
VERIFIED DIRECT TESTIMONY OF STEVEN W. SYLVESTER

1 **INTRODUCTION**

2 **Q1. Please state your name, business address and title.**

3 A1. My name is Steven W. Sylvester. My business address is 801 E. 86th Avenue,
4 Merrillville, Indiana 46410. I am currently the Vice President and General
5 Manager of Northern Indiana Public Service Company LLC ("NIPSCO").

6 **Q2. Please briefly describe your educational background and relevant**
7 **training.**

8 A2. Prior to joining NIPSCO in January of 2019 as Vice President and General
9 Manager, I served as Vice President of Safety for NiSource Inc. and in that
10 role was responsible for coordination of safety and safety education across
11 the NiSource footprint. My tenure in that position was interrupted in
12 September of 2018 when I was asked to coordinate local operations in
13 Lawrence, Massachusetts in response to the events of September 13, 2018.
14 In that role, I had overall responsibility for all the relict resources for the
15 restoration efforts as well as a team of about 60 doing boiler, hot water and
16 forced air heating unit replacement work. Prior to 2018, I served as Vice

1 President and General Manager Field Operations for Columbia Gas of Ohio
2 where I was responsible for all field operations activities and for the safe,
3 reliable and efficient operation and maintenance of distribution pipelines
4 and other facilities providing natural gas service to approximately 1.5
5 million residential, commercial, and industrial customers. In 2013, I
6 accepted the position of Vice President of Distribution Operations for the
7 NiSource Gas Distribution companies where I was responsible for leading
8 the central dispatching business application and support, planning and
9 business improvement functions supporting natural gas utilities in Ohio,
10 Kentucky, Pennsylvania, Maryland, Virginia and Massachusetts. Prior to
11 that, I was Vice President and General Manager of Field Operations for
12 Columbia Gas of Ohio and Columbia Gas of Kentucky. I have worked for
13 the NiSource and Columbia family of companies in a range of operations
14 and leadership roles since 1986.

15 **Q3. What are your responsibilities as Vice President and General Manager?**

16 A3. As Vice President and General Manager, I am responsible for the day-to-
17 day operation of NIPSCO's physical gas transmission, distribution, and
18 storage systems including operations, maintenance and damage
19 prevention. In that capacity, I manage a workforce of nearly 600 employees

1 providing safe and reliable delivery of natural gas service to approximately
2 835,000 industrial, commercial and residential customers. This includes
3 NIPSCO's gas construction segment with a labor force of 125 that is
4 responsible for distribution line extensions, main replacements and
5 relocations, along with a variety of betterment projects.

6 **Q4. Have you previously testified before this or any other regulatory**
7 **commission?**

8 A4. Yes. I previously filed testimony before the Indiana Utility Regulatory
9 Commission ("Commission") in NIPSCO's Gas Federally Mandated Cost
10 Adjustment ("FMCA") tracker filings in Cause No. 45007-FMCA-X
11 (beginning in FMCA-2). I also filed testimony before the Commission in
12 Cause No. 44970-S1 supporting NIPSCO's request for approval of civil
13 penalties for 2017 in accordance with the Settlement Agreement approved
14 by the Commission in Cause No. 44970.

15 **Q5. What is the purpose of your direct testimony in this proceeding?**

16 A5. The purpose of my testimony is to (1) provide an overview of NIPSCO's
17 gas system, (2) describe NIPSCO's operations and maintenance ("O&M"),
18 Storage, and Damage Prevention Teams in the Gas Operations

1 Organization, (3) provide an overview of the federal pipeline safety
2 regulation, (4) explain NIPSCO Transmission Integrity Management
3 Program, (5) explain NIPSCO's Distribution Integrity Management
4 Program, (6) explain the Underground Storage Rule, and (7) provide an
5 overview of eight of the federally mandated projects included in the
6 Pipeline Safety II Compliance Plan (the "Compliance Plan") that will be
7 executed under my direction and supervision, including a discussion of the
8 estimated costs, any alternatives that demonstrate the project is reasonable
9 and necessary, any extension of the useful life an existing facility, and how
10 the project allows for compliance with provisions of the U.S. Department of
11 Transportation, Pipeline and Hazardous Materials Safety Administration
12 ("PHMSA") Rules.

13 **Q6. Are you sponsoring any attachments to your direct testimony?**

14 A6. Yes. Together with NIPSCO Witness Craycraft, I am sponsoring a portion
15 of NIPSCO's proposed Pipeline Safety II Compliance Plan, which is
16 attached to NIPSCO's Verified Petition filed in this Cause as Attachment A.
17 I also sponsor Attachment 3-A, which is a map of NIPSCO's gas service
18 territory showing each of NIPSCO's thirteen (13) Local Operating Areas
19 and the corresponding area of responsibility.

1 NIPSCO'S GAS SYSTEM

2 **Q7. Please provide an overview of NIPSCO's gas system.**

3 A7. NIPSCO owns and operates a natural gas local distribution company
4 ("LDC") that provides gas service to approximately 830,000 gas customers
5 in 32 counties in the northern tier of Indiana. NIPSCO has provided gas
6 service for more than 100 years. The NIPSCO system is made up of more
7 than 600 miles of transmission pipe, more than 17,500 miles of distribution
8 lines, and on-system storage comprised of the Royal Center Underground
9 Storage facility (Trenton and Mt. Simon formations) and a liquefied natural
10 gas facility located in LaPorte, Indiana. NIPSCO's service territory is
11 diverse and incorporates large urban areas in Lake, St. Joseph and Allen
12 Counties along with primarily rural areas in much of its service territory.
13 NIPSCO is currently interconnected with six (6) interstate pipelines.

14 NIPSCO GAS STORAGE

15 **Q8. Please provide an overview of NIPSCO's gas storage organization.**

16 A8. NIPSCO manages two (2) underground gas storage formations located
17 within Cass, Pulaski, and Fulton Counties - the Royal Center Underground
18 Storage facility located near Royal Center, Indiana (the "Trenton
19 formation"), and the Grass Creek facility in Grass Creek, Indiana (the "Mt.

1 Simon formation"). The Trenton formation provides 4 billion cubic feet of
2 gas system storage capacity. The Mt. Simon formation is able to provide 2
3 billion cubic feet of storage gas, but has been in inactive status for many
4 years. The NIPSCO underground storage organization consists of 16
5 employees responsible for the operation and maintenance of the Trenton
6 formation to ensure its availability and performance as required to support
7 NIPSCO's gas system.

8 **NIPSCO DAMAGE PREVENTION**

9 **Q9. Please provide an overview of NIPSCO's damage prevention**
10 **organization.**

11 A9. NIPSCO's damage prevention organization is responsible for helping to
12 manage and mitigate the risk of damage through a variety of activities
13 including underground facility locating, excavator engagement and
14 outreach and damage investigation. Third party damages to NIPSCO
15 facilities has been identified as a high risk to public safety, and NIPSCO
16 works cooperatively with the Commission's Pipeline Safety Division to
17 improve public awareness of underground facilities and mitigate facility
18 damage risk through education and continuous improvement of Company
19 practices. Increasingly, the damage prevention function also entails the

1 capture and evaluation of data related to excavation activities and damage
2 events. NIPSCO has a dedicated staff of 19 employees charged with
3 working with NIPSCO's locate contractors and with the excavator
4 community to reduce the risk of damage to NIPSCO's underground gas
5 facilities. NIPSCO's damage prevention organization also audits the locate
6 contractors to detect any locator training deficiencies by performing field
7 audits of random locates. Members of this organization also work with
8 NIPSCO's communications group to help with public awareness efforts.
9 The damage prevention organization holds meetings with employees and
10 excavators to raise awareness of damage prevention and promote public
11 safety. They gather, organize and retain data to look for trends that could
12 help improve the program. This staff is supported by NiSource resources
13 that assist in coordinating damage prevention activities across the NiSource
14 footprint. NIPSCO's emphasis on damage prevention is part of its DIMP
15 plan as discussed below.

