Columbia Gas of Pennsylvania, Inc.
2021 General Rate Case
Docket No. R-2021-3024296
Standard Filing Requirements
Exhibit 13
Volume 4 of 10

EXHIBIT 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
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Applicability; public utilities other than canal, turnpike, tunnel, bridge and wharf companies.

(a) Whenever a public utility, other than a canal, turnpike, tunnel, bridge or wharf company files a tariff, revision or supplement effecting changes in the terms and conditions of service rendered or to be rendered, it shall submit to the Commission, with the tariff, revision or supplement, statements showing all of the following:

(1) The specific reasons for each change.

Response (Kempic):

The rate changes are being proposed to allow Columbia Gas of Pennsylvania a reasonable opportunity to recover revenue sufficient to cover its operating expenses and increases to rate base and provide a reasonable opportunity to earn a fair rate of return.

(2) The total number of customers served by the utility.

Response (Kempic): Refer to Exhibit No. 3.

(3) A calculation of the number of customers, by tariff subdivisions, whose bills will be affected by the change.

Response (Notestone): Refer to Exhibit No.103, Schedule No. 8.

(4) The effect of the change on the utility's customers.

Response (Notestone): Refer to Exhibit No. 103, Schedule No. 8.

(5) The direct or indirect effect of the proposed change on the utility's revenue and expenses.

Response (Kempic): Refer to Exhibit Nos. 3 and 4.

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(6) The effect of the change on the service rendered by the utility.

Response (Kempic): Service rendered by the utility will not be impacted by the changes to rates.

(7) A list of factors considered by the utility in its determination to make the change. The list shall include a comprehensive statement about why these factors were chosen and the relative importance of each. This subsection does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa. C.S. §1308 (relating to voluntary changes in rates).

Response (Kempic): Not Applicable.

(8) Studies undertaken by the utility in order to draft its proposed change. This paragraph does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa. C.S. §1308.

Response (Kempic): Not Applicable.

(9) Customer polls taken and other documents which indicate customer acceptance and desire for the proposed change. If the poll or other documents reveal discernible public opposition, an explanation of why the change is in the public interest shall be provided

Response (Kempic): No customer polls were taken to indicate customer acceptance and desire for the proposed rate changes.

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(10) Plans the utility has for introducing or implementing the changes with respect to its ratepayers.

Response (Kempic): Columbia will notify its ratepayers of the proposed changes through a bill insert in compliance with the Commission's Regulations (Pa Code Section 53.45).

(11) F.C.C., F.E.R.C. or Commission orders or rulings applicable to the filing.

Response (Kempic): There are no orders or rulings that directly apply to this change.

(b) Whenever a public utility, other than a canal, turnpike, tunnel, bridge or wharf company files a tariff, revision, or supplement which will increase or decrease the bills to its customers, it shall submit in addition to the requirements of subsection (a), to the Commission, with the tariff, revision or supplement, statements showing all of the following:

(1) The specific reason for each increase or decrease.

Response (Kempic): The rate changes are being proposed to allow Columbia Gas of Pennsylvania a reasonable opportunity to recover revenue sufficient to cover its operating expenses and increases to rate base and provide a reasonable opportunity to earn a fair rate of return.

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(2) The operating income statement of the utility for a 12-month period, the end of which may not be more than 120 days prior to the filing.

Response (Kempic): Refer to Exhibit No.2.

(3) A calculation of the number of customers, by tariff subdivision, whose bills will be increased.

Response (Notestone): Refer to Exhibit No. 103, Schedule No. 8.

(4) A calculation of the total increase, in dollars, by tariff subdivision, projected to an annual basis.

Response (Notestone): Refer to Exhibit No. 103, Schedule No. 8.

(5) A calculation of the number of customers, by tariff subdivision, whose bills will be decreased.

Response (Notestone): Refer to Exhibit No.103, Schedule No. 8.

(6) A calculation of the total decreases, in dollars, by tariff subdivision, projected to an annual basis.

Response (Notestone): Refer to Exhibit No.103, Schedule No. 8.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 II RATE OF RETURN
A. ALL UTILITIES

13. Attach copies of the summaries of the projected two years' Company's budgets (revenues, expense, and capital).

Response:

Please see the Company’s response to Standard Data Request GAS-ROR-13 for projected revenues and expenses.

Please see the Company’s response to Standard Data Request GAS-ROR-14 for the projected construction budget.

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Referenced by Commission Regulations

Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
53.52	**Applicability: Public Utilities Other Than Canal, Turnpike, Bridge, and Wharf Companies**					
53.52(a)	Whenever a public utility, other than a canal, turnpike, tunnel, bridge or wharf company files a tariff, revision or supplement effecting changes in the terms and conditions of service rendered or to be rendered, it shall submit to the Commission, with the tariff, revision, or supplement, statements showing all of the following:	13	3			Kempic
53.52(a)1	The specific reasons for each change.	13	1	113	1	Kempic/Notestone
53.52(a)2	The total number of customers served by the utility.	3 13	 1	103 113	 1	Bell Kempic
53.52(a)3	A calculation of the number of customers, by tariff subdivision, whose bills will be affected by the change.	3 13	 1	103 113	 1	Bell Kempic
53.52(a)4	The effect of the change on the utility's customers.	3 13	 1	103 113	 1	Bell Kempic
53.52(a)5	The direct or indirect effect of the proposed change on the utility's revenue and expenses.	13	1	113	1	Kempic/Notestone
53.52(a)6	The effect of the change on the service rendered by the utility	13	1	113	1	Kempic/Notestone
53.52(a)7	A list of factors considered by the utility in its determination to make the change. The list shall include a comprehensive statement about why these factors were chosen and the relative importance of each. This subsection does not apply to a portion of a change seeking a general rate increase as defined in 66 Pa. C. S. & 1308 (relating to voluntary changes in rates).	13	1	113	1	Kempic/Notestone
53.52(a)8	Studies undertaken by the utility in order to draft its proposed change. This paragraph does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa. C. S. & 1308.	13	1	113	1	Kempic/Notestone
53.52(a)9	Customer polls taken and other documents which indicate customer acceptance and desire for the proposed change. If the poll or other documents reveal discernible public opposition, an explanation of why the change is in the public interest shall be provided.	13	1	113	1	Kempic/Notestone
53.52(a)10	Plans the utility has for introducing or implementing the changes with respect to its ratepayers.	13	1	113	1	Kempic/Notestone
53.52(a)11	FCC. FERC or Commission orders or rulings applicable to the filing.	13	1	113	1	Kempic/Notestone
53.52(b)	Whenever a public utility, other than a canal, turnpike, tunnel, bridge or wharf company files a tariff, revision or supplement which will increase or decrease the bills to its customers, it shall submit in addition to the requirements of subsection (a), to the Commission, with the Tariff, revision, or supplement, statements showing all of the following:	13	3			Kempic/Notestone

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53.52(b)1	The specific reasons for each Increase or decrease.	13	1	113	1	Kempic/Notestone
53.52(b)2	The operating income statement of the utility for a 12-month period, the end of which may not be more than 120 days prior to the filing.	2 3 13	1	102 103 113	1 1	Miller Bell Kempic
53.52(b)3	A calculation of the number of customers, by tariff subdivision, whose bills will be increased.	3 13	1	103 113	1	Bell Kempic
53.52(b)4	A calculation of the total increases, in dollars, by tariff subdivision, projected to an annual basis.	3 13	1	103 113	1	Bell Kempic
53.52(b)5	A calculation of the number of customers, by tariff subdivision, whose bills will be decreased.	3 13	1	103 113	1	Bell Kempic
53.52(b)6	A calculation of the total decreases. in dollars, by tariff subdivision, projected to an annual basis.	3 13	1	103 113	1	Bell Kempic
53.52(c)1	A Statement showing the utility's calculation of the rate of return earned in the 12-month period referred to on subsection (b)(2), and the anticipated rate of return to be earned when the tariff, revision, or supplemental becomes effective. The rate base used in this calculation shall be supported by summaries of original cost for the rate of return calculation.	8		108		Shultz
53.52(c)2	A detailed balance sheet of the utility as of the close of the period referred to in subsection (b)f2).	1	1	101		Miller
53.52(c)3	A summary, by detailed plant accounts, of the book value of the property of the utility at the date of the balance sheet required by paragraph (2).	8	1, 2	108		Shultz
53.52(c)4	A statement showing the amount of the depreciation reserve, at the date of the balance sheet required by paragraph (2), applicable to the property, summarized as required by paragraph (3).	8	3	108	3	Shultz
53.52(c) 5	A statement of operating income, setting forth the operating revenues and expenses by detailed accounts for the 12-month period ending on the balance sheet required by paragraph (2).	2	1	102	1	Miller
53.52(c) 6	A brief description of a major change in the operating or financial condition of the utility occurring between the date of the balance sheet required by paragraph (2) and the date of transmittal of the tariff, revision or supplement. As used on this paragraph, a major change is one which materially alters the operating or financial condition of the utility from that reflected in paragraphs (1) - (5).	1	2	101		Miller
53.53 I A	**53.53 I. VALUATION** **A. ALL UTILITIES**					
53.53.I.A.1	Provide a corporate history (include the dates of original incorporation, subsequent mergers and/or acquisitions). Indicate all countries and cities and other governmental subdivisions to which service is provided (including service areas outside the state), and the total population in the area served.	15	1	115		Danhires

