is current, the contents are subject to continual review. The Environmental Compliance Manager designee is responsible for formally reviewing, updating, revising, and distributing revisions to this plan at intervals not exceeding 15 months, but at least once each calendar year, and make appropriate changes as necessary to ensure it is effective. The Director of EHS&S will record all plan reviews on the IMTT Review Log in Appendix T. The Director of EHS&S or designee will complete all submission and approval procedures required by 49 CFR 194.119.

Plan Holders shall record any pertinent changes or additions that come to their attention upon their copy of the plan and subsequently notify the Environmental Compliance Manager of these changes. The Director of EHS&S is responsible for notifying all Plan Holders, including governmental agencies, of significant changes which come to his/her attention.

Item 3. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpartH of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Operations, Maintenance and Emergency Manual- Section 23 Inspection of Breakout Tanks, dated August 2020* (OME) and *Confined Space - IMTT-EH&S-POL-1003, dated 04/06/20* (Confined Space) failed to include details associated with access/egress onto floating roofs of in-service aboveground breakout tanks for the purpose of performing inspection, service, maintenance or repair activities of in-service tanks, as required by §195.405(b)[1]•

During the inspection, the PHMSA inspector requested IMTT's procedures regarding §195.405(b) requirements. IMTT provided the OME and the Confined Space procedures.

Section 23.1 of the OME stated in part:

> To comply with 49 CFR 195.405(b), IMTT has reviewed API Publication 2026 - Safe Access/Egress Involving Floating Roofs of Storage Tanks in Petroleum Serviceregarding the potentially hazardous conditions and safety practices associated involved with inspection, service, maintenance, and repair activities. IMTT has included applicable safety practices in its procedures.

However, the procedures failed to indicate any process or details on safety practices for access/egress onto floating roofs. Furthermore, the Confined Space[2] procedure was not referencedor linked to the IMTT OME manual.

Therefore, IMTT failed to include details associated with access/egress onto floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance, or repair activities of in-service tanks in accordance with §195.405(b). IMTT must revise its procedures to address this requirement.

IMTT Response:

IMTT has revised Section 21 of the Operations, Maintenance and Emergency Manual as follows:

21.7 Protection against Static Electricity, Lightning and Stray Currents with Safe Access/Egress During Tanks Inspection and Maintenance Activities

The hazards associated with access/egress onto floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance, or repair activities (other than specified general considerations, specified routine tasks or entering tanks removed from service for cleaning) are addressed in API Pub 2026, "Safe Access/Egress Involving Floating Roofs of Storage Tanks in Petroleum Service".

During the performance of any task, IMTT personnel are required to follow standard health and safety practices and procedures. IMTT Bayonne does not allow their personnel to access floating roofs while they remain in service. In the event a floating roof must be accessed, it will be performed via competent third-contractor only after the contractor's floating roof entry procedure has been vetted to ensure IMTT's Confined Space and Hot Work Permit procedures will be followed. The procedures provide guidance on preventing ignition from static, lightning, or stray currents and ensure personnel are protected from unsafe environments.

IMTT will provide protection against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks. This must be done in accordance with API RP 2003, "Protection against Ignitions Arising out of Static, Lightning, and Stray Currents," unless the Company documents why compliance with all or certain provisions of API RP 2003 is not necessary for the safety of a particular breakout tank. When any substantial tank inspection or maintenance activities are performed, IMTT personnel will conduct a job safety analysis to identify possible hazards and the mitigative steps to prevent those hazards

21.7.1 Preventing Static Electricity

Hazards are caused by the accumulation of electric charges on material and the process of dissipating these charges, resulting in the potential for ignition. Precautions are as follows:

- *Prior to performing field activities on tanks, personnel should remove cellular phones, pagers, electrical equipment, nylon clothing, and other ignition sources.*
- *Personnel should ground themselves by grabbing handrails when climbing tanks.*
- *Field Personnel should ground any equipment used in measurement and maintenance activities by making metal-to-metal contact with the tank surface and away from product or product vapors.*
- *Avoid splashing and over agitation of product during tank gauging or sampling*

21.7.2 Performing Lightning Precautions

Although classified as direct-strike lightning and indirect lightning currents, these currents can be deadly and cause direct ignition to flammable materials. Personnel can be directly affected by nearby lightning strikes that create indirect lightning currents causing secondary sparking remote from the direct-strike. IMTT will follow the IMTT Lightning Procedure and field personnel should take the following precautions:

- *Stay away from tanks during thunderstorms (see Lightning Procedure).*
- *Close roof openings and gauge hatches.*
- *Ensure that the tank roofs are in good condition with no holes or excessive thinning.*
- *Avoid initial filling of tanks during lightning storms.*
- *Do not set the roof on its legs, thus creating a vapor space, during thunderstorms.*

21.7.3 Stray Currents

Stray currents are any electrical currents flowing in paths other than those provided, including the earth, pipelines, and structures. Stray currents resulting in electrical contact and separation can cause ignition of flammable materials. IMTT personnel will ensure the following:

- *Jumpers/bonding cables will be utilized when separating structures, flanges and other appurtenances connected to the tanks during maintenance activities.*
- *Cathodic protection systems can be turned off during maintenance*
- *Ensure floating roofs are properly grounded to the tanks*

21.7.4 Documentation

IMTT will document the protection against ignitions arising out of electricity, lightning and stray currents during the development of job safety analysis (JSAs) or on the daily safe work permits.

Item 4. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpartH of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Corrosion Manual, dated April, 2021 (Corrosion Manual)* failed to include details for installing cathodic protection systems in accordance with ANSI/API RP 651, or providing details on why complying with all or certain provisions of ANSI/API RP 651 is not necessary for the safety of its tanks, per the requirement §195.565[3].

During the inspection, PHMSA requested IMTT's procedure regarding §195.565 requirements. IMTT provided the Corrosion Manual. PHMSA asked IMTT where the §195.565 requirements were located, and how IMTT complies with the requirements. IMTT stated that not all of its breakout tanks have cathodic protection and they do not have a procedure for how all tanks complywith this regulation.