16 **FEDERAL PIPELINE SAFETY REGULATION OVERVIEW**

17 **Q10. Please provide an overview of the federal pipeline safety regulatory**
18 **scheme.**

19 **A10.** In 1970, minimum pipeline safety standards were published in the Code of

1 Federal Regulations – Title 49 Part 192 (the “Code”). These rules, as
2 amended, define the minimum standards for the safe construction,
3 operation and maintenance of natural gas systems. The Code is
4 prescriptive about many actions that operators must take, how frequently
5 they must conduct those actions, and the types of documentation and
6 retention of documents related to those activities. As in many jurisdictions,
7 Indiana specifically requires gas utilities to follow these requirements
8 which are subject to audit and enforcement by the Commission’s Pipeline
9 Safety Division. *See generally* Ind. Code ch. 8-1-22.5. Included in the Code
10 are detailed sections describing the requirements for numerous activities
11 including, but not limited to the, design, construction, corrosion control,
12 pressure testing, pressure rating, integrity management, and operations
13 and maintenance of gas facilities.

14 The Code is unique among federal regulatory schemes in at least two
15 respects. First, PHMSA routinely incorporates provisions of technical
16 engineering, compliance, and project management protocols developed by
17 third parties into its provisions. Second, rules proposed for adoption are
18 subject to the usual notice and comment provisions, but proposed rules are
19 also subject to additional review by the Department of Transportation

1 ("DOT") Administrator as well as the Office of Management and Budget
2 ("OMB"). This prolongs the time necessary for the adoption of final rules
3 and provides additional layers of review.

4 **Q11. How has the Code evolved?**

5 A11. The Code has been amended a number of times since its inception in
6 August of 1971 to create or to modify mandatory programs or rules that
7 address various aspects of pipeline and public safety. The mandated
8 programs include (1) Damage Prevention Program (49 CFR § 192.614), (2)
9 Operator Qualification Program (49 CFR Part 192, Subpart N), (3) Public
10 Awareness Program (49 CFR § 192.616), (4) Emergency Management Plan
11 (49 CFR § 192.615), (5) Control Room Management Program (49 CFR §
12 192.631), (6) Gas Transmission Pipeline Integrity Management (49 CFR Part
13 192, Subpart O) with another set of revisions to this section expected to be
14 out as a final rule in 2018, (7) Gas Distribution Pipeline Integrity
15 Management (49 CFR Part 192, Subpart P); and (8) Underground Natural
16 Gas Storage Facilities Integrity Management Program (49 CFR Part
17 192.12(d)).

18 In 2002, PHMSA enacted 49 CFR Part 192, Subpart O that mandates the

1 creation of a Transmission Integrity Management Program (TIMP) plan
2 covering the higher pressure transmission pipeline and corresponding
3 systems. Beginning in 2011, 49 CFR Part 192, Subpart P mandated the
4 creation of a Distribution Integrity Management Program ("DIMP") plan
5 covering the lower pressure distribution system. These programs provide
6 a mandated regulatory structure for the assessment of system risks and
7 progressive implementation of solutions and continuous improvements
8 based upon the severity of those risks over time.

9 Unlike the other prescriptive provisions of the Code, both the TIMP and
10 DIMP plans are focused on continuous improvement through an ongoing
11 cycle of assessment and remediation whereby risks to transmission and
12 distribution assets must be identified, ranked, and based on risk ranking,
13 be remediated over time (e.g., by program, the more severe risks are
14 addressed first, the lower level risks later after the more severe risks have
15 been addressed). As a result, the TIMP and DIMP plans do not require
16 performance of specific activities but rather mandate that regulated
17 companies diligently undertake a proactive process that identifies, ranks,
18 and then implements measures to remediate the risks identified, based on
19 their relative risk ranking.

1 TRANSMISSION INTEGRITY MANAGEMENT PROGRAM

2 **Q12. Please explain the federal TIMP regulations.**

3 A12. In 2002, the American Society of Mechanical Engineers ("ASME")
4 published a standard to ensure the integrity of pipelines. PHMSA's Office
5 of Pipeline Safety ("OPS") subsequently adopted regulations that
6 incorporated the results of the ASME B31.8S standard. These standards
7 define a formal gas pipeline integrity program in accordance with the
8 Pipeline Safety Improvement Act of 2002 enacted on December 17, 2002.
9 *See 49 CFR Part 192, Subpart O, Amdt 192-95.*

10 The intent of the TIMP regulations is to identify potential threats to the
11 transmission system, assess the severity of those threats with a risk analysis
12 process, rank the risks identified, complete an assessment method
13 interrogating the threat and remediate or monitor the risks as appropriate.
14 Operators address potential threats by either repairing defects, replacing
15 pipeline sections, or implementing preventive and mitigating measures to
16 preemptively identify changes in threats. The TIMP regulations also
17 specify how pipeline operators must identify, prioritize, assess, evaluate,
18 repair, and validate, through comprehensive analyses, the integrity of gas
19 transmission pipelines that, in the event of a leak or failure, could affect

1 certain populated and occupied areas or High Consequence Areas
2 ("HCAs").

3 **Q13. Please describe NIPSCO's TIMP plan.**

4 A13. NIPSCO operates 690.11 miles of transmission-class natural gas pipelines,
5 122.94 miles of which are located in HCAs. The pipelines in HCAs are
6 assessed and ranked on a seven year cycle using a relative risk model in
7 conjunction with subject matter experts' input to identify threats, potential
8 threats, or variability in known threats. Based on the results of the
9 inspections and assessments, excavations are performed to directly
10 examine the pipe and make appropriate remediation as necessary. Further,
11 it should be noted that NIPSCO exceeds the minimum standards in that it
12 uses In-Line-Inspection ("ILI") tools in all ILI compatible transmission lines,
13 without regard to which of the line sections are HCAs. In addition, NIPSCO
14 plans to continue to expand its inventory of ILI compatible transmission
15 lines across its transmission footprint.

16 **Q14. What is the status of NIPSCO's TIMP plan?**

17 A14. NIPSCO's TIMP baseline assessments began in 2004 and were completed
18 by 2010 with 42 assessment projects using Direct Assessment ("DA")

1 methods in the form of External Corrosion Direct Assessment ("ECDA")
2 and Internal Corrosion Direct Assessment ("ICDA"). There were 442
3 excavations, known as direct examinations, performed within the HCAs of
4 the pipelines. These inspections identified coating deficiencies and
5 anomalies based on the ECDA and ICDA techniques deployed, including
6 some from mechanical damage stemming from Third Party Damage by
7 other excavators. The majority of corrosion related anomalies were from
8 original coating techniques used during installation. NIPSCO discovered
9 and corrected 25 external corrosion defects during its initial assessments.