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53.53.I.A.2	Provide a schedule showing the measures of value and the rates of return at the original cost and trended original cost measures of value at the spot, three-year and five-year average price levels. All claims made on this exhibit should be cross-referenced to appropriate exhibits. Provide a schedule similar to the one listed above, reflecting respondent's final claim in its previous rate case.	8		108		Shultz
53.53.I.A.3	Provide a description of the depreciation methods utilized in calculating annual depreciation amounts and depreciation reserves, together with a discussion of all factors which were considered in arriving at estimates of service life and dispersion by account. Provide dates of all field inspections and facilities visited.	9	1	109	1	Spanos
53.53.I.A.4	Set forth, in exhibit form, charts depicting the original and estimated survivor curves and a tabular presentation of the original life table plotted on the chart for each account where the retirement rate method of analysis is utilized. a. If any utility plant was excluded from the measures of value because it was deemed not to be "used and useful" in the public service, supply a detailed description of each item of property. b. Provide the surviving original cost at test year end by vintage by account and include applicable depreciation reserves and annuities. (i) These calculations should be provided for plant in service as well as other categories of plant, including, but not limited, to contributions in aid of construction, customer's advances for construction, and anticipated retirements associated with any construction work in progress claims (if Applicable)	9	1	109	1	Spanos
53.53.I.A.5	Provide a comparison of respondent's calculated depreciation reserve vs. book reserve by account at the end of the test year.	9	2	109	2	Spanos
53.53.I.A.6	Supply a schedule by account and depreciable group showing the survivor curve and annual accrual rate estimated to be appropriate: a. For the purposes of this filing. b. For the purposes of the most recent rate increase filing prior to the current proceedings. (i) Supply a comprehensive statement of any changes made in method of depreciation and in he selection of average service lives and dispersion.	9	3	109	3	Spanos
53.53.I.A.7	Provide a table, showing the cumulative depreciated original cost by year of installation for utility plant in service at the end of the test year (depreciable plant only) as claimed in the measures of value, in the following form: a. Year installed. b. Original cost - the total surviving cost associated with each installation year from all plant accounts.	9	4	109	4	Spanos

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	c. Calculated depreciation reserve-the calculated depreciation reserve associated with each installation year from all plant accounts. d. Depreciated original cost - (Column B minus Column C). e. Total - cumulation year by year of the figures from Column D. f. Column E divided by the total of the figure in Column D.	9	4	109	4	Spanos
53.53.I.A.8	Provide a description of the trending methodology which was utilized. Identify all indexes which were used (include all backup workpapers) and all the reasons particular indexes were chosen. If indexes were spliced, indicate which years were utilized in any splices. if indexes were composite, show all supporting calculations, include any analysis made to "test" the applicability of any index.	8		108		Shultz
53.53.I.A.9	Provide an exhibit indicating the spot trended original cost at test year end by vintage by account and include applicable depreciation reserves. Include total by account for all other trended measures of value.	8		108		Shultz
53.53.I.A.10	Supply an exhibit indicating the percentages of Undepreciated original cost which were trended with the following indexes: a. Boeckh. b. Handy-Whitman. c. Indexes developed from suppliers' prices. d. Indexes developed from company records and company price histories. e. Construction equipment. f. Government statistical releases.	8		108		Shultz
53.53.I.A.11	Provide a table, showing the cumulative trended depreciated original cost (at the spot price level) by year installation for utility plant in service at the end of the test year (depreciable plant only) as claimed in the measures of value, in the following form: a. Year installed. b. Trended original cost (at the spot price level) - the total surviving cost associated with each installation year from all plant accounts. c. Trended calculated depreciation reserve - the calculated depreciation reserve associated with each installation year from all plant accounts. d. Depreciated trended original cost - (Column B minus Column C). e. Total-accumulation year by year of the figures from Column D. f. Column E divided by the total of the figures in Column D.	8		108		Shultz
53.53.I.A.12	If a claim is made for construction work in progress, include, in the form of an exhibit, the summary page from all work orders, amount expensed at the end of the test year and anticipated in-service dates. Indicate if any of the construction work in progress will result in insurance recoveries, reimbursements, or retirements of existing facilities. Describe in exact detail the necessity of each project claimed if not detailed on the summary page from the work order. Include final completion date and estimated total amounts to be spent on each project. [These exhibits should be updated at the conclusion of these proceedings.]	8		108		Shultz

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53.53.I.A.13	If a claim is made for non-revenue producing construction work in progress, include, in the form of an exhibit, the summary page from all work orders, amount expensed at the end of the test year and anticipated in-service dates. Indicate if any of the construction work in progress will result in insurance recoveries, reimbursements, or retirements of existing facilities. Describe in exact detail the necessity of each project claimed if not detailed on the summary page from the work order. Include final completion date and estimated total amounts to be spent on each project. [These exhibits should be updated at the conclusion of these proceedings.]	8		108		Shultz
53.53.I.A.14	If a claim is made for plant held for future use, supply the following: a. A brief description of the plant or land site and its cost. b. Expected date of use for each item claimed. c. Explanation as to why it is necessary to acquire each item in advance of its date of use. d. Date when each item was acquired. e. Date when each item was placed in plant held for future use.	8		108		Shultz
53.53.I.A.15	If materials and supplies comprise part of the cash working capital claim, attach an exhibit showing the actual book balances for materials and supplies by month for the thirteen months prior to the end of the test year. Explain any abrupt changes in monthly balances. [Explain method of determining claim if other than that described above.]	8		108		Shultz
53.53.1.A.16	If fuel stocks comprise part of the cash working capital claim, provide an exhibit showing the actual book balances (quantity and price) for the fuel inventories by type of fuel for the thirteen months prior to the end of the test year by location, station, etc. [Explain the method of determining claim if other than that described above.]	8		108		Shultz
53.53.I.A.17	Regardless of whether a claim for net negative or positive salvage is made, attach an exhibit showing gross salvage, cost of removal, and net salvage for the test year and four previous years by account.	9	5	109	5	Spanos
53.53.I.A.18	Explain in detail by statement or exhibit the appropriateness of claiming any additional items, not previously mentioned, in the measures of value.	8		108		Shultz
53.53.I.C	**53.53.I VALUATION C. GAS UTILITIES**					
53.53.I.C.1	Provide, with respect to the scope of operations of the utility, a description of all property, including an explanation of the system's operation, and all plans for any significant future expansion, modification, or other alterations of facilities. This description should include, but not be limited to the following: a. If respondent has various gas service areas, indicate if they are integrated, such that the gas supply is available to all customers. b. Provide all pertinent data regarding company policy related to the addition of new consumers in the company's service area. c. Explain how respondent obtains its gas supply, as follows: (i) Explain how respondent stores or manufactures gas; if applicable. (ii) State whether the company has peak shaving facilities. (iii) Provide details of coal-gasification programs, if any. iv) Describe the potential for emergency purchases of gas. (v) Provide the amount of gas in MCF supplied by various suppliers in the test year (include a copy of all contracts).	17		117		Bell

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Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
	d. Provide plans for future gas supply, as follows: (i) Supply details of anticipated gas supply from respondent's near-term development of gas wells, if any. (ii) Provide gas supply agreements and well development ventures and identify the parties thereto. e. Indicate any anticipated curtailments and explain the reasons for the curtailments. f. Provide current data on any Federal Power Commission action or programs that may affect, or tend to affect, the natural gas supply to the gas utility.	17		117		Bell
53.53.I.C.2	Provide an overall system map, including and labeling all measuring and regulating stations, storage facilities, production facilities transmission and distribution mains, by size, and all interconnections with other utilities and pipelines.	15	2	115		Danhires
53.53.II.A	**53.53.II. RATE RETURN** **A. ALL UTILITIES**					
53.53.II.A.1	Provide capitalization and capitalization ratios for the last five-year period and projected through the next two years. (With short-tern debt and without short-term debt.) Company, Parent and System (consolidated)). a. Provide year-end interest coverages before and after taxes for the last three years and at latest date. (Indenture and SEC Bases.) (Company, Parent and System (consolidated)). b. Provide year-end preferred stock dividend coverages for last three years and at latest date (Charter and SEC bases).	401		401		Moul
53.53.II.A.2	Provide latest quarterly financial report (Company and Parent).	402		402		Moul
53.53.II.A.3	Provide latest Stockholder's Report (Company and Parent).	403		403		Moul
53.53.II.A.4	Provide latest Prospectus (Company and Parent).	404		404		Moul
53.53.II.A.5	Supply projected capital requirements and sources of Company, Parent and System (consolidated) for each of future three years.	405		405		Moul
53.53.II.A.6	Provide a schedule of debt and preferred stock of Company, Parent and System (Consolidated) as of test year-end and latest date, detailing for each issue (if applicable): a. Date of issue b. Date of maturity c. Amount issued d. Amount outstanding e. Amount retired f. Amount reacquired g. Gain on reacquisition h. Coupon rate i. Discount or premium at issuance j. Issuance expenses k. Net proceeds l. Sinking Fund requirements m. Effective interest rate n. Dividend rate o. Effective cost rate p. Total average weighted effective Cost Rate	406		406		Moul