The Corrosion Manual - Appendix CI stated, "[c]urrently 49 CFR 195 Subpart H, Corrosion Control, §195.565 How do I install cathodic protection on breakout tanks? states that after October 2, 2000, installed breakout tank bottom CP systems should be installed according to API RP 651,unless IMTT Bayonne notes in the Corrosion Control Manual why complying with all or certain provisions of API RP 651 is not necessary for the safe operation of the tank. The purpose of this document is to provide evidence why retrofitting IMTT Bayonne's Breakout Tank 5804 bottoms to install a new CP system is impractical and not necessary for the safe operation of the breakout tank."

The Corrosion Manual quoted the code but failed to state how IMTT would comply with §195.565or how it would determine that certain provisions of API RP 651 are not necessary for the safe operation of a breakout tank.

Therefore, IMTT's procedures failed to include details on how it installs cathodic protection systems in accordance with ANSI/API RP 651 and failed to provide details in its corrosion control procedures on why complying with all or certain provisions of ANSI/API RP 651 is not necessary for the safety of its tanks without cathodic protection, in accordance with §195.565). IMTT must revise its procedures to address this requirement.

IMTT Response:

Section 195.565 states the following: After October 2, 2000, when you install cathodic protection under §195.563(a)[1] to protect the bottom of an aboveground breakout tank of more than 500 barrels 79.49 m^3 capacity built to API Spec 12F (incorporated by reference, *see* §195.3), API Std 620 (incorporated by reference, *see* §195.3), API Std 650 (incorporated by reference, *see* §195.3), or API Std 650's predecessor, Standard 12C, you must install the system in accordance with ANSI/API RP 651 (incorporated by reference, *see* §195.3). However, you do not need to comply with ANSI/API RP 651 when installing any tank for which you note in the corrosion control procedures established under §195.402(c)(3) why complying with all or certain provisions of ANSI/API RP 651 is not necessary for the safety of the tank.

[1] Section 195.565 states: After October 2, 2000, when you install cathodic protection under §195.563(a) to protect the bottom of an aboveground breakout tank of more than 500 barrels 79.49 m^3 capacity built to API Spec 12F (incorporated by reference, see §195.3), API Std 620 (incorporated by reference, see §195.3), API Std 650 (incorporated by reference, see §195 .3), or API Std 650's predecessor, Standard 12C, you must install the system in accordance with ANSI/API RP 651 (incorporated by reference, see §195.3). However, you don't need to comply with ANSI/API RP 651 when installing any tank for which you note in the corrosion control procedures established under §195.402(c)(3) why complying with all or certain provisions of ANSI/AP! RP 651 is not necessary for the safety of the tank.

IMTT's Corrosion Manual, Section 2.5 – "Cathodic Protection on Aboveground Storage Tanks" specifies the current types of external corrosion control existing on aboveground storage tanks. See the verbiage below:

2.5 Cathodic Protection on Aboveground Storage Tanks

The Company has aboveground storage tanks with variety of different external corrosion protective systems installed. Many tanks were retrofitted prior to becoming breakout tanks as defined by PHMSA. As a result, and depending on the tank, the following scenarios can be found:

- *Single-bottom impressed-current CP (ICCP) system*
- *Double-bottom with a high-density polyethylene (HDPE) liner, leak detection ports, and an ICCP system*
- *Double-bottom with an HDPE liner, leak detection ports, and a sacrificial CP system*
- *Double-bottom with an HDPE liner and the interstitial space is filled with concrete*
- *Double-bottom with an HDPE liner, leak detection ports, and the interstitial space has been purged with nitrogen*
- *Double-bottom without an HDPE liner, with leak detection ports, and the interstitial space has been purged with nitrogen*

IMTT's Corrosion Manual, Section 2.5.1 – "New Tank Bottom External Corrosion Control Methods" specifies how IMTT is going to protect and monitor new tank bottoms as they are taken out of service. See the verbiage below:

2.5.1 New Tank Bottom External Corrosion Control Methods

As tanks are taken out of service for scheduled API 653 inspections, the external corrosion control system installation will be one of the three following:

1) *The first method involves installing an HDPE liner over the old bottom, installing a concrete pad, and then installing a new bottom over the concrete pad. The concrete pad prohibits contact with an electrolyte and inherently makes the interstitial space a non-corrosive environment.*
2) *The second method involves removing the old bottom, installing permanent reference cells or a monitoring tube that facilitates taking CP potentials across the tank bottom, and installing an ICCP system under or around the tank. The tank's diameter and physical surrounding environment will be deciding factors in the final design.*
3) *The third method involves installing an HDPE liner over the old bottom, installing an ICCP system above the new liner, installing permanent reference cells or a monitoring tube that facilitates taking CP potentials across the tank bottom above the liner, and then backfilling with a minimum of 6 ft of clean washed sand. The new bottom is then installed on top of the sand. Appendix B provides an example of an interstitial ICCP system.*

IMTT's Corrosion Manual, Section 2.5.2 – "Existing Tank Bottom External Corrosion Control Methods" details the existing tank corrosion control methods and establishes the methods the company is using to demonstrate why complying with all or certain provisions of ANSI/API RP 651 is not necessary for the safety of the tank. IMTT uses Tank 5804 as the basis and operational guidelines for future tanks as they are taken out of service for API 653 inspections. See verbiage below:

2.5.2 Existing Tank Bottom External Corrosion Control Methods

This section addresses how the Company intends to handle existing tanks with double bottoms and existing corrosion control systems. The Company is committed to operating a facility safely and to make sound decisions ensuring each tank's integrity. A majority of the CP systems installed on double bottom tanks—prior to them becoming PHMSA-regulated breakout tanks—were magnesium or zinc ribbon sacrificial systems installed over an HDPE liner between the old and new bottoms, backfilled with clean washed / dry sand, and using permanent reference cell configurations.