10 TIMP re-assessments of the HCA pipelines began in 2010 completing
11 another 75 assessments of HCA pipeline to date, incorporating an
12 additional 4175 direct examinations. The assessment methods used for the
13 reassessments were 64 DA methods, four hydrostatically pressure tested
14 methods, and seven ILI methods. The re-assessments discovered:

- 15 • more material damage to the pipe wall in the form of six gouges from
16 Third Party Damage requiring repair;
- 17 • laminations within the pipe wall due to process deficiencies in the
18 original manufacturing requiring cut out and replacement; and
- 19 • internal corrosion issues in transmission class pipeline located in the
20 Royal Center Underground Storage property requiring installation
21 of a pipeline liner to provide further protection against corrosive

1 constituents within the gas stream.

2 ILI has proven to be a far superior pipeline assessment method --
3 discovering defects with higher probabilities for future failures if not
4 appropriately addressed.

5 **DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM**

6 **Q15. Please explain the federal DIMP regulations.**

7 A15. PHMSA's OPS adopted rules imposing integrity management
8 requirements for gas distribution pipeline systems on December 4, 2009.
9 See Pipeline Safety: Integrity Management Program for Gas Distribution
10 Pipelines, 74 Fed. Reg. 63906 (Dec. 4, 2009). The effective date of the rules
11 was February 12, 2010. Operators were given until August 2, 2011, to write
12 and implement a DIMP plan.

13 The DIMP regulations require operators to develop, write, and implement
14 a program with the following elements:

- 15 • Distribution system knowledge;
- 16 • Identification of threats;
- 17 • Evaluation of risks;
- 18 • Implementation of measures to address risks;
- 19 • Measurement of performance, monitoring of results and evaluation

of effectiveness;

- Periodic evaluation and improvement of program; and
- Reporting of results.

Q16. Please explain the purpose of the DIMP regulations.

A16. Looking at the history of 49 CFR Part 192, it is clear that since their creation the strategic purpose of these requirements was to establish very specific and prescriptive standards for operators that were to be rigorously followed, without regard to the particular (and sometimes differing) needs and risks in individual Operator systems. Recognizing this (and recognizing that over the last 20 years the number of Federally Reportable Incidents in the United States has essentially remained flat), PHMSA decided to create the DIMP plan in a way that was not as prescriptive as previous regulations, and that now allows Operators to prioritize and remediate risks and threats based on the specifics of their own system rather than broad macro data from across the United States. Then DIMP improvement progress is measured over time by reviewing the quantifiable performance metrics on the various DIMP risk categories that are being targeted (e.g., taking action then measuring the reduction in damages per thousand in excavator damage rates.)

1 **Q17. Please describe the status of NIPSCO's DIMP plan.**

2 A17. The focus areas of NIPSCO's distribution integrity execution are damage
3 prevention, leak management, public awareness, operator qualification
4 programs and corrosion. An early centerpiece to NIPSCO's DIMP plan has
5 been the priority pipe replacement effort addressing cast iron pipe and
6 corrosion threats. As NIPSCO has matured its DIMP plan, it has worked to
7 continually improve its DIMP plan and has partnered with affiliated gas
8 companies to reduce the various DIMP risks that have been identified and
9 to create effective programs to reduce those risks.

10 **Q18. Is NIPSCO's compliance with the provisions of the DIMP and TIMP**
11 **mandatory?**

12 A18. Yes. The Commission has previously determined that compliance with
13 DIMP and TIMP are federally mandated and has authorized recovery of
14 associated costs as part of a compliance project similar to the one NIPSCO
15 is proposing here.¹

16 **UNDERGROUND STORAGE RULE**

17 **Q19. What does the Underground Storage Rule require?**

¹ See *In Re Verified Petitions of N. Ind. Pub. Serv. Co.*, Cause No. 45007.

1 A19. The Storage Field Final Rule (FR) became effective on March 13, 2020. The
2 FR enacts the mandated statements within the American Petroleum
3 Institute Recommended Practices 1170 and 1171: Design and Operation of
4 Solution-mined Salt Caverns Used for Natural Gas Storage and Functional
5 Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and
6 Aquifer Reservoirs, respectively ("API RP 1170" and "API RP 1171"). The
7 FR made compliance with those standards mandatory. The FR requires
8 operators of underground natural gas storage facilities to perform
9 additional actions to ensure the safety and integrity of their storage facilities
10 and operations, and is the most recent in a series of PHMSA requirements
11 for pipeline operators, including NIPSCO. The work required for
12 NIPSCO's gas storage facilities requires timely planning and appropriate
13 lead time to comply with the Underground Storage Rule as written. By
14 virtue of operating the Royal Center Underground Storage, including the
15 Trenton formation as part of its distribution system, and continuing to
16 monitor the currently inactive Mt. Simon formation, the Underground
17 Storage Rule is applicable to NIPSCO and covers all of these facilities. I
18 describe below the components of the Compliance Plan intended to address
19 the federally mandated requirements of the Underground Storage Rule.

1 **Q20. Is compliance with the Underground Storage Rule mandatory?**

2 A20. Yes.

3 **Q21. Is NIPSCO required to comply with the Underground Storage Rule at the**
4 **Mt. Simon formation even though it is currently inactive?**

5 A21. Yes. The Underground Storage Rule applies to existing storage field
6 facilities including storage wells. These wells remain covered by the rules
7 unless and until retired, which requires that the well be filled with cement
8 and disconnected from the gathering pipeline. While inactive, the potential
9 utilization of the Mt. Simon formation and associated equipment is
10 currently under review. Regardless, even if the field is ultimately retired,
11 the Underground Storage Rule requires that the compliance projects in the
12 form of well logging be completed for all Mt. Simon wells.

13 **PIPELINE SAFETY COMPLIANCE PLAN OVERVIEW**

14 **Q22. Are each of the projects consistent with the compliance obligations under**
15 **the Code?**

16 A22. Yes. It is my opinion that each of the projects was developed in an effort to
17 comply with one or more provisions of the Code, and completion of each
18 would satisfy a mandatory obligation thereunder.

1 **Q23. Would completion of the Compliance Plan ensure full compliance with**
2 **the applicable provisions of the Code?**

3 A23. Not necessarily. As I explained above, the Code is a complex set of
4 prescriptive compliance obligations along with accompanying risk-based
5 proactive compliance objectives. While successful completion of each
6 project would comply with one or more of those obligations, overall
7 compliance with all of the Code's provisions is an ongoing and iterative
8 responsibility to be evaluated by the Pipeline Safety Division in accordance
9 with its regulatory oversight responsibility. More importantly, pipeline
10 safety is not simply a compliance obligation. It is the responsibility of all
11 operators to provide a safe and reliable service with a proactive eye toward
12 public safety, notwithstanding whether or not the specific activities
13 required to achieve that overarching objective are memorialized in Federal
14 Code.