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Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Historic Test Year Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Fully Projected Future Test Year Schedule	Witness
53.53.II.A.7	Supply financial data of Company and/or Parent for last five years: a. Earnings-price ratio (average) b. Earnings-book value ratio (per share basis) (avg. book value) c. Dividend yield (average) d. Earnings per share (dollars) e. Dividends per share (dollars) f. Average book value per share yearly g. Average yearly market price per share (monthly high-low basis) h. Pre-tax funded debt interest coverage i. Post-tax funded debt interest coverage j. Market price-book value ratio	407		407		Moul
53.53.II.A.8	State amount of debt interest utilized for income tax calculations, and details of debt interest computations, under each of the following rate cases vases: a. Actual test year b. Annualized test year-end c. Proposed test year-end	7		107		Harding
53.53.II.A.9	State amount of debt interest utilized for income tax calculations which has been allocated from the debt interest of an affiliate, and details of the allocation, under each of the following rate cases vases: a. Actual test year b. Annualized test year-end c. Proposed test year-end	7		107		Harding
53.53.II.A.10	Under Section 1552 of the Internal Revenue Code and Regulations 1.1552-1 thereunder, if applicable, Parent Company, in filing a consolidated income tax return for the group, must choose one of four options by which it must allocate total income tax liability of the group to the participating members to determine each member's tax liability to the federal government. (If this interrogatory is not applicable, so state.) a. State what option has been chosen by the group. b. Provide, in summary form, the amount of tax liability that has been allocated to each of the participating members in the consolidated income tax return c. Provide a schedule, in summary form, of contributions, which were determined on the basis of separate tax return calculations, made by each of the participating members to the tax liability indicated in the consolidated group tax return. Provide total amounts of actual payments to the tax depository for the tax year, as computed on the basis of separate returns of members. d. Provide annual income tax return for group, and if income tax return shows net operating loss, provide details of amount of net operating loss allocated to the income tax returns of each of the members of the consolidated group.	7		107		Harding

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Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
53.53.II.A.11	Provide AFUDC charged by company at test year-end and latest date, and explain method by which rate was calculated.	408		408		Shultz
53.53.II.A.12	Set forth provisions of Company's and Parent's charter and indentures (if applicable) which describe coverage requirements, limits on proportions of types of capital outstanding, and restrictions on dividend payouts.	409		409		Moul
53.53.II.A.13	Attach copies of the summaries of the projected 2 year's Company's budgets (revenue, expense and capital).	13	2	113	2	Miller
53.53.II.A.14	Describe long-term debt reacquisition's by Company and Parent as follows: a. Reacquisition's by issue by year. b. Total gain on reacquisition's by issue by year. c. Accounting of gain for income tax and book purposes.	410		410		Moul
53.53.II.A.15	Set forth amount of compensating bank balances required under each of the following rate base bases: a. Annualized test year operations. b. Operations under proposed rates.	411		411		Moul
53.53.II.A.16	Provide the following information concerning compensating bank balance requirements for actual test year: a. Name of each bank. b. Address of each bank. c. Types of accounts with each bank (checking, savings, escrow, other services, etc.). d. Average Daily Balance in each account. e. Amount and percentage requirements for compensating bank balance at each bank. f. Average daily compensating bank balance at each bank. g. Documents from each bank explaining compensating bank balance requirements. h. Interest earned on each type of account.	411		411		Moul
53.53.II.A.17	Provide the following information concerning bank notes payable for actual test year: a. Line of Credit at each bank. b. Average daily balances of notes payable to each bank, by name of bank. c. interest rate charged on each bank note (Prime rate, formula rate or other). d. Purpose of each bank note (e.g., construction, fuel storage, working capital, debt retirement). e. Prospective future need for this type of financing	412		412		Moul
53.53.II.A.18	Set forth amount of total cash (all cash accounts) on hand from balance sheets for last 24-calendar months preceding test year-end.	1	3	101		Miller
53.53.II.A.19	Submit details on Company or Parent common stock offerings (past 5 years to present) as follows: a. Date of Prospectus b. Date of offering c. Record date d. Offering period-dates and number of days e. Amount and number of share of offering	413		413		Moul

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	f. Offering ratio (if rights offering) g. Per cent subscribed h. Offering price i. Gross proceeds per share j. Expenses per share j. Net proceeds per share (i-j) l. Market price per share 1. At record date 2. At offering date 3. One month after close of offering m. Average market price during offering 1. Price per share 2. Rights per share-average value of rights n. Latest reported earnings per share at time of offering o. Latest reported dividends at time of offering	413		413		Moul
53.53.II.A.20	Provide latest available balance sheet and income statement for Company, Parent and System (consolidated).	414		414		Miller
53.53.II.A.21	Provide Original Cost, Trended Original Cost and Fair Value rate base claims.	8		108		Shultz
53.53.II.A.22	a. Provide Operating Income claims under: (i) Present rates (ii) Pro forma present rates (annualized & normalized) (iii) Proposed rates (annualized & normalized) b. Provide Rate of Return on Original Cost and Fair Value claims under: (i) Present rates (ii) Pro forma present rates (iii) Proposed rates	2	2	102	2	Miller
53.53.II.A.23	List details and sources of "Other Property and Investments," "Temporary Cash Investments and Working Funds on test year-end balance sheet.	1	4	101		Miller
53.53.II.A.24	Attach chart explaining Company's corporate relationship to its affiliates (System Structure).	15	3	115		Kempic
53.53.II.A.25	If the utility plans to make a formal claim for a specific allowable rate of return. Provide the following data in statement form: a. Claimed capitalization and capitalization ratios with supporting data. b. Claimed cost of long-term debt with supporting data. c. Claimed cost of short-term debt with supporting data. d. Claimed cost of total debt with supporting data. e. Claimed cost of preferred stock with supporting data f. Claimed cost of common equity with supporting data.	400		400		Moul
53.53.II.A.26	Provide the following income tax data: a. Consolidated income tax adjustments, if applicable. b. lnterest for tax purposes (basis).	7		107		Harding
53.53.II.C	**53.53.II. RATE RETURN** **C. GAS UTILITIES**					
53.53.II.C.1	Provide test year monthly balances for "Current Gas Storage" and notes financing such storage.	1	5	101		Miller

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Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
53.53.III.A	**53.53.III. BALANCE SHEET AND OPERATING STATEMENT A ALL UTILITIES**					
53.53.III.A1	Provide a comparative balance sheet for the test year and the preceding year which corresponds with the test year date.	1	1	101		Miller
53.53.III.A2	Set forth the major items of Other Physical Property, Investments in Affiliated Companies and Other Investments.	1	6	101		Miller
53.53.III.A3	Supply the amounts and purpose of Special Cash Accounts of all types, such as: a. Interest and Dividend Special Deposits. b. Working Funds other than general operating cash accounts. c. Other special cash accounts and amounts (Temporary cash investments).	1	7	101		Miller
53.53.III.A4	Describe the nature and/or origin and amounts of notes receivable, accounts receivable from associated companies, and any other sign fact receivables, other than customer accounts, which appear on balance sheet.	1	8	101		Miller
53.53.III.A5	Provide the amount of accumulated reserve for uncollectible accounts, method and rate of accrual, amounts accrued, and amounts written-off in each of the last three years.	1	9	101		Miller
53.53.III.A6	Provide a list of prepayments and give an explanation of special prepayments.	1	10	101		Miller
53.53.III.A7	Explain in detail any other significant (in amount) current assets listed on balance sheet.	1	11	101		Miller
53.53.III.A8	Explain in detail, including the amount and purpose, the deferred asset accounts that currently operate to effect or will at a later date effect the operating account supplying: a. Origin of these accounts. b. Probable changes to this account in the near future. c. Amortization of these accounts currently charged to operations or to be charged in the near future. d. Method of determining yearly amortization for the following accounts: Temporary Facilities Miscellaneous Deferred Debits Research and Development Property Losses Any other deferred accounts that effect operating results.	1	12	101		Miller
53.53.III.A9	Explain the nature of accounts payable to associated companies, and note amounts of significant items.	1	13	101		Miller
53.53.III.A10	Provide details of other deferred credits as to their origin and disposition policy (e.g. - amortization).	1	14	101		Miller
53.53.III.A11	Supply basis for Injury and Damages reserve and amortization thereof.	1	15	101		Miller
53.53.III.A12	Provide details of any significant reserves, other than depreciation, bad debt, injury and damages, appearing on balance sheet.	1	16	101		Miller
53.53.III.A13	Provide an analysis of Unappropriated retained earnings for the test year and three preceding calendar years.	1	17	101		Miller
53.53.III.A14	Provide schedules and data in support of the following working capital items: a. Prepayments - List and identify all items b. Federal Excise Tax accrued and prepaid c. Federal Income Tax accrued or prepaid d. Pa. State Income Tax accrued or prepaid e. Pa. Gross Receipts Tax accrued or prepaid	8		108		Shultz

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	f. Pa. Capital Stock Tax accrued or prepaid g. Pa. Public Utility Realty Tax accrued or prepaid h. State sales tax accrued or prepaid i. Payroll taxes accrued or prepaid j. Any adjustment related to the above items for ratemaking purposes.	8		108		Shultz
53.53.III.A15	Supply an exhibit supporting the claim for working capital requirement based on the lead-lag method. a. Pro forma expenses and revenues are to be used in lieu of book data for computing lead-lag days. b. Respondent must either include sales for resale and related expenses in revenues and in expenses or exclude from revenues and expenses. Explain procedures followed (exclude telephone).	8	4	108	4	Shultz
53.53.III.A16	Provide detailed calculations showing the derivation of the tax liability offset against gross cash working capital requirements.	8	4	108	4	Shultz
53.53.III.A17	Prepare a Statement of Income for the various time frames of the rate proceeding including: Col. l-Book recorded statement for the test year. 2-Adjustments to book record to annualize and normalize under present rates. 3-Income statement under present rates after adjustment in Col. 2 4-Adjustment to Col. 3 for revenue increase requested. 5-Income statement under requested rates. a. Expenses may be summarized by the following expense classifications for purposes of this statement: Operating Expenses (by category) Depreciation Amortization Taxes, Other than lncome Taxes Total Operating Expense Operating lncome Before Taxes Federal Taxes State Taxes Deferred Federal Deferred State lncome Tax Credits Other Credits Other Credits and Charges, etc. Total lncome Taxes Net Utility Operating lncome Other lncome & Deductions Other lncome Detailed listing of Other Income used in Tax Calculation Other lncome Deduction Detailed Listing Taxes Applicable to Other lncome and Deductions	2 2	3 4	102	3	Miller Miller