In April 2021, the Company isolated Tank 5804 in order to perform an out-of-service API 653 inspection. The Company intends to use the retrofit performed on Tank 5804 as the basis for future evaluations of each tank's external corrosion system—as the tanks are taken out of service for scheduled API 653 inspections, a similar analysis will be conducted for each tank and the necessary steps to ensure the safe operation of tank will be determined. Appendix C outlines this process.

Many of the existing CP system are still functional and viable, but are only effective when water levels rise enough to penetrate the interstitial space between the old and new bottoms. When the water levels subside and the sand dries out, the soil resistivity of the sand increases substantially to create a non-corrosive environment between the two tank bottoms, lowers the necessary current requirements, and reduces the CP system's ability to generate continuous protective current.

Table 2-1 lists the tanks that have sacrificial cathodic protection systems installed between the old and newer tank floors. Appendix D provides a detailed tank information sheet.

Table 2-2: List of Company's Double-Bottom Tanks with Sacrificial CP Systems

1012	*5059*	*5212*	*6012*	*8560*
1038	*5064*	*5214*	*7508*	*8561*
1109	*5070*	*5604*	*7593*	*8571*
1110	*5161*	*5605*	*7594*	*8572*
1162	*5164*	*5606*	*7595*	*9918*
4009	*5186*	*5804*	*7701*	*9919*
4502	*5187*	*5808*	*7705*	*9920*
4504	*5188*	*5810*	*7708*	*9921*
4513	*5209*	*6004*	*8554*	
5057	*5210*	*6010*	*8558*	

As each of the existing tanks listed in Table 2-1 is taken out of service for scheduled API 653 inspections, the corrosion rate and remaining life of the floor will be evaluated to determine the next path forward. According to API 653 paragraph 4.4.5, an acceptable method for calculating the minimum acceptable bottom thickness for the entire bottom or portions thereof is as follows:

$$\boldsymbol{MRT} = (\text{Minimum of } \boldsymbol{RT_{bc}} \text{ or } \boldsymbol{RT_{ip}}) - \boldsymbol{O_r}\,(\boldsymbol{S_t P_r} + \boldsymbol{UP_r})$$

Where:

- $\boldsymbol{MRT}$ = *Minimum remaining thickness at the end of interval Or. This value must equal or exceed* t_{min}.
- $\boldsymbol{O_r}$ = *In-service interval of operation (years to next internal inspection) not to exceed that allowed by API 653, section 6.4.2*
- $\boldsymbol{RT_{bc}}$ = *Minimum remaining thickness from bottom side corrosion after repairs*
- $\boldsymbol{RT_{ip}}$ = *Minimum remaining thickness from internal corrosion after repairs*

S_tPr = *Maximum rate of corrosion not repaired on the top side.* $S_tP_r = 0$ *for coated areas of the bottom. The expected life of the coating must equal or exceed* O_r *to use* $S_tP_r = 0$.

UP_r = *Maximum rate of corrosion on the bottom side. To calculate the corrosion rate, use the minimum remaining thickness after repairs. Assume a linear rate based on the age of the tank. Use* $UP_r = 0$ *for areas that have effective cathodic protection.*

Once the minimum remaining thickness has been calculated, the remaining life of the floor will be determined without the use of CP. Provided the remaining life of the floor is 10 years or greater, the maximum bottom-side corrosion rate is less than 10 mils per year (mpy) and the sand samples demonstrate an average pH greater than 7, then the installation of a new CP system will be deferred until the next scheduled out-of-service API 653 inspection

The Company has evaluated a number of solutions to bring the levels of CP on breakout tanks with existing double bottoms and sacrificial CP systems high enough during the dry season to satisfy NACE SP0169 criteria of either −0.850 VDC with current applied or 100 mV polarization. However, meeting those requirements proves very difficult and involves cutting out or altering an otherwise intact tank floor that has passed an API 653 out-of-service inspection.

As of July 2021, and in order to support the safe operation of the tanks until their next scheduled API 653 inspections, the Company will perform monthly leak detection port inspections. In addition, the Company will develop a schedule to install electrical resistance (ER) probes on each of the double-bottom tanks. The number of ER probes is determined by the diameter of the tank and—to the extent possible, depending upon surrounding features—they will be distributed evenly around the tank floor perimeter to obtain a representative sample of corrosion rates around the entire tank bottom. The combination of monitoring the interstitial corrosion rate and monitoring for leaks monthly provides additional assurance of each tank floor's integrity

The data will be recorded monthly and reviewed by qualified Company personnel to ensure tank integrity and that average corrosion rates on each tank remain below 10 mpy. Should the corrosion rates begin to exceed the 10 mpy criteria, the tank will be taken out of service the following year to either upgrade the CP system or install a concrete floor between each of the tank bottoms. Each tank's external tank bottom corrosion control system upgrade will be decided on a case-by-case basis.

Another common solution for external corrosion protection on double-bottom tanks involves filling the annular space with sand and purging with nitrogen gas. The nitrogen gas is injected into the annular space to effectively remove the oxygen and render the interstitial space non-corrosive. The detailed tank information sheet in Appendix D lists the tanks that were handled in this manner.

In order to ensure the safe operation and integrity of each nitrogen-purged double-bottom tank, the Company will perform monthly leak detection port inspections. In addition, the Company will develop a schedule to install ER probes on each of the double-bottom tanks. The number of ER probes will be determined by the diameter of the tank and they will be distributed evenly around the tank floor perimeter to obtain a representative sample of corrosion rates around the entire tank bottom. The combination of monitoring the interstitial corrosion rate and monitoring for leaks monthly provides additional assurance of each tank floor's integrity.