15 **COMPLIANCE PLAN PROJECTS**

16 **Q24. Which of the projects included in the Compliance Plan are you**
17 **sponsoring?**

18 A24. I am sponsoring the following eight (8) projects included in the Compliance
19 Plan (the "Gas Operations Projects"), each of which are further discussed

1 below:

Project No.	Project Name
PSCP1	Trenton Well Logging Project
PSCP2	Mt. Simon Well Logging Project
PSCP3	Test Station Casings Project
PSCP4	DIMP/TIMP Administration / Data Verification Project
PSCP5	Fiberglass Riser Replacement Project
PSCP6	Legacy Cross Bore Remediation Project
PSCP7	Legacy Cross Bore Inspection
PSCP8	MAOP - Distribution Project (PS23)

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3 **PROJECT NO. PSCP1 – TRENTON WELL LOGGING PROJECT**

4 **Q25. Please describe Project No. PSCP25 – Trenton Well Logging Project.**

5 A25. The Trenton Well Logging Project is a continuation of the Underground
6 Storage Integrity Project (Project No. PS10) included in NIPSCO's Pipeline
7 Safety Compliance Plan approved in Cause No. 45007.² This project is
8 intended to comply with the Final Rule on Underground Storage effective
9 on March 13, 2020. The Final Rule is applicable to underground storage
10 facilities such as Trenton to address critical safety issues related to
11 downhole facilities, including wells, wellbore tubing, and /casing, at

² As of March 31, 2021, NIPSCO completed a total of 13 wells at the Trenton facility. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 underground natural gas storage facilities. The FR mandates that
2 additional actions be performed to ensure the safety and integrity of
3 underground storage facilities and operations including functional and
4 integrity testing of wells and installation of emergency and security
5 facilities. For NIPSCO, each well that down-hole testing determines to be
6 non-compliant will require retirement or other appropriate remediation if
7 it is to remain in service. In addition, NIPSCO plans to install protective
8 bollards at each well lot to protect each well head valve from damage by
9 vehicles and equipment. The FR requires the performance of baseline
10 assessments for all 97 wells that are part of NIPSCO's underground storage
11 facilities for Trenton formation by March 13, 2027. As of December 31, 2021,
12 NIPSCO will have completed 21 well logs (Project No. PS8 in Cause No.
13 45007). NIPSCO will complete the remaining 76 well logs over the next five
14 year period (January 2022 through December 2026).

15 **Q26. Please describe the projected federally mandated costs associated with**
16 **the Trenton Well Logging Project and how the cost estimates were**
17 **developed.**

18 A26. As shown in Attachment A to the Verified Petition, NIPSCO projects the
19 federally mandated incremental O&M expenses associated with the

1 Trenton Well Logging Project will be \$10,963,412. These expenses include
2 the cost of baseline assessments on the remaining 76 wells at Trenton.
3 NIPSCO's preliminary investigation indicates that each of the 76 wells
4 require mechanical integrity testing and inspection at an estimated cost of
5 \$122,570 per well (material and labor) for completion of a Gamma ray,
6 neutron, temperature, hi-resolution flux leakage and cement bond log for
7 each to determine whether defective tubing exists and requires
8 replacement. Additional site supervision charges totaling approximately
9 \$13,390 per year will also be required as part of the testing and inspection
10 process as NIPSCO lacks sufficiently experienced and specialized
11 personnel to oversee the work. In addition to this integrity testing, the
12 estimate contemplates the hiring of an additional full time integrity
13 engineer to administer the risk modeling, and incremental ongoing
14 maintenance and reporting required by the FR. These values were
15 escalated 3% a year for inflation for 2023 through 2026.

16 **Q27. Please describe any alternatives to the Trenton Well Logging Project that**
17 **demonstrate the project is reasonable and necessary.**

18 A27. NIPSCO completed a preliminary assessment of the Trenton wells, and
19 concluded that the remediation described above was the only appropriate

1 course of action under the FR. The only alternative approach would have
2 entailed more significant well construction/replacement/adaptation at a
3 higher cost. There are no other efficient and equally effective means of
4 achieving compliance.

5 **Q28. Will the Trenton Well Logging Project extend the useful life of an**
6 **existing facility and, if so, what is the value of that extension?**

7 A28. The impact on the useful lives of the 76 wells at Trenton through the
8 Trenton Well Logging Project is unknown. The primary benefit of the
9 Project will be increased safety and integrity safety related to the wells.

10 **Q29. Please describe how the Trenton Well Logging Project allows NIPSCO to**
11 **comply with a federally mandated requirement.**

12 A29. The work identified above is being undertaken in compliance with
13 PHMSA's revisions to portions of the Code applicable to underground
14 storage facilities such as NIPSCO's Trenton facility.

15 **PROJECT NO. PSCP2 – MT. SIMON WELL LOGGING PROJECT**

16 **Q30. Please describe PSCP26 – Mt. Simon Well Logging Project.**

17 A30. Like the Trenton Well Logging Project, the Mt. Simon Well Logging Project
18 is intended to comply with the Final Rule on Underground Storage effective

on March 13, 2020. The FR revised portions of the PHMSA Rules applicable to underground storage facilities such as Mt. Simon to address critical safety issues related to downhole facilities, including wells, wellbore tubing, and /casing, at underground natural gas storage facilities. The FR mandate that additional actions be performed to ensure the safety and integrity of underground storage facilities and operations including functional and integrity testing of wells and installation of emergency and security facilities. For NIPSCO, each well that down-hole testing determines to be non-compliant will require retirement or other appropriate remediation if it is to remain in service. In addition, NIPSCO plans to install protective bollards at each well lot to protect each well head valve from damage by vehicles and equipment. The FR requires the performance of baseline assessments for all 46 wells at Mt. Simon by March 13, 2027. NIPSCO will complete all well logs over the period (June 2021 through December 2026).

Q31. Please describe the projected federally mandated costs associated with the Mt. Simon Logging Project and how the cost estimates were developed.

A31. As shown in Attachment A to the Verified Petition, NIPSCO projects the

1 federally mandated incremental O&M expenses associated with the Mt.
2 Simon Well Logging Project will be \$8,264,330. These expenses include the
3 cost of baseline assessments on all 46 wells at Mt. Simon. NIPSCO's
4 preliminary investigation indicates that each of the 46 wells require
5 mechanical integrity testing and inspection at an estimated cost of \$154,000
6 per well (material and labor) for completion of a Gamma ray, neutron,
7 temperature, hi-resolution flux leakage and cement bond log for each to
8 determine whether defective tubing exists and requires replacement.
9 Additional site supervision charges totaling approximately \$15,000 per year
10 will also be required as part of the testing and inspection process as
11 NIPSCO lacks sufficiently experienced and specialized personnel to
12 oversee the work. In addition to this integrity testing, the estimate
13 contemplates the hiring of an additional full time integrity engineer to
14 administer the risk modeling, and incremental ongoing maintenance and
15 reporting required by the FR. These values were escalated 3% a year for
16 inflation for 2022 through 2026.

17 **Q32. Please describe any alternatives to the Mt. Simon Well Logging Project**
18 **that demonstrate the project is reasonable and necessary.**

19 **A32.** NIPSCO completed a preliminary assessment of the Mt. Simon wells, and

1 concluded that the remediation described above was the only appropriate
2 course of action under the FR. The only alternative approach would have
3 entailed more significant well construction/replacement/adaptation at a
4 higher cost. There are no other efficient and equally effective means of
5 achieving compliance.

6 **Q33. Will the Mt. Simon Well Logging Project extend the useful life of an**
7 **existing facility and, if so, what is the value of that extension?**

8 A33. The impact on the useful lives of the 46 wells at Mt. Simon through the Mt.
9 Simon Well Logging Project is unknown. The primary benefit of the Project
10 will be increased safety and integrity safety related to the wells.

11 **Q34. Please describe how the Mt. Simon Well Logging Project allows NIPSCO**
12 **to comply with a federally mandated requirement.**

13 A34. The work identified above is being undertaken in compliance with
14 PHMSA's revisions to portions of the Code applicable to underground
15 storage facilities such as NIPSCO's Mt. Simon facility.