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	Listing lncome Before lnterest Charges Listing of all types of lnterest Charges and all amortization of Premiums and/or Discounts and expenses on Debt issues Total lnterest Net lncome After lnterest Charges (Footnote each adjustment to the above statements with explanation in sufficient clarifying detail.)	2	3, 4			Miller
53.53.III.A18	Provide comparative operating statements for the test year and the immediately preceding 12 months showing increases and decreases between the two periods. These statements should supply detailed explanation of the causes of the major variances between the test year and preceding year by detailed account number.	2	5	102	4	Miller
53.53.III.A19	List extraordinary property losses as a separate item, not included in operating expenses or depreciation and amortization. Sufficient supporting data must be provided.	13	5	113	3	Miller
53.53.III.A20	Supply detailed calculations of amortization of rate case expense, including supporting data for outside services rendered. Provide the items comprising the rate case expense claim (include the actual billings or invoices in support of each kind of rate case expense), the items comprising the actual expenses of prior rate cases and the unamortized balances.	4	4	104	4	Miller
53.53.III.A21	Submit detailed computation of adjustments to operating expenses for salary, wage and fringe benefit increases (union and non-union merit, progression, promotion and general) granted during the test year and six months subsequent to the test year. Supply data showing for the test year: a. Actual payroll expense (regular and overtime separately) by categories of operating expenses. i.e. maintenance, operating transmission, distribution, other. b. Date, percentage increase, and annual amount of each general payroll increase during the test year. c. Dates and annual amounts of merit increases or management salary adjustments. d. Total annual payroll increases in the test year e. Proof that the actual payroll plus the increases equal the payroll expense claimed in the supporting data (by categories of expenses). f. Detailed list of employee benefits and cost thereof for union and non-union personnel. Any specific benefits for electives and officers should also be included, and cost thereof. g. Support the annualized pension cost figures (i) State whether these figures include any unfunded pension costs. Explain. (ii) Provide latest actuarial study used for determining pension accrual rates. h. Submit a schedule showing any deferred income and consultant fee to corporate officers or employees.	4	5	104	5	Miller
53.53.III.A22	Supply an exhibit showing an analysis, by functional accounts, of the charges by affiliates (Service Corporations, etc.) for services rendered included in the operating expenses of the filing company for the 12-month period ended prior to the test year. a. Supply a copy of contracts, if applicable. b. Explain the nature of the services provided. c. Explain basis on which charges are made. d. If charges allocated, identify allocation factors used.	4	11	104	9	Miller

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53.53.III.A23	e. Supply the components and amounts comprising the expense in this account. f. Provide details of initial source of charge and reason thereof. Describe costs relative to leasing equipment, computer rentals, and office space, including terms and conditions of the lease. State method for calculating monthly or annual payments.	4	12	104	9	Miller
53.53.III.A24	Submit detailed calculations (or best estimates) of the cost resulting from major storm damage.	4	13	104	9	Miller
53.53.III.A25	Submit details of expenditures for advertising (National and Institutional and Local media). Provide a schedule of advertising expense by major media categories for the test year and the prior two comparable years with respect to: a. Public health and safety b. Conservation of energy c. Explanation of Billing Practices. Rates, etc. d. Provision of factual and objective data programs in educational institutions e. Other advertising programs f. Total advertising expense	4	8	104	6	Miller
53.53.III.A26	Provide a list of reports, data, or statements requested by and submitted to the Commission during and subsequent to the test year.	14	1	114	1	Danhires
53.53.III.A27	Prepare a detailed schedule for the test year showing types of social and service organization memberships paid for by the Company and the cost thereof.	4	14	104	9	Miller
53.53.III.A28	Submit a schedule showing, by major components, the expenditures associated with Outside Services Employed, Regulatory Commission Expenses and Miscellaneous General Expenses, for the test year and prior two comparable years.	4	14	104	9	Miller
53.53.III.A29	Submit details of information covering research and development expenditures, including major projects within the company and forecasted company programs.	4	9	104	7	Miller
53.53.III.A30	Provide a detailed schedule of all charitable and civic contributions by recipient and amount for the test year.	4	15	104	9	Miller
53.53.III.A31	Provide a detailed analysis of Special Services-Account 795.	4	14	104	9	Miller
53.53.III.A32	Provide a detailed analysis of Miscellaneous General Expense-Account No. 801.	4	14	104	9	Miller
53.53.III.A33	Provide a labor productivity schedule.	4	10	104	8	Miller
53.53.III.A34	List and explain all non-recurring abnormal or extraordinary expenses incurred in the test year which will not be present in future years.	4	16	104	9	Miller
53.53.III.A35	List and explain all expenses included in the test year which do not occur yearly but are of a nature that they do occur over an extended period of years. (e.g.,-Non-yearly maintenance programs, etc.) [Responses shall be submitted and identified as exhibits.}	4	16	104	9	Miller
53.53.III.A36	Using the adjusted year's expenses under present rates as a base, give detail necessary for clarification of all expense adjustments. Give clarifying detail for such adjustments that occur due to changes in accounting procedure, such as charging a particular expense to a different account than was used previously. Explain any extraordinary declines in expense due to such change of account use.	4	16	104	9	Miller

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53.53.III.A37	Indicate the expenses that are recorded in the test year, which are due to the placement in operating service of major plant additions or the removal of major plant from operating service, and estimate the expense that will be incurred on a full-year's operation.	4	16	104	9	Miller
53.53.III.A38	Submit a statement of past and anticipated changes, since the previous rate case, in major accounting procedures.	4	16	104	9	Miller
53.53.III.A39	Identify the specific witness for all statements and schedules of revenues, expenses, taxes, property, valuation, etc.	13	3	113	3	Kempic
53.53.III.A40	Adjustments which are estimated shall be fully supported by basic information reasonably necessary.	13	4	113	3	Miller
53.53.III.A41	Submit a statement explaining the derivation of the amounts used for projecting future test year level of operations and submit appropriate schedules supporting the projected test year level of operations.	13	4	113	3	Miller
53.53.III.A42	If a company has separate operating divisions, an income statement must be shown for each division, plus an income statement for company as a whole.	2	6	102	5	Miller
53.53.III.A43	If a company's business extends into different states or jurisdictions, then statements must be shown listing Pennsylvania jurisdictional data, other state data and federal data separately and jointly (Balance sheets and operating accounts)	2	6	102	5	Miller
53.53.III.A44	Ratios, percentages, allocations and averages used in adjustments must be fully supported and identified as to source.	13	4	113	3	Miller
53.53.III.A45	Provide an explanation of any differences between the basis or procedure used in allocations of revenues, expenses, depreciation and taxes in the current rate case and that used in the prior rate case.	13	4	113	3	Miller
53.53.III.A46	Supply a copy of internal and independent audit reports of the test year and prior calendar year, noting any exceptions and recommendations and disposition thereof.	13	4	113	3	Miller
53.53.III.A47	Submit a schedule showing rate of return on facilities allocated to serve wholesale customers.	11		111		Notestone
53.53.III.A48	Provide a copy of the latest capital stock tax report and the latest capital stock tax settlement.	6	3	106	3	Harding
53.53.III.A49	Submit details of calculations for Taxes, Other than Income where a company is assessed taxes for doing business in another state, or on its property located in another state.	6	4	106	3	Harding
53.53.III.A50	Provide a schedule of federal and Pennsylvania taxes, other than income taxes, calculated on the basis of test year per books, pro forma at present rates, and pro forma at proposed rates, to include the following categories: a. social security b. unemployment c. capital stock d. public utility realty e. PUC assessment f. other property g. any other appropriate categories	6	2	106	2	Harding
53.53.III.A51	Submit a schedule showing for the last five years the income tax refunds, plus interest (net of taxes), received from the federal government due to prior years' claims.	7		107		Harding

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53.53.III.A52	Provide detailed computations showing the deferred income taxes derived by using accelerated tax depreciation applicable to post-1969 utility property increases productive capacity, and ADR rates on property. (Separate between state and federal, also rate used).	7		107		Harding
	a. State whether tax depreciation is based on all rate base items claimed as of the end of the test year, and whether it is the annual tax depreciation at the end of the test year. b. Reconcile any difference between the deferred tax balance, as shown as a reduction to measures of value (rate base), and the deferred tax balance as shown on the balance sheet.	7		107		Harding
53.53.III.A53	Submit a schedule showing a breakdown of the deferred income taxes by state and federal per books, pro-forma existing rates, and under proposed rates.	7		107		Harding
53.53.III.A54	Submit a schedule showing a breakdown of accumulated investment tax (credits 3 percent, 4 percent, 7 percent, 10 percent and 11 percent), together with details of methods used to write-off the unamortized balances.	7		107		Harding
53.53.III.A55	Submit a schedule showing the adjustments for taxable net income per books (including below-the-line items) and pro-forma under existing rates, together with an explanation of any difference between the adjustments. Indicate charitable donations and contributions in the tax calculation for rate making purposes.	7		107		Harding
53.53.III.A56	Submit detailed calculations supporting taxable income before state and federal income taxes where the income tax is subject to allocation due to operations in another state, or due to operation of other taxable utility or non-utility business, or by operating divisions or areas.	7		107		Harding
53.53.III.A57	Submit detailed calculations showing the derivation of deferred income taxes for amortization of repair allowance if such policy is followed. [Note: Submit additional schedules if the company has more than one accounting area.]	7		107		Harding
53.53.III.A58	Furnish a breakdown of major items comprising prepaid and deferred income tax charges and other deferred income tax credits and reserves by accounting areas.	7		107		Harding
53.53.III.A59	Provide details of the Federal Surtax Credit allocated to the Pennsylvania jurisdictional area, if applicable.	7		107		Harding
53.53.III.A60	Explain the reason for the use of cost of removal of any retired plant figures in the income tax calculations.	7		107		Harding
53.53.III.A61	Submit the corresponding data applicable to Pennsylvania Corporate Income Tax deferment. a. Show the amounts of straight line tax depreciation and accelerated tax depreciation, the difference between which gave rise to the normalizing tax charged back to the test year operating statement. b. Show normalization for both Federal and State Income Taxes. c. Show tax rates used to calculate tax deferment amount.	7		107		Harding