As the ER probes are installed, the data will be recorded monthly and reviewed by qualified Company personnel to ensure tank integrity and that average corrosion rates on each tank remain below 10 mpy. Should the corrosion rates begin to exceed the 10 mpy criteria, the tank will be taken out of service the following year to either upgrade the CP system or install a concrete floor between each of the tank bottoms. Each tank's external tank bottom corrosion control system upgrade will

be decided on a case-by-case basis.[2]

Item 4 Conclusion:

As provided above, IMTT has defined the operational guidelines to ensure the safe operation of the existing aboveground storage tanks. API 651, Section 5 – "Determination of Need for Cathodic Protection" states the following:

> *The need for cathodic protection shall be determined for all aboveground storage tanks. This section discusses parameters for consideration when determining whether a steel aboveground storage tank bottom requires cathodic protection.*
>
> *The decisions governing the need for cathodic protection should be based on data from inspections performed in accordance with API 653, corrosion surveys; operating records; prior test results with similar tank systems in similar environments; national, state, and local code requirements; and the recommendations made within this document.*
>
> *Due to the wide variety of tank pad types and conditions, and their variability in preventing corrosion with or without cathodic protection, the practices of this standard should be used in conjunction with the inspection and maintenance practices of API 653 (including measuring the electrical and chemical properties of the tank pad) to determine that external corrosion of tank bottoms is being adequately controlled and will continue to be controlled over the long term.*

Based upon guidance inside of API 651 and the practices defined in IMTT's Corrosion Manual Sections 2.5.1 and 2.5.2, IMTT believes the corrosion manual details what will be done for new tank bottom external corrosion control methods and it provides sufficient detail to demonstrate why complying with all or certain provisions of ANSI/API RP 651 is not necessary for the safety of the tank.

Item 5. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's OME failed to include details for providing protection for each valve from unauthorized operation and from vandalism, as required by §195.420(c).

Section 195.420(c) states, "[e]ach operator shall provide protection for each valve from unauthorized operation and from vandalism."

During the inspection, PHMSA requested IMTT's procedures regarding valve protection. IMTT indicated that all valves are locked or within a locked fence in the facility, but this information was not described in its written procedures.

Therefore, IMTT's procedures failed to include details for providing protection for each valve from unauthorized operation and from vandalism in accordance with §195.420(c). IMTT must revise its procedures to address this requirement.

[2] IMTT has implemented and executed these changes in 2021 and 2022 and the language will amended in the next procedural review of the Corrosion Manual.

IMTT Response

IMTT has revised Section 18 of the Operations, Maintenance and Emergency Manual as follows:

18.1.4.3 Security of Valves
18.1.4.3.1 Pipeline

All valves along the Right of Way are properly locked and secured. Each valve is secured via a locked fence or buried enclosure. One valve is located within PSE&G's secured facility in Linden, NJ. Security is verified during ROW inspections.

18.1.4.3.2 Bayonne

Bayonne valves are located within the IMTT TWIC secured facility or the Packards and Curries secured facilities and are routinely checked during security patrols.

Item 6. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ••.

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's OME and *Lightning Policy Document 52-165, dated 08/11/15* (Lightning Policy), failed to provide sufficient guidance for protecting pipeline systems against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks in accordance with API RP 2003, per the requirement of §195.405(a).

Section 195.405(a) states:

> After October 2, 2000, protection provided against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks must be in accordance with API RP 2003 (incorporated by reference, see §195.3), unless the operator notes in the procedural manual (§195.402(c)) why compliance with all or certain provisions of API RP 2003is not necessary for the safety of a particular breakout tank.

During the inspection, the PHMSA inspector requested IMTT's procedures regarding §195.405(a). IMTT provided the OME and the Lightning Policy. The OME and the Lightning Policy failed to indicate any process or details for protection against ignitions involving aboveground breakout tanks, nor did it provide a reason why compliance with all or certain provision of API RP 2003 is not necessary for the safety of a particular breakout tank. Furthermore, the Lightning Policy was not referenced or linked to the IMTT OME manual.

Therefore, IMTT procedures failed to include provisions for protecting against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks in accordance with API RP 2003, per the requirement of §195.405(a).

IMTT Response

IMTT has revised Section 21.7 of the Operations, Maintenance and Emergency Manual as follows:

21.7 Protection against Static Electricity, Lightning and Stray Currents with Safe Access/Egress During Tanks Inspection and Maintenance Activities

The hazards associated with access/egress onto floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance, or repair activities (other than specified general considerations, specified routine tasks or entering tanks removed from service for cleaning) are addressed in API Pub 2026, "Safe Access/Egress Involving Floating Roofs of Storage Tanks in Petroleum Service".

During the performance of any task, IMTT personnel are required to follow standard health and safety practices and procedures. IMTT Bayonne does not allow their personnel to access floating roofs while they remain in service. In the event a floating roof must be accessed, it will be performed via competent third-contractor only after the contractor's floating roof entry procedure has been vetted to ensure IMTT's Confined Space and Hot Work Permit procedures will be followed. The procedures provide guidance on preventing ignition from static, lightning, or stray currents and ensure personnel are protected from unsafe environments.

IMTT will provide protection against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks. This must be done in accordance with API RP 2003, "Protection against Ignitions Arising out of Static, Lightning, and Stray Currents," unless the Company documents why compliance with all or certain provisions of API RP 2003 is not necessary for the safety of a particular breakout tank. When any substantial tank inspection or maintenance activities are performed, IMTT personnel will conduct a job safety analysis to identify possible hazards and the mitigative steps to prevent those hazards

21.7.1 Preventing Static Electricity

Hazards are caused by the accumulation of electric charges on material and the process of dissipating these charges, resulting in the potential for ignition. Precautions are as follows:

- *Prior to performing field activities on tanks, personnel should remove cellular phones, pagers, electrical equipment, nylon clothing, and other ignition sources.*
- *Personnel should ground themselves by grabbing handrails when climbing tanks.*
- *Field Personnel should ground any equipment used in measurement and maintenance activities by making metal-to-metal contact with the tank surface and away from product or product vapors.*
- *Avoid splashing and over agitation of product during tank gauging or sampling*