16 **PROJECT NO. PSCP3 – TEST STATION CASINGS PROJECT**

17 **Q35. Please describe Project No. PSCP278 – Test Station Casings Project.**

18 A35. The Test Station Casings Project is a continuation of the Test Station Casings

1 Project (Project No. PS22) included in NIPSCO's Pipeline Safety
2 Compliance Plan approved in Cause No. 45007.³ Carrier pipe casings are
3 steel pipes that were historically used to protect distribution pipe when it
4 was installed at a crossing site such as a bridge over a stream or other
5 obstacle. Carrier pipe casings are no longer commonly used because they
6 have proven over time to trap moisture inside and thereby pose an
7 increased risk of corrosion on the enclosed steel pipe. Contemporary
8 crossings are accomplished through the use of horizontal boring under the
9 obstacle or through the wrapping of the distribution pipe with protective
10 material. The project includes installation of test stations on approximately
11 500 casings.

12 **Q36. Please describe the projected federally mandated costs associated with**
13 **the Test Station Casings Project and how the cost estimates were**
14 **developed.**

15 A36. As shown in Attachment A to the Verified Petition, NIPSCO projects the
16 federally mandated incremental O&M expenses associated with the Test

³ As of March 31, 2021, NIPSCO completed a total of 713 inspected cased crossing sites and installed corrosion test stations at all 713 of these sites. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 Station Casings Project will be \$2,298,827. This will permit these crossings
2 to be monitored in conjunction with NIPSCO's atmospheric corrosion
3 inspection cycle. The project cost estimates were developed based on the
4 time and materials necessary to install a test station.

5 **Q37. Please describe how the Test Station Casings Project allows NIPSCO to**
6 **comply with a federally mandated requirement.**

7 A37. This project is undertaken in compliance with the provisions of 49 CFR §
8 192.467(c) which requires measures must be taken to minimize corrosion of
9 the pipeline inside of casings, and 49 CFR § 192.935 which mandates a
10 continual evaluation and remediation of known system risks. This project
11 will assist NIPSCO in monitoring casings as part of that process.

12 **Q38. Did NIPSCO evaluate other options for dealing with its carrier pipe**
13 **casings?**

14 A38. Yes. In evaluating the options to address the integrity risk associated with
15 these crossings, it was determined that the cost of installing test stations
16 was far lower than the cost of either removing the steel casings themselves
17 or replacing each crossing completely with a new bored crossing. While
18 replacement may eventually prove necessary in some instances, this test

1 station program will allow NIPSCO to monitor these casings and evaluate
2 what, if any, corrective action is required.

3 **Q39. Will the Test Station Casings Project extend the useful life of an existing**
4 **facility and, if so, what is the value of that extension?**

5 A39. No. The Test Station Casings Project is intended as a means of monitoring
6 casings to identify instances where corrosion risk exists to prevent
7 premature failure and maintain the expected useful life of the assets.

8 **PROJECT NO. PSCP4 – DIMP/TIMP ADMINISTRATION & DATA VERIFICATION**
9 **PROJECT**

10 **Q40. Please describe Project No. PSCP28 – DIMP/TIMP Administration &**
11 **Data Verification Project.**

12 A40. The DIMP/TIMP Administration & Data Verification Project is a
13 continuation of the DIMP Administration / Leak Data Verification Project
14 (Project No. PS6) included in NIPSCO's Pipeline Safety Compliance Plan
15 approved in Cause No. 45007.⁴ The DIMP/TIMP Administration & Data
16 Verification Project is intended to enable the review of historic leak records,
17 Regulator, Odorizer systems, Pipeline Heaters, Liquefied Natural Gas

⁴ As of March 31, 2021, NIPSCO reviewed a total of 80,879 records. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 Storage inspection records, Underground Storage inspection records,
2 Excess Flow Valve data, Curb Valve inspections, Pressure Test as it pertains
3 to Service and Mains, and Pipe Exposure forms for all of NIPSCO's input
4 into a database system that can support a more accurate risk model while
5 verifying that the data captured in NIPSCO's digital database is accurate
6 and reliable. These records are a critical underpinning to a number of
7 DIMP/TIMP progressive improvement initiatives.

8 This project will fund the hiring of two additional full time Compliance
9 Specialists, to complement the one full time Compliance Specialist hired as
10 part of Project No. PS6 approved in Cause No. 45007. These Compliance
11 Specialists are dedicated to the support and administration of NIPSCO's
12 DIMP/TIMP program. This project will fund three full time Compliance
13 Specialists dedicated to the support and administration of NIPSCO's
14 DIMP/TIMP program. One Compliance Specialist will be responsible for
15 the review and verification of NIPSCO's Excess Flow Valve Inspections,
16 Curb Valve Inspections, Services and Mains Pressure Test Data, and Pipe
17 Exposure Data and the input of that data into a risk model so that the data
18 can be used for predictive modelling in support of DIMP's progressive
19 improvement requirements. The second Compliance Specialist will be

1 responsible for the review and verification of NIPSCO's historic leak
2 records and the input of that data into a risk model so that the data can be
3 used for predictive modelling in support of DIMP's progressive
4 improvement requirement. The third Compliance Specialist will be
5 responsible for the review and verification of NIPSCO's Regulator
6 Inspection records, Odorizer system records, Pipeline Heater records,
7 Liquified Natural Gas Storage records, and Underground Storage records
8 to provide increasing oversight to an increasingly complex Transmission
9 Integrity Management Program.

10 **Q41. Please describe the projected federally mandated costs associated with**
11 **the DIMP/TIMP Administration & Data Verification Project and how the**
12 **cost estimates were developed.**

13 A41. As shown in Attachment A to the Verified Petition, NIPSCO projects the
14 federally mandated incremental O&M expenses associated with the
15 DIMP/TIMP Administration & Data Verification Project will be \$1,940,760.
16 The cost estimates for the DIMP/TIMP Administration & Data Verification
17 Project were based on the midpoint salary of three Compliance Specialist
18 positions for 2022. These values were escalated 3% a year for inflation for
19 2023 through 2026.

1 **Q42. Please describe any alternatives to the DIMP/TIMP Administration &**
2 **Data Verification Project that demonstrate the project is reasonable and**
3 **necessary?**

4 A42. As I have previously discussed, DIMP/TIMP is a risk-based initiative that
5 contemplates flexibility in achieving its regulatory goal of progressive
6 performance improvement in reducing threats to a distribution and
7 transmission systems. As such there are endless alternatives to any selected
8 strategy to address specific risks. It is my view that the positions
9 contemplated by the DIMP/TIMP Administration & Data Verification
10 Project are effective means to (a) provide increasing oversight to an
11 increasingly complex integrity management program, and (b) allow for the
12 rapid verification and assimilation of historical data appropriate to creating
13 a thoroughly vetted baseline from which performance and remediation can
14 be enhanced. Data verification is a necessary pre-requisite to the
15 advancement of NIPSCO's DIMP/TIMP plans, and dedicating employees
16 to capture that data is the most efficient way to accomplish that. NIPSCO
17 currently has one full time Compliance Specialist to support its DIMP/TIMP
18 plans, and with the size of the NIPSCO system two additional positions are
19 warranted. As a result, there were no alternatives evaluated.

1 **Q43. Will the DIMP/TIMP Administration & Data Verification Project extend**
2 **the useful life of an existing facility and, if so, what is the value of that**
3 **extension?**

4 A43. While there are no facilities directly addressed as part of the DIMP/TIMP
5 Administration & Data Verification Project, it is critical to the continued
6 operation and maintenance of our facilities that we have accurate and
7 complete records that support the knowledge and risk assessment related
8 to those facilities required for the maintenance of the useful life thereof.