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53.53.III.A62	Provide the accelerated tax depreciation and the book depreciation used to calculate test year deferrals in amounts segregated as follows: For: a. Property installed prior to 1970. b. Property installed subsequent to 1969 (indicate increasing capacity additions and no increasing capacity additions).	7		107		Harding
53.53.III.A63	State whether all tax savings due to accelerated depreciation on property installed prior to 1970 have been passed through to income. (If not, explain).	7		107		Harding
53.53.III.A64	Show any income tax loss/gain carryovers from previous years that may effect test year income taxes or future year income taxes. Show loss/gain carryovers by years of origin and amounts remaining by years at the end of the test year.	7		107		Harding
53.53.III.A65	State whether the company eliminates any tax savings by the payment of actual interest on construction work in progress not in rate base claim. If response is affirmative: a. Set forth amount of construction claimed in this tax savings reduction. Explain the basis for this amount. b. Explain the manner in which the debt portion of this construction is determined for purposes of the deferral calculations. c. State the interest rate used to calculate interest on this construction debt portion, and the manner in which it is derived. d. Provide details of calculation to determine tax saving reduction. State whether state taxes are increased to reflect the construction interest elimination.	7		107		Harding
53.53.III.A66	Provide a detailed analysis of Taxes Accrued per books as of the test year date. Also supply the basis for the accrual and the amount of taxes accrued monthly.	7		107		Harding
53.53.III.A67	For the test year as recorded on test year operating statement: a. Supply the amount of federal income taxes actually paid. b. Supply the amount of the federal income tax normalizing charge to tax expense due to excess of accelerated tax depreciation over book depreciation. c. Supply the normalizing tax charge to federal income taxes for the 10% Job Development Credit during test year. d. Provide the amount of the credit of federal income taxes due to the amortization or normalizing yearly debit to the reserve for the 10% Job Development Credit. e. Provide the amount of the credit to federal income taxes for the normalizing of any 3% Investment Tax Credit Reserve that may remain on the utility books.	7		107		Harding
53.53.III.A68	Provide the debit and credit in the test year to the Deferred Taxes due to Accelerated Depreciation for federal income tax, and provide the debit and credit for the Job Development Credits (whatever account) for test year.	7		107		Harding

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53.53.III.A69	Reconcile all data given in answers to questions on income taxes charged on the test year operating statement with regard to income taxes paid, income taxes charged because of normalization and credits due to yearly write-offs of past years' income tax deferrals, and from normalization of investment tax and development credits. (Both state and federal income taxes.)	7		107		Harding
53.53.III.A70	With respect to determination of income taxes, federal and state: a. Show income tax results of the annualizing and normalizing adjustments to the test year record before any rate increase. b. Show income taxes for the annualized and normalized test year. c. Show income tax effect of the rate increase requested. d. Show income taxes for the normalized and annualized test year after application of the full rate increase. [It is imperative that continuity exists between the income tax calculations as recorded for the test year and the final income tax calculation under proposed rates. If the company has more than one accounting area, then additional separate worksheets must be provided in addition to those for total company.]	7		107		Harding
53.53.III.A71	In adjusting the test year to an annualized year under present rates, explain any changes that may be due to book or tax depreciation change and to debits and credits to income tax expense due to accelerated depreciation, deferred taxes, job development credits, tax refunds or other items. (The above refers only the adjustments going from recorded test year to annualized test year).	7		107		Harding
53.53.III.E	**53.53.III.BALANCE SHEET AND OPERATING STATEMENT E. GAS UTILITIES**					
53.53.III.E.1	If Unrecovered Fuel Cost policy is implemented, provide the following: a. State manner in which amount of Unrecovered Fuel Cost on balance sheet at the end of the test year was determined, and the month in test year in which such fuel expense was actually incurred. Provide amount of adjustment made on the rate case operating account for test year-end unrecovered fuel cost. (If different than balance sheet amount, explain.) b. Provide amount of Unrecovered Fuel Cost that appeared on the balance sheet at the opening date of the test year, and the manner in which it was determined. State whether this amount is in the test year operating account..	1	18	101		Miller
53.53.III.E.2	Provide details of items and amounts comprising the accounting entries for Deferred Fuel Cost at the beginning and end of the test year.	1	18	101		Miller
53.53.III.E.3	Submit a schedule showing a reconciliation of test year MCF sales and line losses. List all amounts of gas purchased, manufactured and transported.	10	7	110	7	Bell
53.53.III.E.4	Provide detailed calculations substantiating the adjustment to revenues for annualization of changes in number of customers and annualization of changes in volume sold for all customers for the test year. a. Break down changes in number of customers by rate schedules. b. If an annualization adjustment for changes in customers and changes in volume sold is not submitted, please explain.	3		103		Bell
53.53.III.E.5	Submit a schedule showing the sources of gas supply associated with annualized MCF sales.	12	1	112	1	Bell

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53.53.III.E.6	Supply, by classification. Operating Revenues - Miscellaneous for test year	3		103		Bell
53.53.III.E.7	Provide details of respondent's attempts to recover uncollectible and delinquent accounts.	16		116	1	Bell
53.53.III.E.8	Describe how the net billing and gross billing is determined. For example, if the net billing is based on the rate blocks plus FCA and STA, and the gross billing is determined by a percentage increase (1, 3, 5 percent), then state whether the percentage increase is being applied to all three items of revenue - rate blocks plus FCA and STA.	3		103		Bell
53.53.III.E.9	Describe the procedures involved in determining whether forfeited discounts or penalties are applied to customers billing.	3		103		Bell
53.53.III.E.10	Provide annualization of revenues as a result of rate changes occurring during the test year, at the level of operations as of end of the test year.	3		103		Bell
53.53.III.E.11	Provide a detailed billing analysis supporting present and proposed rates by customer classification and/or tariff rate schedule.	3		103		Bell
53.53.III.E.12	Provide a schedule showing residential and commercial heating sales by unit (MCF) per month and degree days for the test year and three preceding twelve month periods.	10	1	110	1	Bartos
53.53.III.E.13	Provide a schedule of present and proposed tariff rates showing dollar change and percent of change by block. Also, provide an explanation of any change in block structure and the reasons therefore.	3		103		Bell
53.53.III.E.14	Provide the following statements and schedules. The schedules and statements for the test year portion should be reconciled with the summary operating statement. a. An operating revenues summary for the test year and the year preceding the test year showing the following (Gas MCF): (i) For each major classification of customers (a) MCF sales (b) Dollar Revenues (c) Forfeited Discounts (Total if not available by classification) (d) Other and Miscellaneous revenues that are to be taken into the utility operating account along with their related costs and expenses. (ii) A detailed explanation of all annualizing and normalizing adjustments showing method utilized and amounts and rates used in calculation to arrive at adjustment. (iii) Segregate, from recorded revenues from the test year, the amount of revenues that are contained therein, by appropriate revenue categories, from: (a) Fuel Adjustment Surcharge (b) State Tax Surcharge (c) Any other surcharge being used to collect revenues. (d) Provide explanations if any of the surcharges are not applicable to respondent's operations. [The schedule should also show number of customers and unit of sales (Mcf), and should provide number of customers by service classification at beginning and end of test year.]	3		103		Bell

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	b. Provide details of sales for resale, based on periods five years before and projections for five years after the test year, and for the test year. List customers, Mcf sold, revenues received, source of Mcf sold (storage gas, pipeline gas, manufactured gas, natural or synthetic), contracted or spot sales, whether sales are to affiliated companies, and any other pertinent information.	3		103		Bell
53.53.III.E.15	State manner in which revenues are being presented for ratemaking purposes: a. Accrued Revenues b. Billed Revenues c. Cash Revenues Provide details of the method followed.	3		103		Bell
53.53.III.E.16	If revenue accruing entries are made on the books at end of each fiscal period, give entries made accordingly at the end of the test year and at the beginning of the year. State whether they are reversed for ratemaking purposes.	2	7	102	6	Miller
53.53.III.E.17	State whether any adjustments have been made to expenses in order to present such expenses on a basis comparable to the manner in which revenues are presented in this proceeding (i.e.- accrued, billed or cash).	4	1	104	1	Miller
53.53.III.E.18	If the utility has a Fuel Adjustment Clause: a. State the base fuel cost per MCF chargeable against basic customers' rates during the test year. If there was any change in this basic fuel charge during the test year, give details and explanation thereof. b. State the amount in which the fuel adjustment clause cost per MCF exceeds the fuel cost per MCF charged in base rates at the end of the test year. c. If fuel cost deferment is used at the end of the test year, give (i) The amount of deferred fuel cost contained in the operating statement that was deferred from the 12-month operating period immediately preceding the test year. (ii) The amount of deferred fuel cost that was removed from the test period and deferred to the period immediately following the test year. d. State the amount of Fuel Adjustment Clause revenues credited to the test year operating account. e. State the amount of fuel cost charged to the operating expense account in the test year which is the basis of Fuel Adjustment Clause billings to customers in that year. Provide summary details of this charge f. From the recorded test year operating account, remove the Fuel Adjustment Clause Revenues. Also remove from the test year recorded operating account the excess of fuel cost over base rate fuel charges, which is the basis for the Fuel Adjustment charges. Explain any differences between FAC Revenues and excess fuel costs. [The above is intended to limit the operating account to existing customers' base rate revenues and expense deductions relative thereto].	12	2	112	2	Bell
53.53.III.E.19	Provide growth patterns of usage and customer numbers per rate class, using historical and projected data.	10	2	110	2	Bartos
53.53.III.E.20	Provide, for test year only, a schedule by tariff rates and by service classifications showing proposed increase and percent of increase.	3		103		Bell