21.7.2 Performing Lightning Precautions

Although classified as direct-strike lightning and indirect lightning currents, these currents can be deadly and cause direct ignition to flammable materials. Personnel can be directly affected by nearby lightning strikes that create indirect lightning currents causing secondary sparking remote from the

direct-strike. IMTT will follow the IMTT Lightning Procedure and field personnel should take the following precautions:

- *Stay away from tanks during thunderstorms (see Lightning Procedure).*
- *Close roof openings and gauge hatches.*
- *Ensure that the tank roofs are in good condition with no holes or excessive thinning.*
- *Avoid initial filling of tanks during lightning storms.*
- *Do not set the roof on its legs, thus creating a vapor space, during thunderstorms.*

21.7.3 Stray Currents

Stray currents are any electrical currents flowing in paths other than those provided, including the earth, pipelines, and structures. Stray currents resulting in electrical contact and separation can cause ignition of flammable materials. IMTT personnel will ensure the following:

- *Jumpers/bonding cables will be utilized when separating structures, flanges and other appurtenances connected to the tanks during maintenance activities.*
- *Cathodic protection systems can be turned off during maintenance*
- *Ensure floating roofs are properly grounded to the tanks*

21.7.4 Documentation

IMTT will document the protection against ignitions arising out of electricity, lightning and stray currents during the development of job safety analysis (JSAs) or on the daily safe work permits.

Item 7. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) …

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Manual* failed to include a process for verifying that its supervisors maintain a thorough knowledge of that portion of the corrosion control procedures established under §195.402(c)(3) for which they are responsible for insuring compliance, in accordance with §195.555.

Section 195.555 states that operators " ... must require and verify that supervisors maintain a thorough knowledge of that portion of the corrosion control procedures established under §195.402(c)(3) for which they are responsible for insuring compliance."

During the inspection, PHMSA requested IMTT's procedures regarding §195.555, and IMTT provided its Corrosion Manual. Section 6 of the Corrosion Manual stated in part, "The Company requires and must verify that supervisors (Asset Managers and/or their designees) maintain a thorough knowledge of that portion of the corrosion control procedures for which they are responsible for insuring compliance. The supervisors will review Corrosion Control procedures asneeded to keep abreast of their responsibilities. This review will be documented on a training sign-in sheet or in the

employee's training history."

However, the Corrosion Manual failed to include any procedure or details on how IMTT verifies that supervisors maintain a thorough knowledge of the corrosion control procedures.

Therefore, IMTT's procedures failed to include a process for verifying that its supervisors maintain a thorough knowledge of that portion of the corrosion control procedures established under §195.402(c)(3) for which they are responsible for insuring compliance, in accordance with §195.555. IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT has revised section 6 of the Corrosion Manual to provide the needed steps to verify and ensure IMTT supervisors maintain the knowledge needed to ensure compliance. Please see the revised program language below:

The Company requires and must verify that supervisors (Asset Managers and/or their designees) maintain a thorough knowledge of that portion of the corrosion control procedures for which they are responsible for insuring compliance. The Company requires supervisors to successfully complete the Association for Materials Protection and Performance (AMPP), formerly NACE, CP2 – Cathodic Protection Technician certification. In addition, the supervisors will review Corrosion Control procedures on an annual basis to keep abreast of their responsibilities. This review will be delivered annually via CBT through the Company's Learning Management System (LMS). Understanding of the material will be verified through an exam based on the procedures contained in the Corrosion Manual and the basic principles of corrosion control. In addition, the supervisor is expected to be fully qualified in the following Education, certifications and covered tasks:

- *AMPP (formerly NACE) Cathodic Protection Technician level (CP2) certification, or higher (CP3 or CP4)*
- *Bachelor of Science degree in related Engineering field (Mechanical, Electrical, or Civil Engineering or applicable Chemical or Chemical Refining Engineering, Chemistry, Physics or Metallurgy.*
- *Maintain certifications for following covered tasks:*
    - *Inspect Cathodic Protection Rectifiers*
    - *Measure Wall Thickness*
    - *Inspection of Breakout Tanks*
    - *Inspect Internal Pipe Surfaces*
    - *Prevention of Atmospheric Corrosion*
    - *General Abnormal Operating Conditions*
    - *Provide Security for Pipeline Facilities*

Item 8. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's OME and Lightning Policy failed to include details on protecting the pipeline against damage from fault currents or lightning, in accordance with §195.575(e).

Section 195.575(e) states that "If a pipeline is in close proximity to electrical transmission tower footings, ground cables, or counterpoise, or in other areas where it is reasonable to foresee fault currents or an unusual risk of lightning, you must protect the pipeline against damage from fault currents or lightning and take protective measures at insulating devices."

During the inspection, PHMSA requested IMTT's procedures regarding fault current and lightning protection. IMTT provided the OME and the Lightning Policy; however, the OME failed to include any procedure or details for protecting the pipeline against damage from fault currents or lightning. Furthermore, the Lightning Policy was not referenced or linked to the IMTT OME manual.

Therefore, IMTT's procedures failed to include details for protecting the pipeline against damage from fault currents or lightning in accordance with §195.575(e). IMTT must revise its proceduresto address this requirement.

IMTT Response

IMTT's Corrosion Manual, Section 2.6 – Electrical Isolation states the following:

2.6 Electrical Isolation

The Company will electrically isolate each buried or submerged pipeline from other metallic structures, unless they are electrically interconnected and cathodically protect the pipeline and the other structures as a single unit. One or more insulating devices, such as flange assemblies, prefabricated joint unions, or couplings within piping systems, must be installed where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.

The Company will inspect and electrically test each electrical isolation annually during annual CP surveys or when new equipment is installed to ensure isolation.

For insulating devices installed in an area where a combustible atmosphere is reasonable to foresee, precautions must be taken to prevent arcing. If a pipeline is in close proximity to electrical transmission tower footings, ground cables, or counterpoise, or in other areas where it is reasonable to foresee fault currents or an unusual risk of lightning, the Company will protect the pipeline against damage from fault currents or lightning and take protective measures at insulating devices. Protective systems may include grounding grids, matts or systems that allow high potentials a direct path to ground.