9 **Q44. Please describe how the DIMP/TIMP Administration & Data**
10 **Verification Project allows NIPSCO to comply with a federally mandated**
11 **requirement.**

12 A44. First, 49 CFR Part 192, Subpart P, requires that NIPSCO undertake an
13 ongoing and progressive assessment of its distribution system and the risks
14 facing it based on a comprehensive evaluation of conditions identified and
15 documented in appropriate records. 49 CFR Part 192, Subpart O, requires
16 that NIPSCO undertake an ongoing and progressive assessment of its
17 transmission system and the risks facing it based on a comprehensive
18 evaluation of conditions identified and documented in appropriate records.
19 To date, oversight of its DIMP/TIMP plans has been the responsibility of

1 NIPSCO's Compliance Manager who is also responsible for monitoring
2 NIPSCO's compliance with all of the prescriptive provisions of the Code.
3 By hiring full time Compliance Specialists dedicated solely to support the
4 DIMP/TIMP plans, NIPSCO will be in a position to better manage and
5 evaluate system conditions and risks, indirectly improving compliance
6 with DIMP/TIMP. NIPSCO's Local Distribution Company ("LDC")
7 affiliates each have an individual tasked with that responsibility.

8 Second, 49 CFR § 192.1007(a)(e)(i) requires that a DIMP Plan include:

- 9 (a) Knowledge. An *operator* must demonstrate an
10 understanding of its *gas* distribution system developed
11 from reasonably available information.
12
13 (1) Identify the characteristics of the pipeline's
14 design and operations and the environmental
15 factors that are necessary to assess the applicable
16 threats and risks to its gas distribution *pipeline*.
17 (2) Consider the information gained from past
18 design, operations, and maintenance.
19 (3) Identify additional information needed and
20 provide a plan for gaining that information over
21 time through normal activities conducted on the
22 pipeline (for example, design, construction,
23 operations or maintenance activities).
24 (4) Develop and implement a process by which the
25 *IM program* will be reviewed periodically and
26 refined and improved as needed.
27 (5) Provide for the capture and retention of data on
28 any new pipeline installed. The data must

1 include, at a minimum, the location where the
2 new pipeline is installed and the material of
3 which it is constructed.
4

5 (e) *Measure performance, monitor results, and evaluate effectiveness.* (1)
6 Develop and monitor performance measures from an established
7 baseline to evaluate the effectiveness of its IM program. An operator
8 must consider the results of its performance monitoring in
9 periodically re-evaluating the threats and risks. These performance
10 measures must include the following:

11 (i) Number of hazardous leaks either eliminated or repaired as
12 required by §192.703(c) of this subchapter (or total number of leaks
13 if all leaks are repaired when found), categorized by cause;

14 Third, 49 CFR § 192.911(c) requires that a TIMP Plan include:

15 An operator's initial *integrity management program* begins with a
16 framework (see § [192.907](#)) and evolves into a more detailed and
17 comprehensive integrity management program, as information is
18 gained and incorporated into the program. **An operator must make**
19 **continual improvements to its program.** The initial program
20 framework and subsequent program must, at minimum, contain the
21 following elements. (When indicated, refer to ASME/ANSI B31.8S
22 (incorporated by reference, see § [192.7](#)) for more detailed
23 information on the listed element.)

24 (c) An identification of threats to each covered *pipeline*
25 segment, which must include data integration and a risk
26 assessment. An operator must use the threat identification
27 and risk assessment to prioritize covered segments for
28 assessment (§ [192.917](#)) and to evaluate the merits of
29 additional preventive and mitigative measures (§ [192.935](#))
30 for each *covered segment*.
31

1 The DIMP/TIMP Administration & Data Verification Project enables the
2 establishment of a more accurate baseline through hiring Compliance
3 Specialists dedicated to the systematic verification of historical data to
4 enable a better and more complete assessment of remediation/inspection
5 strategies in compliance with DIMP/TIMP.

6 **PROJECT NO. PSCP5 – FIBERGLASS RISER REPLACEMENT PROJECT**

7 **Q45. Please describe Project No. PSCP5 – Fiberglass Riser Replacement**
8 **Project.**

9 A45. The Fiberglass Riser Replacement Project is a continuation of the Fiberglass
10 Riser Replacement Project (Project No. PS8) included in NIPSCO's Pipeline
11 Safety Compliance Plan approved in Cause No. 45007.⁵ The Fiberglass
12 Riser Replacement Project is intended to replace fiberglass service risers
13 when they are identified on the NIPSCO distribution system.

14 **Q46. What is a fiberglass service riser and why do they require replacement?**

15 A46. A service riser is a piping component of the natural gas service line that
16 protects the gas service pipe as it transitions from below ground to above

⁵ As of March 31, 2021, NIPSCO completed a total of 7,886 units. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 ground and just upstream of the gas meter. In the past, some risers were
2 made of fiberglass which becomes brittle over time and therefore affords
3 no protection to the service line. In particular, fiberglass risers are prone to
4 shatter from comparatively minor external force such as being struck by a
5 lawn mower. Once shattered, the fixture is prone to leaking at or near the
6 meter generally at the base of an external wall -- a particularly dangerous
7 location. NIPSCO estimates that there are approximately 17,000 fiberglass
8 risers across its distribution system that require replacement.

9 **Q47. Please describe the projected federally mandated costs associated with**
10 **the Fiberglass Riser Replacement Project and how the cost estimates were**
11 **developed.**

12 A47. As shown in Attachment A to the Verified Petition, NIPSCO projects the
13 federally mandated incremental O&M expenses associated with the
14 Fiberglass Riser Replacement Project will be \$2,755,818. The cost estimates
15 for the Fiberglass Riser Replacement Project were based on the known cost
16 of replacement for a service line riser as reflected in NIPSCO's annual filing
17 made with the Commission in accordance with 170 IAC 5-1-27(D). These
18 values were escalated 3% a year for inflation for 2023 through 2026.

1 **Q48. Please describe any alternatives to the Fiberglass Riser Replacement**
2 **Project that demonstrate the project is reasonable and necessary?**

3 A48. There are no other efficient and equally effective means for achieving
4 compliance. The Fiberglass Riser Replacement Project addresses a known
5 risk with high consequence of failure through its elimination. The cost of
6 replacing the fiberglass risers is very small compared to the consequence of
7 a failure. The alternative to a fiberglass riser replacement program is to
8 replace the risers as they fail and/or as leaks are reported. The
9 programmatic approach is reasonable and necessary because it will allow
10 for the replacement of all risers within a specified time without the risks
11 associated with a riser failure or leak in very close proximity to the building.
12 NIPSCO will also be in a position to plan the work and procure the needed
13 materials in an efficient way. With that said, NIPSCO will continue to
14 replace risers in the event of a leak or failure at the time of the discovery.

15 **Q49. Will the Fiberglass Riser Replacement Project extend the useful life of an**
16 **existing facility and, if so, what is the value of that extension?**

17 A49. No. The Fiberglass Riser Replacement Project is an asset replacement
18 project and as such is not intended to extend the life of the assets being
19 replaced.

1 **Q50. Please describe how the Fiberglass Riser Replacement Project allows**
2 **NIPSCO to comply with a federally mandated requirement.**

3 A50. 49 CFR § 192.1007(d) requires NIPSCO to determine and implement
4 measures designed to reduce the risks from failure of its gas distribution
5 pipeline. These measures must include an effective leak management
6 program (unless all leaks are repaired when found). By addressing the
7 known risk of leaks from fiberglass service risers, the Fiberglass Riser
8 Replacement Project is intended to reduce the risks from failure associated
9 with its system in compliance with DIMP, 49 CFR Part 192, Subpart O.