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53.53.III.E.21	If a gas company is affiliated with another utility segment, such as a water or electric segment, explain the effects, if any, upon allocation factors used in the gas rate filing of current or recent rate increases allowed to the other utility segment (or segments) of the company.	2	8	102	7	Miller
53.53.III.E.22	Provide supporting data detailing curtailment adjustments, procedures and policies.	10	3	110	3	Bell
53.53.III.E.23	Submit a schedule showing fuel cost in excess of base compared to fuel cost recovery for the period two months prior to test year and the test year	12	3	112	2	Bell
53.53.III.E.24	Supply a detailed analysis of Purchased Gas for the test year and the twelve month period prior to the test year.	12	4	112	2	Bell
53.53.III.E.25	Submit calculations supporting energy cost per MCF and operating ratio used to determine increase in costs other than production to serve additional load.	12	4	112	2	Bell
53.53.III.E.26	Submit detailed calculations for bulk gas transmission service costs under supply and/or interconnection agreements.	12	4	112	2	Bell
53.53.III.E.27	Submit a schedule for gas producing units retired or scheduled for retirement subsequent to the test year showing station, units, MCF capacity, hours of operation during test year, net output produced and cents/MCF of maintenance and fuel expenses.	13	6	113	4	Shultz
53.53.III.E.28	Provide a statement explaining the details of firm gas purchase (long-term) contracts with affiliated and nonaffiliated utilities, including determination of costs, terms of contract, and other pertinent information.	17		117		Bell
53.53.III.E.29	Provide intrastate operations percentages by expense categories for two years prior to the test year.	4	17	104	9	Miller
53.53.III.E.30	Provide a schedule showing suppliers, MCF purchased, cost (small purchases from independent suppliers may be grouped); emergency purchases, listing same information; curtailments during the year; gas put into and taken out of storage; line loss, and any other gas input or output not in the ordinary course of business.	12	4	112	2	Bell
53.53.III.E.31	Provide a schedule showing the determination of the fuel costs included in the base cost of fuel.	12	5	112	2	Bell
53.53.III.E.32	Provide a schedule showing the calculation of any deferred fuel costs shown in Account 174. Also, explain the accounting, with supporting detail, for any associated income taxes.	1	19	101		Miller
53.53.III.E.33	Submit a schedule showing maintenance expenses, gross plant and the relation of maintenance expenses thereto as follows. (i) Gas Production Maintenance Expenses per MCF production, per $1,000 MCF production, and per $1,000 of Gross Production Plant; (ii) Transmission Maintenance Expenses per MMCF mile and per $1,000 of Gross Transmission Plant; (iii) Distribution Maintenance Expenses per customer and per $1,000 of Gross Distribution Plant; (iv) Storage Maintenance Expenses per MMCF of Storage Capacity and per $1,000 of Gross Storage Plant. This schedule shall include three years prior to the test year, the test year and one year's projection beyond the test year.	4	18	104	9	Miller
53.53.III.E.34	Prepare a 3-column schedule of expenses, as described below for the following periods (supply sub-accounts, if significant, to clarify basic accounts): a. Column 1 - Test Year b. Column 2 and 3 - The two previous years	4	3 19	104	3	Miller

Columbia Gas of Pennsylvania, Inc.
Docket No. R-2021-3024296
Referenced by Commission Regulations

Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
	Provide the annual recorded expense by accounts. (Identify all accounts used but not specifically listed below.)					
53.53.III.E.35	Submit a schedule showing the Gross Receipts Tax Base used in computing Pennsylvania Gross Receipts Tax Adjustment.	6	1	106	1	Harding
53.53.III.E.36	State the amount of gas, in MCF, obtained through various suppliers in past years.	12	4	112	2	Bell
53.53.III.E.37	In determining pro forma expense, exclude cost of gas adjustments applicable to fuel adjustment clause and exclude fuel adjustment clause revenues, so that the operating statement is on the basis of base rates only.	3		103		Bell
53.53.III.E.38	Identify company's policy with respect to replacing customers lost through attrition.	10	4	110	4	Bell
53.53.III.E.39	Identify procedures developed to govern relationship between the respondent and potential customers - i.e., basically expansion, alternate energy requirements, availability of supply, availability of distribution facilities, ownership of metering and related facilities.	10	4	110	4	Danhires
53.53.IV.B	**53.53.IV. RATE STRUCTURE** **B. GAS UTILITIES** Each gas utility shall submit the following simultaneously with any rate increase filing:					
53.53.IV.B.1	Provide a Cost of Service Study showing the rate of return under the present and proposed tariffs for all customer classifications. The study should include a summary of the allocated measures of value, operating revenues, operating expenses and net return for each of the customer classifications at original cost and at the 5-year trended original cost.	11		111	1 - 3	Notestone
53.53.IV.B.2	Provide a statement of testimony describing the complete methodology of the cost of service study.	11		111		Notestone
53.53.IV.B.3	Provide a complete description and back-up calculations for all allocation factors.	11		111	4	Notestone
53.53.IV.B.4	Provide an exhibit for each customer classification showing the following data for the test year and the four previous years: a. The maximum coincident peak day demand. b. The maximum coincident 3-day peak day demand. c. The average monthly consumption in Mcf during the Primary Heating Season (November-March). d. The average monthly consumption in Mcf during the Non-heating season (April-October). e. The average daily consumption in Mcf for each 12-month period	10	5	110	5	Bartos
53.53.IV.B.5	Submit a Bill Frequency Analysis for each rate. The analysis should include the rate schedule and block interval, the number of bills at each interval, the cumulative number of bills at each interval, the Mcf or therms at each interval, the cumulative Mcf or therms at each interval, the accumulation of Mcf or therms passing through each interval, and the revenue at each interval for both the present rate and the proposed rates. The analysis should show only those revenues collected from the basic tariff.	11		111		Bell
53.53.IV.B.6	Supply copies of all present and proposed Gas Tariffs.	14	2	114	1	Danhires
53.53.IV.B.7	Supply a graph of present and proposed base rates on hyperbolic cross section paper.	11		111	5	Bell

Columbia Gas of Pennsylvania, Inc.
Docket No. R-2021-3024296
Referenced by Commission Regulations

Commission Regulation Number	Commission Regulation	Historic Test Year Twelve Months Ended November 30, 2020 Exhibit	Schedule	Fully Projected Future Test Year Twelve Months Ended December 31, 2022 Exhibit	Schedule	Witness
53.53.IV.B.8	Supply a map showing the Gas System Facilities and Gas Service Areas. The map should include transmission lines, distribution lines, other companies' lines interconnecting with the interconnecting points clearly designated, major compressor stations, gas storage and gas storage lines. The normal direction of gas flow within the transmission system should be indicated by arrows. Separate service areas within the system should be clearly designated.	15	2	115		Danhires
53.53.IV.B.9	Supply a cost analysis supporting minimum charges for all rate schedules.	11		111	2 - 3	Notestone
53.53.IV.B.10	Supply a cost analysis supporting demand charges for all tariffs which contain demand charges.	11		111		Notestone
53.53.IV.B.11	Supply the net fuel clause adjustment by month for the test year.	12	6	112	2	Bell
53.53.IV.B.12	Supply a tabulation of base rate bills for each rate schedule comparing the existing rates to proposed rates. The tabulation should show the dollar difference and the per cent increase or decrease.	11		111	6	Bell
53.53.IV.B.13	Submit the projected demands for all customer classes for both purchased and produced gas for the three years following the test year filing.	10	6	110	6	Bartos
53.53.IV.B.14	Supply an exhibit showing the gas deliveries to each customer class for the most recent 24 month period. The exhibit should identify the source of the gas, such as "purchased" (pipeline), "production" (include purchases from local producers), "storage withdrawal", "propane/air", and "unaccounted for".	10	7	110	7	Bell
53.62	**53.62 RECOVERY OF FUEL COSTS BY GAS UTILITIES** In addition to information otherwise required to be filed by a jurisdictional natural gas distributor with gross intrastate annual operating revenues in excess of $40 million seeking a change in its base rates, each gas utility must also file updates to the information required by &53.64(c) (relating to filing requirements for natural gas distributors with gross intrastate annual operating revenues in excess of $40 million). In the case of a utility purchasing gas as defined at &53..61 (a) (relating to purpose) from an affiliated interest, it shall also file updates to the information required at &53.65 (relating to special provisions relating to natural gas distributors with gross interstate annual operating revenues in excess of $40 million with affiliated interests). These updates shall be made at the time the base rate case under 66 Pa.C.S. 1308 (relating to voluntary changes in rates) is originally filed. Deficiencies in filing will be treated as set forth at &53.51 (c) (relating to general).					
	Weather Normalization Adjustment	10	8	110	8	Bartos
	Volumetric Portion of Load Growth Adjustment	10	9	110	9	Bartos
	Estimated Number of Bills and Normalized Sales Volumes	10	9	110	9	Bartos
	Future Test Year Sales Forecast	10	9	110	10	Bartos
	Adjustment to Purchase Gas Expense	12	7	112	3	Bell
	Recovery of Fuel Costs by Gas Utilities (1307-F)	12	8	112	4	Bell

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

40. Adjustments which are estimated shall be fully supported by basic information reasonably necessary.

Response: All adjustments made were based on annualizing and normalizing the 12 months ended November 30, 2020. The derivation and support behind the adjustments are shown on the following exhibits:

Exhibit No. 2	Income Statement
Exhibit No. 3	Revenues
Exhibit No. 4	Expenses
Exhibit No. 5	Depreciation
Exhibit No. 6	Taxes Other Than Income Taxes
Exhibit No. 7	Income Taxes
Exhibit No. 8	Measures of Value

41. Submit a statement explaining the derivation of the amounts used for projecting future test year level of operations and submit appropriate schedules supporting the projected test year level of operations.