Item 9. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) •••

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Corrosion Manual* and *OME* failed to describe the interval and method for performing routine in-service (monthly) inspections of breakout tanks per the requirements of §195.432(b).

Section §195.432(b) states:

> Each operator must inspect the physical integrity of in-service atmospheric and low-pressure steel above-ground breakout tanks according to API Std 653 (except section 6.4.3, Alternative Internal Inspection Interval) (incorporated by reference, see §195.3). However, if structural conditions prevent access to the tank bottom, its integrity may be assessed according to a plan

included in the operations and maintenance manual under §195.402(c)(3). The risk-based internal inspection procedures in API Std 653, section 6.4.3 cannot be used to determine the internal inspection interval.

API Standard 653 - Section 6.3.1.2 states in part, "The interval of such inspections shall be consistent with conditions at the particular site, but shall not exceed one month."

During the inspection, PHMSA requested IMTT's procedures regarding in-service monthly breakout tank inspections. IMTT was unable to provide a relevant procedure to the requirement and indicated that it is not currently in its procedures.

Therefore, IMTT's procedures failed to describe the interval and method for performing routine in-service (monthly) inspections of breakout tanks, in accordance with §195.432(b). IMTT must revise its procedures to address this requirement.

IMTT Response:

IMTT has revised Section 21 of the Operations, Maintenance and Emergency Manual as follows:

21. Inspection of Breakout Tanks

21.1. DOT Description

Per 49 CFR 195.432(a), IMTT shall, at intervals not exceeding 15 months, but at least once each calendar year, visually inspect each breakout tank (including atmospheric and pressure tanks).
Per 49 CFR 195.432(b), the inspection of the physical integrity of in-service atmospheric and low-pressure steel aboveground breakout tanks must be done according to API STD 653 – Tank Inspection, Repair, Alteration, and Reconstruction. However, if structural conditions prevent access to the tank bottom, the bottom integrity may be assessed according to a plan included in the operations and maintenance manual under 49 CFR 195.402(c)(3).

1) The inspection of physical integrity of in-service steel aboveground breakout tanks built to API STD 2510 must be according to Section 6 of API 510.
Per 49 CFR 195.405(a), IMTT takes all precautions to protect against static electricity, lightning, and stray currents during operation and maintenance activities of aboveground breakout tanks.
Per 49 CFR 195.405(b), IMTT has reviewed API Publication 2026 – Safe Access/Egress Involving Floating Roofs of Storage Tanks in Petroleum Service regarding the potentially hazardous conditions and safety practices associated involved with inspection, service, maintenance, and repair activities.

21.2. Scope

The EH&S and Engineering Department are responsible for maintaining a list of breakout tanks and ensuring that inspections are performed and documented in accordance with regulatory requirements.

21.3. API RP 653 and 510 Tank Inspections

*IMTT requires the approved API tank inspection vendor's procedure be compliant with all aspects of the regulatory requirements. IMTT will not approve any work to begin until all expectations are met and IMTT and the vendor have formally agreed to the proce**dure.***

21.4. Monthly In-Service Inspections

The IMTT Security Department completes visual tank inspections once each calendar month. These inspections include visual reviews for the following:

- *Cracks or deformities in the surrounding grounds*
- *Settlement or gaps around the perimeter*
- *Drainage concerns*
- *Potential product leakage*

- *Environmental concerns*
- *Corrosion*
- *Leak signs*
- *Equipment concerns*
- *Valve conditions*
- *Dike wall conditions*
- *Drainage pond condition*
- *Debris or obstruction issues*

Refer to Monthly Breakout Tank Visual Inspection Work Instruction *for the detailed checklist that is followed during the inspection.*

Item 10. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) .•.

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Corrosion Manual* and OME failed to describe the interval and method for performing external ultrasonic thickness inspections of breakout tanks per the requirements of §195.432(b) (quoted in full in Item 9).

API Standard 653 - Section 6.3.3.1 states in part, "External, ultrasonic thickness measurements ofthe shell can be a means of determining a rate of uniform general corrosion while the tank is in service, and can provide an indication of the integrity of the shell. The extent of such measurements shall be determined by the owner/operator. During the inspection, PHMSA requested IMTT's procedures regarding external ultrasonic thickness breakout tank inspections. IMTT was unable to provide a relevant procedure to the requirement and indicated that it is not currently in its procedures.

Therefore, IMTT's procedures failed to describe the interval and method for performing external ultrasonic thickness inspections of breakout tanks, in accordance with §195.432(b). IMTT must revise its procedures to address this requirement.

IMTT Response:

IMTT has added section 21.5 – "API 653 External Inspections" to the Operations, Maintenance and Emergency Manual. Please see the excerpts from the manual below:

21.5. API 653 External Inspections

Pursuant to API Std 653, an authorized inspector must perform a visual and ultrasonic thickness inspections at least every five years or at a quarter of the corrosion rate life of the shell, whichever is less. Pursuant to API Std 510, an authorized inspector must perform a visual inspection at an interval that does not exceed the lesser of five years or the required internal/on-stream inspection.

The Company shall maintain records documenting that breakout tanks have received external inspections at the required intervals and that the deficiencies found during the inspections have been documented and repaired according to §195.205

Item 11. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Corrosion Manual* and OME failed to describe the interval and method for performing internal inspections of breakout tanks per the requirements of §195.432(b) (quoted in full in Item 9).

API Standard 653 - Section 6.4.1.2 stated in Part:

> All tanks shall have a formal internal inspection conducted at the intervals defined by6.4.2 or 6.4.3.

API Standard 653 - Section 6.4.2.1 stated in Part:

> Intervals between internal inspections shall be determined by the corrosion rates measured during previous inspections or anticipated based on experience with tanks in similar service. Normally, bottom corrosion rates will control and the inspection interval will be governed by the measured or anticipated corrosion rates and the calculations for minimum required thickness of tank bottoms (see 4.4.7). The actual inspection interval shall be set to ensure that the bottom plate minimum thicknessesat the next inspection are not less than the values listed in Table 6-1. In no case, however, shall the internal inspection interval exceed 20 years.