10 **PROJECT NO. PSCP6 – LEGACY CROSS BORE REMEDIATION PROJECT**

11 **Q51. Please describe Project No. PSCP6 – Legacy Cross Bore Remediation**
12 **Project.**

13 A51. The Legacy Cross Bore Remediation Project is a continuation of the Legacy
14 Cross Bore Remediation Project (Project No. PS9) included in NIPSCO's
15 Pipeline Safety Compliance Plan approved in Cause No. 45007.⁶ The
16 Legacy Cross Bore Remediation Project is intended to remediate legacy

⁶ As of March 31, 2021, NIPSCO identified a total of 93 gas-related cross bores and remediated 84 gas-related cross bores. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

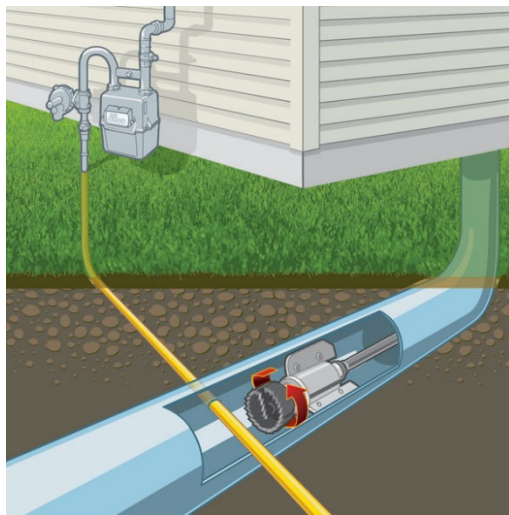
1 cross bores identified across NIPSCO's distribution system. Cross bores are
2 a known industry issue and the risk warrants investigation and
3 remediation.

4 **Q52. What is a cross-bore?**

5 A52. A "cross bore" is defined as an intersection of an existing underground
6 utility or underground structure by a second utility installed by trenchless
7 technology that results in direct contact between the transactions of the
8 utilities that compromise the integrity of either utility or underground
9 structure. It occurs when another utility line is accidentally bored through a
10 sewer, septic, or storm drain line. While contemporary horizontal boring
11 practices and updated damage prevention laws generally reduce the
12 likelihood of new cross-bores, older techniques and technology were not
13 always as safe, and cross-bores were created without the knowledge of
14 installation crews because the boring unit could pass through a sewer or
15 septic line without producing any telltale signs. Cross-bores present a very
16 dangerous situation because if the sewer/septic line becomes clogged and
17 must be cleaned out, the equipment used to root out the clog can damage
18 or rupture the cross bored gas line resulting in the leakage of gas into the
19 sewer/septic system and thereby into the attached residence or business.

1 Frequently this type of damage is unknown to the crew cleaning the line
2 because the reamer head cuts through the gas line with little or no
3 resistance. Figure 2 below is an illustration of a cross-bored gas line.

4 Figure 2 – Cross-bore Illustration



5
6 **Q53. How can the risk associated with cross-bored gas lines be reduced?**

7 A53. Once identified, remediation of cross-bored gas lines is comparatively
8 simple, and entails excavating the cross-bore and relocating the gas line and
9 repairing or replacing the sewer line involved. The more difficult task is
10 identifying locations where cross-bores have occurred. Many times cross-
11 bores exist in conflict with a sewer line for long periods of time without the
12 knowledge of the utility or the customer. Moreover, the frequency and
13 location of cross-bores is highly variable from area to area and is dependent

1 on a number of factors including the age of the gas and sewer systems and
2 the way specific areas were developed over time. Fortunately, technology
3 has been developed to permit remote cameras to be inserted into sewer
4 lines to identify the presence of obstructions including gas lines. By using
5 this technology, cross-bores can be identified and remediated before
6 damage or rupture occurs.

7 **Q54. Please describe the projected federally mandated costs associated with**
8 **the Legacy Cross Bore Remediation Project and how the cost estimates**
9 **were developed.**

10 A54. As shown in Attachment A to the Verified Petition, NIPSCO projects the
11 federally mandated incremental O&M expenses associated with the Legacy
12 Cross Bore Remediation Project will be \$1,168,010. The cost estimates for
13 the Legacy Cross Bore Remediation Project were based on a cost per cross-
14 bore of roughly \$2,300, which is based on an average of the cost of the cross-
15 bore remediations actually experienced by NIPSCO during the period 2018-
16 2020. NIPSCO will have four sewer camera crews to inspect 30 to 50 miles
17 of sewer lines each for a total yearly line inspection of between 120 to 200
18 miles. During the period 2018 through 2020, NIPSCO averaged 54 cross
19 bores identified per year, with an average of 27 gas related cross bores

1 identified per year (generally based on using one sewer camera crew, and
2 occasionally, two sewer camera crews). Based on those averages, with four
3 full time sewer camera crews, NIPSCO estimates it may identify 216 total
4 cross bores per year, with 108 gas related cross bores per year.

5 **Q55. Please describe any alternatives to the Legacy Cross Bore Remediation**
6 **Project that demonstrate the project is reasonable and necessary?**

7 A55. There are no other efficient and equally effective means of achieving
8 compliance. The Legacy Cross Bore Remediation Project addresses a
9 known risk with high consequence of failure through its elimination. The
10 cost of replacing the fiberglass risers is very small compared to the
11 consequence of a failure. The alternative to a proactive cross-bore
12 remediation program is to remediate cross bores when they are identified.
13 Because the risk associated with the ignition of gas within a building is so
14 high, the programmatic approach is reasonable and necessary. With that
15 said, NIPSCO will continue to remediate cross-bores at the time of the
16 discovery.

17 **Q56. Will the Legacy Cross Bore Remediation Project extend the useful life of**
18 **an existing facility and, if so, what is the value of that extension?**

1 A56. No. The Legacy Cross Bore Remediation Project results in an asset
2 replacement project and as such is not intended to extend the life of the
3 assets being replaced.

4 **Q57. Please describe how the Legacy Cross Bore Remediation Project allows**
5 **NIPSCO to comply with a federally mandated requirement.**

6 A57. The Legacy Cross Bore Remediation Project is undertaken in compliance
7 with DIMP, 49 CFR Part 192, Subpart P. DIMP requires LDCs to evaluate
8 their systems and identify risks based upon their relative threat. While it is
9 difficult to project the number of actual cross-bores across NIPSCO's
10 distribution system, the consequence associated with cross bores is
11 potentially catastrophic because gas from a severed line can back flow
12 through a sewer line into a building where it is subject to ignition. As a
13 result, remediation of cross-bores is among the highest priorities in
14 NIPSCO's DIMP Plan. Further, every other NiSource LDC that has
15 undertaken a Legacy Cross-Bore Program has found legacy cross-bores in
16 their systems (To date over 680 have been discovered and remediated).
17 Inasmuch as the state of trenchless technology was common across the gas
18 industry at the time that these cross-bores took place, there is no reason to
19 believe that these same conditions do not exist in NIPSCO's system in

1 Indiana.

2 **PROJECT NO. PSCP7 – LEGACY CROSS-BORE INSPECTION**

3 **Q58. Please describe Project No. PSCP7 – Legacy Cross-bore Inspection Project.**

4 A58. The Legacy Cross Bore Inspection Project is a continuation of the Legacy
5 Cross Bore Inspection Project (Project No. PS21) included in NIPSCO's
6 Pipeline Safety Compliance Plan approved in Cause No. 45007.⁷ The
7 Legacy Cross-bore Inspection Project is intended to facilitate the proactive
8 investigation of sewer lines within NIPSCO's service territory to identify
9 instances where gas lines have been cross-bored through them so that cross-
10 bores that are identified can be remediated. The hazards and remediation
11 of cross-bores were discussed above concerning Project No. PSCP6.