Response: Exhibits explaining the derivation of the amounts used for projecting a future test year (12 months ending November 30, 2021) and a fully projected future test year (12 months ended December 31, 2022) are:

Exhibit No. 102	Income Statement
Exhibit No. 103	Revenues
Exhibit No. 104	Expenses
Exhibit No. 105	Depreciation
Exhibit No. 106	Taxes Other Than Income Taxes
Exhibit No. 107	Income Taxes
Exhibit No. 108	Measures of Value

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

44. Ratios, percentages, allocations and averages used in adjustments must be fully supported and identified as to source.

Response: When allocation factors are used, they are identified on the appropriate exhibit.

45. Provide an explanation of any differences between the basis or procedure used in allocations of revenues, expenses, depreciation and taxes in the current rate case and that used in the prior rate case.

Response: There are no differences.

46. Supply a copy of internal and independent audit reports of the test year and prior calendar year, noting any exceptions and recommendations and disposition thereof.

Response: Please see Exhibit 13, Schedule 4 Attachment A for copies of internal audits. There were no independent audit reports performed specifically for Columbia Gas of Pennsylvania during the test year and prior calendar year.

Columbia Gas of Pennsylvania
Internal Audit Report Listing
For the 2 Year Period Ending November 30, 2020

No.	Date of Report	Audit
1	12/13/18	Customer Communication Consultative Memo
2	01/08/19	PowerPlant Upgrade SDLC (Test & Deploy Phases)
3	02/13/19	NiSource Capitalization Audit
4	03/06/19	Inside and Inaccessible Meter and Pipeline Inspection Follow-Up - CKY, CVA, CPA, and CMD
5	03/11/19	2018 Abnormal Operating Conditions (AOC) - Columbia Gas of Pennsylvanie & Maryland
6	03/11/19	Meter Barrier Protection - NGD
7	03/12/19	Procure-To-Pay SDLC - Core Release 1 (Design & Build Phases)
8	05/06/19	NiSource Corporate Services Company Cost Allocation Audit
9	06/19/19	Corporate Credit Cards Expense Review & Analytics (2018 Annual Report)
10	06/19/19	NiSource Officer Expense Review
11	09/11/19	2019 Disaster Recovery
12	09/20/19	2018 Pension Trust & Benefits
13	09/25/19	Abandonment of Service Line Facilities
14	10/08/19	Robotics Process Automation (RPA) Design
15	02/24/20	Emergency Preparedness and Response Plan Audit (NiSource)
16	03/03/20	Odorization Monitoring Process / Documentation (Columbia Gas Distribution Companies)
17	03/03/20	Cross Bore Identification & Remediation(NiSource Gas Distribution Companies)
18	03/05/20	Software Asset Management Design – Advisory Memo
19	03/12/20	SMS Mitigation Proposal Plan Audit
20	04/17/20	Planning IT Migration – Advisory Memo
21	05/15/20	2020 Tie-In Audit
22	07/28/20	NiSource Officer Expense Audit
23	07/28/20	Employee Expense Audit & Analytics (2019 Annual Period)
24	07/28/20	IT Modernization – Human Capital Management SDLC (Design and Build Phases)
25	07/29/20	2019 Pension Benefit Follow Up
26	07/30/20	2019 Pension Trust and Benefits (NiSource)
27	11/01/20	Cyber - Vulnerability Management Advisory Memo
A	09/20/19	Priveleged & Confidential - NTSB Report (Attorney-Client Privilege)
B	09/30/19	Columbia Low Pressure System Safety Enhancements (Attorney-Client Privilege)
C	02/04/20	2019 SCADA IT General Computer Controls Design (Attorney-Client Privilege)

TO: *Ann Ruff, Director Corporate Communications*
Royce Workman, Director Customer Experience Strategy

FROM: **Internal Audit**

DATE: *December 13, 2018*

SUBJECT: **Consultative Review Re: Customer Notifications/Communications**

Internal Audit performed a consultative review over customer notifications/communications efforts (referred to herein as "communications") for Columbia Gas of Virginia ("CGV"), Columbia Gas of Pennsylvania ("CPA"), and Columbia Gas of Maryland ("CMD"). The review focused on identifying the various communications that occur both prior and/or subsequent to work being performed on a customer's premise by NiSource employees or third party contractors.

(Note: The original scope of work included the evaluation of customer communication efforts across the NiSource organization to provide insight and compare and contrast each jurisdiction's communication efforts. However, the work of the audit team was re-directed due to the Merrimack Valley incident and all states were not able to be covered in our work).

Approach/Methodology

Internal Audit performed interviews with 32 employees across the following departments; Communications, Operations, Capital Construction, Engineering, Integration Center, and Compliance.

In an attempt to capture the communication efforts occurring in each respective company, Internal Audit utilized these interviews to summarize communication activities identified by interviewees. (Note: No additional verification procedures were performed to validate the implementation or execution of the specific activities identified.)

Results

Please see accompanying schedule which summarizes the communication efforts for CGV (Page 2) and CPA/CMD (Page 3). The summary contains the following fields:

- Subject - Activities or topics of communication
- Why – Reason for the communication
- Location – Company location in which the communication method is utilized
- Expected Frequency – How often the communication should occur
- Departments Involved – Listing of involved departments
- Type of Communication – Form used (i.e. door hanger, letter)
- Special Requirements – General notes (i.e. commission driven)

In addition, Internal Audit provided a summary (Page 4) of key comments made from individuals during the interview process.

Subject	Why	Location	Expected Frequency	Departments Involved in Communication	Type of Communication	Special Requirements
			CGV			
AOC Communications	Inform Customers an AOC Inspection occurred and potentially remediation required.	All 3 Op Centers	Door Hanger - Operations, excluding System Ops Letter - All remediation work	IC, Operations	**Door Hanger** - Left after AOC inspection **Letter** - Sent out by IC for remediation work	Door hangers driven by state commission. System Ops would have difficulties completing work if they tagged every house.
Construction	Communicate work related to relocation, betterment, and replacement of main and service lines.	All 3 Op Centers	Completed on a JO basis	Construction Department and Communications	**Postcard** - Sent typically 1 month before work **Factsheet/FAQ/Restoration Info Letter** - Sent ~1-2 weeks before work **Door Hanger** - Left a couple days before work begins **Social Media** - If large project will target zip code with communication	
Major Projects	Initial communication of upcoming work to those impacted by it.	All 3 Op Centers	Any work that impacts traffic around project	Major Projects, Communications	**Door Hanger** - Left with business card of project manager. **Town Hall** - While rare (5 or 6 last 5 years not just CGV) if there are road closures will set up a town hall meeting to discuss purpose and plans	
GPS	Informs Customers what the collection process looks like.	All 3 Op Centers	Work Dependent	Communications	**Social Media** - Targeted Facebook posts showing video of GPS data collection	
Crossbore	Informs customers about the process	All 3 Op Centers	Work Dependent	Communications, Operations	**Letter** - Sent explaining process and directs to website which shows contractor work **Door Hanger** - Based on municipalities, will leave door hanger with contactors contact information during the initial work	
Leak Inspectors	Informing customer we need access to our system so will be installing a gate on fence	All 3 Op Centers	Ad Hoc, rare	Communications	**Letter** - Provides information	
Right of Way	What to expect when in your area, importance of clearing.	All 3 Op Centers	Ad Hoc	Communications	**Social Media** - Targeted Facebook posts **Email** - Provides information **Bill** - Insert Provides information **Customer Newsletter** - Spot in quarterly letter	
Meter Access	Asking them to trim plants or we can do it. Result of AOC Inspection finding.	All 3 Op Centers	All VAAOCD (CGV AOC Job Type Code) JOs	IC	**Letter** - Part of the process under AOC Communications.	
Customer Contact	All employees working on a premise for typically over ~5-10 minutes will try to make contact with the customer before or after work explaining what is going on	All 3 Op Centers	Informal every JO	All in the field	Informal knock on the door (process just started)	
Abandonment	Informing customer at premise that the service will be abandoned	All 3 Op Centers	Abandonment JOs completed by the Construction Group under Operations	Construction Department	Door Hanger	
Field Audits & QA/QC on Utility Tickets	Letting the customer know of audit work	All 3 Op Centers	Review work done by other departments and line locators	Damage Prevention	Verbal communication to the customer	
Propane Communication	Communication required for maintenance work done every 3 years	All 3 Op Centers	For two propane subdivisions every three years	System Operations	**Letter** - Same letter on file is utilized	
Leakage access	Leakage inspections for condos and homes that we do not have access to perform leakage inspections.	All 3 Op Centers	When access is needed	System Operations	Phone or Letters can be sent	
Engineering	Site visits when planning work with the customer	All 3 Op Centers	Job specific	Engineering	**Verbal** - No formal communication	
New Business	New Business has a defined process with multiple client contact points, however once work is scheduled the communication process for Home Owners (i.e. not developers or builders) would follow the construction process outlined above.					
Shutoff for both failure to pay and SOII (Service Order for Inaccessible Inspection)/CGI (Couldn't Get In)	Each operating center has a defined communication process that generally includes phone calls, letters, and door hangers which are usually driven by state and local municipality requirements.					