During the inspection, PHMSA requested IMTT's procedures regarding internal breakout tank inspections. IMTT was unable to provide a relevant procedure to the requirement and indicated that it is not currently in its procedures.

Therefore, IMTT's procedures failed to describe the interval and method for performing internal inspections of breakout tanks, in accordance with §195.432(b). IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT has added sections 21.6 – "API 653 Internal Inspections" to the Operations, Maintenance and Emergency Manual. Please see the excerpts from the manual below:

21.6. Internal Inspections

Pursuant to API Std 653, an authorized inspector must perform internal inspections. The interval is determined by the corrosion rate, based on previous inspections and experience with tanks in similar service. However, the intervals shall not exceed 20 years. If the corrosion rate cannot be determined because of lack of information, then the Company will inspect within 10 years to establish rates.

Pursuant to API Std 510, an authorized inspector must perform internal inspections. Unless justified by a RBI assessment, the period between internal or on-stream inspections shall not exceed one half the remaining life of the vessel or 10 years, whichever is less. Whenever the remaining life is less than four years, the inspection interval may be the full remaining life up to a maximum of two years. When an inspection reveals a need for repairs, the Company will do the repairs as soon as practical.

The Company shall maintain records documenting that breakout tanks have received internal inspections at the required intervals and that deficiencies found during inspections have been documented and then repaired according to §195.205

Item 12. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) ...

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's *Corrosion Manual* and OME failed to describe the interval and method for performing external inspections of breakout tanks per the requirements of §195.432(b) (quoted in full in Item 9).

API Standard 653 - Section 6.3.2.1 states in Part:

> All tanks shall be given a visual external inspection by an authorized inspector. This inspection shall be called the external inspection and must be conducted at least every 5 years or RCA/4N years (where RCA is the difference between the measured shell thickness and the minimum required thickness in mils, and N is the shell corrosion rate in mils per year) whichever is less. Tanks may be in operation during this inspection.

During the inspection, PHMSA requested IMTT's procedures regarding external breakout tank inspections. IMTT was unable to provide a relevant procedure to the requirement and indicated that it is not currently in its procedures.

Therefore, IMTT's procedures failed to describe the interval and method for performing external inspections of breakout tanks, in accordance with §195.432(b). IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT feels that NOA Items 10 and 12 are essentially the same. IMTT requests that NOA Item 12 be excluded from the NOA. However, if PHMSA desires a response to close the item, IMTT has added section 21.5 – "API 653 External Inspections" to the Operations, Maintenance and Emergency Manual. Please see the excerpts from the manual below:

21.5. API 653 External Inspections

Pursuant to API Std 653, an authorized inspector must perform a visual and ultrasonic thickness inspections at least every five years or at a quarter of the corrosion rate life of the shell, whichever is less. Pursuant to API Std 510, an authorized inspector must perform a visual inspection at an interval that does not exceed the lesser of five years or the required internal/on-stream inspection.

The Company shall maintain records documenting that breakout tanks have received external inspections at the required intervals and that the deficiencies found during the inspections have been documented and repaired according to §195.205

Item 13. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(1) …

(7) Starting up and shutting down any part of the pipeline system in a manner designed to assure operation within the limits prescribed by §195.406, consider the hazardous liquid or carbon dioxide in transportation, variations in altitude along the pipeline, and pressure monitoring and control devices.

IMTT's procedures for maintenance and normal operations were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's OME and *Control Room Management Plan, dated August, 2020* (CRM) failed to include procedures for shutting down any part of the pipeline system in a manner designed to assure operation within the limits prescribed by §195.406, considering the hazardous liquid, variations in altitude along the pipeline, and pressure monitoring and control devices.

During the inspection, PHMSA requested IMTT's procedure regarding shutting down the pipeline system. IMTT provided its OME, which states in Section 3.6, "Normal Shutdown Procedure- The following steps apply for normal shutdown of the pipeline: The Controller notifies the origin station as to when the pipeline will be shut down. If the transfer is between one or more IMTT- Pipeline terminals, then the origin station is another IMTT Pipeline Terminal. The origin station pumps are shut down first. The IMTT-Pipeline pumps are shut down in succession, starting with the pumps closest to the origin station."

When the PHMSA requested further information on the requirements within §195.402(c)(7), such as how the limits prescribed by §195.406 are considered as well as what the process is for shutting down critical pipeline components (i.e., valves) in the system, IMTT was unable to provide a response.

Therefore, IMTT's procedures failed to include procedures for shutting down any part of the pipeline system in a manner designed to assure operation within the limits prescribed by §195.406, in accordance with §195.402(c)(7). IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT's *Control Room Management Plan*, Appendices C, D, and E, have detailed line-specific procedures for shutting down all critical components associated with the pipeline.

Item 14. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(e) *Emergencies.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety when an emergency condition occurs:

(1) ...

(3) Having personnel, equipment, instruments, tools, and material available as needed at the scene of an emergency.

IMTT's procedures for operations, maintenance and emergencies were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's FRP failed to include processes to ensure the availability of personnel, equipment, instruments, tools, and materials as needed at the scene of an emergency in accordance with §195.402(e)(3).

During the inspection, PHMSA requested IMTT's procedures regarding §195.402(e)(3). IMTT

indicated that this information was included in the response equipment list, and that they use a communication system and i-respond app-based service in emergencies. However, the FRP did not provide further details to ensure that personnel, instruments, tools, and materials are at the scene of an emergency, nor did it discuss or mention IMTT's use of i-respond communication system.

Therefore, IMTT's procedures failed to include processes to ensure the availability of personnel, equipment, instruments, tools, and materials as needed at the scene of an emergency, in accordance with §195.402(e)(3). IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT currently uses the *IMTT Emergency Response Team Dispatching and Response Operations Support* procedure, which covers the critical tasks and functions of the emergency response communications protocol (provided separately for reference). IMTT will continue to align this document and the FRP and ICS system documents to ensure a comprehensive IMTT Communications Program.