12 **Q59. Please describe the projected federally mandated costs associated with**
13 **the Legacy Cross-Bore Identification Project and how the cost estimates**
14 **were developed.**

15 A59. As shown in Attachment A to the Verified Petition, NIPSCO projects the
16 federally mandated incremental O&M expenses associated with the Legacy

⁷ As of March 31, 2021, NIPSCO investigated 175.24 combined miles of sanitary and storm sewer. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 Cross Bore Inspection Project will be \$17,842,944. The estimate was
2 developed based on sewer camera investigation, sewer cleaning, traffic
3 control, tracking software, and the cost for three full time positions
4 dedicated to this initiative, to support the evaluation and identification of
5 cross-bores for up to 800 miles of sewer line by the end of 2026.

6 **Q60. Please describe any alternatives to the Legacy Cross Bore Identification**
7 **Project that demonstrate the project is reasonable and necessary?**

8 A60. The only alternative to a proactive cross-bore remediation program is to
9 remediate cross-bores when they are identified. Because the risk associated
10 with the ignition of gas within a building is so high, the programmatic
11 approach is reasonable and necessary. NIPSCO's approach has been
12 successful with other NiSource LDCs and is consistent with best industry
13 practice.

14 **Q61. Will the Legacy Cross Bore Identification Project extend the useful life of**
15 **an existing facility and, if so, what is the value of that extension?**

16 A61. No. As with the Legacy Cross Bore Remediation Project, the Legacy Cross
17 Bore Identification Project results in asset replacement when cross-bores are
18 detected, and as such is not intended to extend the life of the assets being

1 replaced.

2 **Q62. Please describe how the Legacy Cross Bore Remediation Project allows**
3 **NIPSCO to comply with a federally mandated requirement.**

4 A62. The Legacy Cross Bore Remediation Project is undertaken in compliance
5 with DIMP, 49 CFR Part 192, Subpart P. DIMP requires LDCs to evaluate
6 their systems and identify risks based upon their relative threat. While it is
7 difficult to project the number of actual cross-bores across NIPSCO's
8 distribution system, the consequence associated with cross bores is
9 potentially catastrophic because gas from a severed line can back flow
10 through a sewer line into a building where it is subject to ignition. As a
11 result, remediation of cross-bores is among the highest priorities in
12 NIPSCO's DIMP Plan. Further, every other NiSource LDC that has
13 undertaken a Legacy Cross-Bore Program has found legacy cross-bores in
14 their systems (To date over 680 have been discovered and remediated).
15 Inasmuch as the state of trenchless technology was common across the gas
16 industry at the time that these cross-bores took place, there is no reason to
17 believe that these same conditions do not exist in NIPSCO's system in
18 Indiana.

1 **PROJECT NO. PSCP8 – MAOP – DISTRIBUTION PROJECT**

2 **Q63. Please describe Project No. PSCP8 – MAOP– Distribution Project (Project**
3 **ID PSCP8).**

4 A63. The MAOP – Distribution Project is a continuation of the MAOP –
5 Distribution Project (Project No. PS23) included in NIPSCO's Pipeline
6 Safety Compliance Plan approved in Cause No. 45007.⁸ NIPSCO pursued
7 improvement of its gas distribution system records through a linen mining
8 project as part of its Transmission, Distribution, and Storage System
9 Improvement Charge ("TDSIC") gas plan approved in the Commission's
10 April 30, 2014 Order in Cause No. 44403 ("Gas TDSIC Plan"). The linen
11 mining project enabled NIPSCO to utilize the enhanced system records in
12 its Geographic Information System ("GIS") to validate current Maximum
13 Allowable Operating Pressures ("MAOP") records through a tracing
14 methodology based on information captured from NIPSCO's linen books.
15 Linen books are analog records that have been maintained in individual
16 NIPSCO offices for many years, and the information delineated on these
17 records is being captured digitally as part of the linen mining project.

⁸ As of March 31, 2021, NIPSCO established MAOP's on a total of 41 distribution systems with 137.025 miles of main and 4,121 services. Sylvester Testimony filed May 25, 2021 in Cause No. 45007-FMCA-6.

1 Document retention for anything installed prior to initiation of the Code in
2 1970 was certainly less rigorous in the industry than it is now, so validating
3 what records NIPSCO has and that the records align with the appropriate
4 systems adds another quality assurance layer in the design and operation
5 of those systems.

6 The MAOP – Distribution Project entails the engagement of vendors to
7 assist NIPSCO's Engineering Department with the tracing and validation
8 of documents. This project will also work in conjunction with NIPSCO's
9 ongoing efforts to verify and document compliance with system MAOP by
10 individual pipeline attributes. The capture of analog data was an important
11 step for NIPSCO to modernize and update its system records. This project
12 is intended for the tracing and validation of the data captured thorough that
13 process.

14 **Q64. Please describe the projected federally mandated costs associated with**
15 **the MAOP – Distribution Project and how the cost estimates were**
16 **developed.**

17 A64. As shown in Attachment A to the Verified Petition, NIPSCO projects the
18 federally mandated incremental O&M expenses associated with the MAOP

1 – Distribution Project will be \$22,918,135. The projected federally
2 mandated costs associated with the MAOP – Distribution Project are
3 \$2,000,000 for the first year and \$5,000,000 per year after. The first year will
4 require onboarding and training for new employees and contractors. This
5 will ensure the work force required is fully trained to implement the
6 initiative. This estimate is the sum of the annual labor costs associated with
7 the hiring of Gas Measurement, Gas Service, Construction & Maintenance
8 Employees, additional leak survey contractors, and external Engineers.
9 These resources are needed to establish individualized uprate procedures,
10 review and document required records for MAOP establishment, perform
11 required leak surveys, remediation of identified leaks, regulator station
12 monitoring/control and project coordination.

13 **Q65. Please describe how the MAOP – Distribution Project allows NIPSCO to**
14 **comply with a federally mandated requirement.**

15 A65. DIMP, 49 CFR Part 192, Subpart P, requires that NIPSCO undertake an
16 ongoing and progressive assessment of its distribution system and the risks
17 facing it based on a comprehensive evaluation of conditions identified and
18 documented in appropriate records. The ability to verify the accuracy and
19 compliance of the distribution system with established maximum operating

1 pressures is a critical component to that process.

2 **Q66. Did NIPSCO evaluate other options for identifying and compiling**
3 **MAOP detail for its distribution pipelines?**

4 A66. Yes, NIPSCO considered the use of external personnel to complete the work
5 but determined that the length of the initiative required many of the
6 positions required very specific training and experience, so they would
7 need to be trained internal employees. Those positions with more general
8 expertise such as leak survey contractors will remain contracted resources.

9 **Q67. Will the MAOP – Distribution extend the useful life of an existing facility**
10 **and, if so, what is the value of that extension?**

11 A67. No. While it could result in the continued service life of some assets as a
12 byproduct of the work to be performed, the MAOP – Distribution Project is
13 a data validation and verification project.

14 **CONCLUSION**

15 **Q68. Does this conclude your prepared direct testimony?**

16 A68. Yes.

VERIFICATION

I, Steven W. Sylvester, Vice President and General Manager of Northern Indiana Public Service Company LLC, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.



Steven W. Sylvester

Date: June 7, 2021