IMTT is in the process of coordinating a meeting with key personnel in the following departments to more fully develop a comprehensive Communications Plan for implementation into the FRP:

- Environmental, Health, and Safety
- Fire Team
- Emergency Responders
- Dispatch
- Management
- Operations
- Safety

IMTT is respectfully requesting a 60-day extension to allow the opportunity to ensure that all key stakeholders are involved in the development of this plan.

Item 15. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) ...

(t) Safety-related condition reports. The manual required by paragraph (a) of this section must include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that potentially may be safety-related conditions that are subject to the reporting requirements of §195.55.

IMTT's procedures for safety related conditions were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's OME failed to include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that potentially may be safety-related conditions that are subject to the reporting requirements of§ 195.55.

During the inspection, PHMSA requested IMTT's procedure regarding recognizing safety related conditions. IMTT provided the OME and indicated that while they perform training for recognizing potential safety related conditions, it is not addressed in its procedure.

Therefore, IMTT's procedures failed to include instructions in its written procedures for personnel to recognize conditions that potentially may be safety-related conditions in accordance with § 195.402(f). IMTT must revise its procedures to address this requirement.

IMTT Response:

OME Section 6.10.3 and 6.10.4.1 provide a detailed list of safety-related conditions and specific requirements for an employee to follow to determine how to report those conditions. IMTT's updated OME language is as follows:

6.10.3 Responsibilities

All employees are responsible for the initial notification to Unit 8 of the possibility of hazardous conditions that may lead to imminent danger. Training to identify these is handled via OME training.

The Compliance Manager is responsible for preparing the Hazardous Materials Incident Report and submitting it electronically to PHMSA at http://hazmat.dot.gov.

In addition to creating an IMS report, these must be reported by the IMTT Compliance Manager with respect to 49 CFR 195.50 through 195.54 via a completed DOT Form 7000-1, which shall be submitted through the PHMSA portal as soon as practicable, but no later than 30-days after discovery. All root cause analyses and supplemental information or changes to the original submitted report must be within the 30-day period.

6.10.4 Specifics

6.10.4.1 Filing Safety-Related Condition Reports

IMTT must file the Safety-Related Condition Report no later than 5 days after it is first determined that a safety-related condition exists and not later than 10 days after the condition is first discovered for situations in which repairs are not possible within this time frame. Weekends and federal holidays are not included. First discovery is when the anomaly is initially detected. First determining is when IMTT analyzes the anomaly and concludes that repairs are necessary.

The safety-related conditions that require reporting are the following:

- *General corrosion that has reduced the wall thickness to less than that required for the MOP and localized corrosion pitting to a degree where leakage might result*
- *Unintended movement or abnormal loading of a pipeline by environmental causes, such as earthquakes, landslides, or floods that impair its serviceability*
- *Any material defect or physical damage that impairs the serviceability of a pipeline*
- *Any malfunction or operating error that causes the pressure of a pipeline to rise above 110% of its MOP*
- *Leak in a pipeline that constitutes an emergency*
- *Any safety-related condition that could lead to an imminent hazard and causes (either directly or indirectly by remedial action of the operator) for purposes other than abandonment, a 20% or more reduction in operating pressure, or shutdown of operation of a pipeline*

Safety-related conditions must exist in any one of the following locations to require reporting, regardless of the type of timeliness of repair:

- *Within 220 yards of any building intended for human occupancy or outdoor place of assembly*
- *Within the ROW of an active railroad, paved road, street, or highway*
- *Where hazardous liquids could reasonably be expected to pollute any stream, river, lake, reservoir, or other body of water*

Item 16. §195.403 Emergency response training.

(a) ...

(c) Each operator shall require and verify that its supervisors maintain a thorough knowledge of that portion of the emergency response procedures established under 195.402 for which they are responsible to ensure compliance.

IMTT's procedures for emergency response training were inadequate to assure safe operation of a pipeline facility. Specifically, IMTT's FRP failed to require and include a process to verify that supervisors be knowledgeable of emergency response procedures for which they are responsible for per the requirements of§ 195.403(c).

During the inspection, PHMSA requested IMTT's procedures regarding emergency response supervisor training. IMTT was unable to provide a response and was unable to provide a relevant section of its FRP or other manuals which indicated how IMTT complies with the requirement.

Therefore, IMTT's procedures failed to require and include a process to verify that supervisors are knowledgeable of emergency response procedures for which they are responsible for, m accordance with§ 195.403(c). IMTT must revise its procedures to address this requirement.

IMTT Response

IMTT updated Appendix I of its FRP to include the following language:

Employees and supervisors are all trained in every aspect of emergency response, focusing heavily on their areas of responsibility. Drills cover all response techniques to ensure that supervisors have a thorough knowledge of their area tasks and communication requirements. The drills also verify that current procedures are accurate to ensure that, during an actual emergency, there are no questions or concerns when implemented.

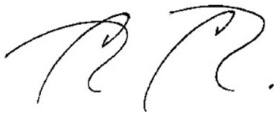
* * *

IMTT believes that the explanations and procedure updates listed herein address all but item 14, from CPF 1-2022-015-NOA. The response for item 14 is nearly complete, but as described above, IMTT requests an additional 60-days to finalize the response.

IMTT would also like to confirm that this completes all required responses related to PHMSA's May 10 to May 24, 2021 audit.

Please let me know if you have any questions or need additional information.

Sincerely,



Carlin Conner
Chairman and Chief Executive Officer

Attachments:

IMTT's Confined Space Procedure and Hot Work Permit Procedure
IMTT-Bayonne Security Department Monthly Breakout Tank Inspection Work Instruction
IMTT's Control Room Management Plan, Appendices C, D, and E
IMTT Emergency Response Team Dispatching and Response Operations Support Procedure