	Legend
Subject:	Activities or topics of communication
Why :	Reason for the communication
Location:	Company location in which the communication method is utilized
Expected Frequency:	How often the communication should occur
Departments Involved:	Listing of involved departments
Type of Communication:	Form used (i.e. door hanger, letter)
Special Requirements:	General notes (i.e. commission driven)

CPA/CMD						
Subject	**Why**	**Location**	**Expected Frequency**	**Departments Involved in Communication**	**Type of Communication**	**Special Requirements**
Construction (Infrastructure Replacement Program)	Communicate work related to capital construction work	All Op Centers	Completed on a JO basis	Construction Department and Communications	**Door Hanger** - Left on the door of houses **Letter** - Communication Team will send letter for larger projects **Door Hanger for Infrastructure Replacement** - Hangers that explain process, including restoration **CPA ONLY 30 Day Notice Letter** - For all meter move outs, hand delivered **72 Hour Notice Door Hanger** - Notice that gas will be shut off	Tariff Requirement on 30 day notice 72 Hour Notice creates Log that communication was made for state commission All communication by construction coordinator includes their business card
Major Projects	Initial communication of upcoming work to those impacted by it.	All Op Centers	Any work that impacts traffic around project	Major Projects, Communications	**Door Hanger** - Left with business card of project manager. **Town Hall** - While rare (5 or 6 last 5 years not just CPA/CMD) if there are road closures will set up a town hall meeting to discuss purpose and plans	
GPS	Informs Customers what the collection process looks like.	All Op Centers	Periodic	Communications	**Letter** - PSID Driven **Door Hanger** - Has been used, gives number to call center and GPS Website	
Meter Protection (currently on hold with plans to resume)	Communication that was left at the customers site saying it was 3 days before we would be back	PA North 2017 and PA South	Work Dependent	Contractors	**Letter** - Sent explaining process **Door Hanger** - Contractor driven with their name and number of when they will perform work	Regulatory Recommendation
Riser Replacement	Informing customer of upcoming riser replacement, total of 26k risers to replace, multi-year program	PA East	Work Dependent	Operations Communications	**Letter** - Typically goes out ~2 weeks before work Call - Precision Pipeline will call to schedule	
Farm Tap Inspections	Letter informing them of upcoming inspections	All Op Centers	Work Dependent	Operations Communications	**Letter**	
Outage/Dig In/Reconnection	Depending on issue communication to the public is made	All Op Centers	Event driven	Communications	**Social Media** **Door Hanger - On reconnects** **Customer Email**	
Leak Repair	Communication to schedule leak repair	PA East	Job specific	Operations	**Verbal or Door Hanger** - Will go out and communicate with customer to schedule a time to work or leave a door hanger, at a minimum they have to give 3 days	3 day rule commission driven
Engineering	Site visits when planning work with the customer	All Op Centers	Job specific	Engineering	**Verbal** - No formal communication	
Locates	Communication may be required if the locator needs to go inside	PA East	Locate specific	Operations	**Door Hanger** - Will be left if they need access to the inside of the house to finish locate.	Informal and manual
Scattered Services	Communication on plant work on new or replacement services	PA East	Based on the JO	Operations	Employee will access situation leave no parking where applicable and talk with the customer or leave card	
Shutoff for both failure to pay and SOII (Service Order for Inaccessible Inspection)/CGI (Couldn't Get In)	Each operating center has a defined communication process that generally includes phone calls, letters, and door hangers which are usually driven by state and local municipality requirements.					

	Legend
Subject:	Activities or topics of communication
Why :	Reason for the communication
Location:	Company location in which the communication method is utilized
Expected Frequency:	How often the communication should occur
Departments Involved:	Listing of involved departments
Type of Communication:	Form used (i.e. door hanger, letter)
Special Requirements:	General notes (i.e. commission driven)

Note:	Comments below were made from individuals during the interview process. Internal Audit summarized the information to provide further perspective on customer communication activities.

All	"For shut offs we do not have a form/door hanger that says we tried to shut off your gas today please call back. This could potentially increase bill payments as people realize someone actually was here to shut off service as oppose to notices received."

CGV	"On scattered new service and replacements we communicate to the customer that is getting the service line (Construction Communication Flow). There are situations where the main may be on the other side of the street and we are required to dig in the yard of the customer not receiving the new line and they will not receive any form of communication. It would be a challenge to identify these instances."
CGV	"In some areas of CGV South they previously used trifold signs in areas that had outages."
CGV	"Customers have brought up cases where they had an AOC and a Leak. Work on them were at separate times and since there is an AOC communication process they were informed of that work but not the grade 2 or 2+ even though that generally digs up more of a customers lawn."

CPA	"There is a large amount of door hangers (rough estimate ~25) that could be narrowed down. Door hangers in question relate to the normal scenarios Operations and Construction run into while at customers premise (i.e. Need access to relight, CGI, Meter Access, Nobody Home)."
CPA	"Streamline the shutoff tags, a lot of tags for the different scenarios, maybe have fewer tags with checkbox."
CPA	"If the field was aware of what the IC was sending and vice versa. Also if the call center was aware of all the communication."

PowerPlant Upgrade SDLC - Test & Deploy Phases

To: Jennifer Tipton, VP – Enterprise Applications
Walt Wojcik, Director – IT Applications
Steve Brown, Program Manager - IT Applications

From: John Manfreda, Project Manager - Infor. Systems Audit
Greg Wancheck, Director - Infor. Systems Audit

January 8, 2019

NiSource IT Audit conducted our PowerPlant Upgrade SDLC assessment for the project's Test & Deploy phases between July 2018 and November 2018 to provide an independent perspective around ongoing project governance, delivery service activities and inclusion of relevant solution control considerations. This Test and Deploy phase analysis was directly preceded by IT Audit's PowerPlant Upgrade SDLC - Design & Build phase review that was released in July 2018 and provided a perspective on the project's earlier phase gate activities. This review is IT Audit's second (and final) project SDLC review for the NiSource PowerPlant Upgrade project.

IT Audit's PowerPlant Upgrade SDLC - Test & Deploy phase assessment noted the following:

- **The PowerPlant Upgrade project team implemented and executed appropriate solution-based controls for the Test and Deploy phases to address project delivery risk.**

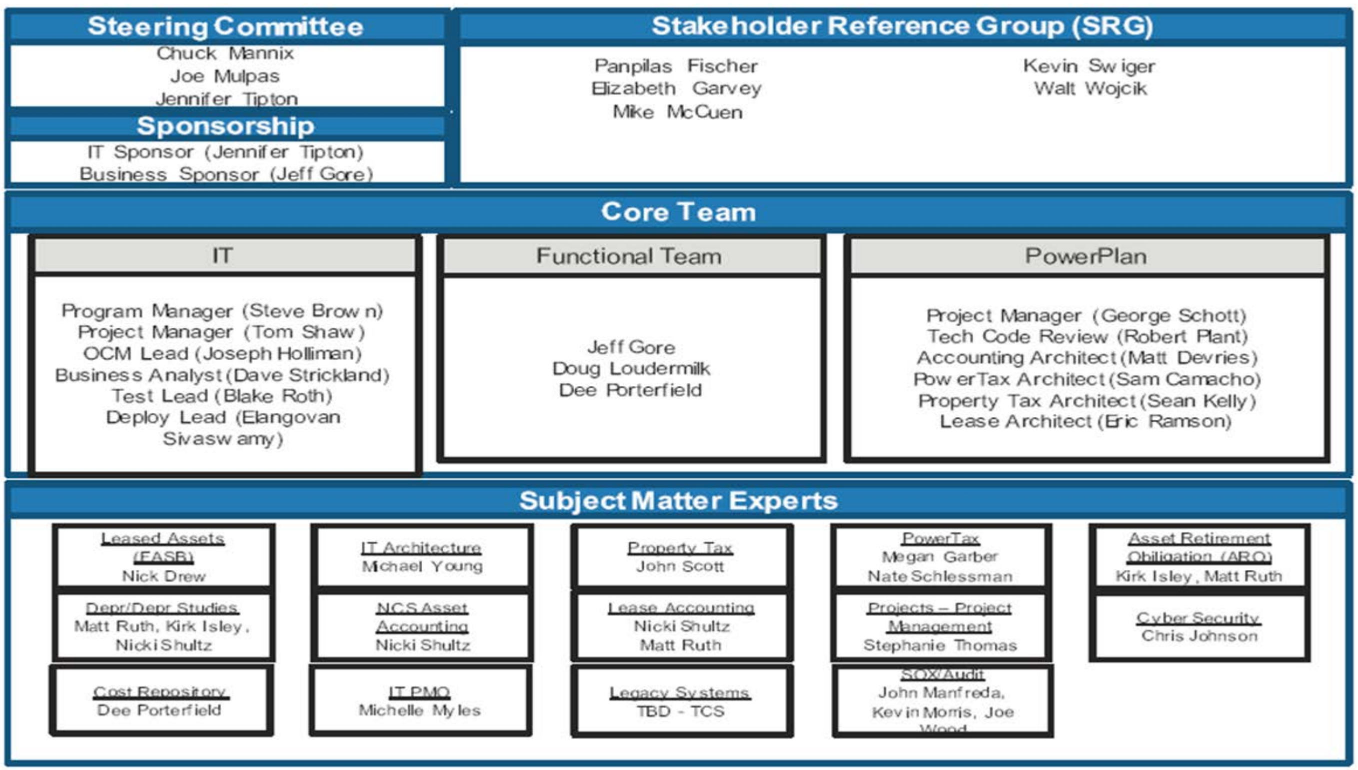
- **Sarbanes Oxley Act (SOX) control considerations were included as part of both PowerPlant Upgrade and Lease Module application testing and deployment, including appropriate engagement of related NiSource assurance personnel.**

- **The PowerPlant Upgrade project team performed appropriate activities to deploy project deliverables within both agreed-to time and quality objectives.**

This audit conforms with the International Standards for the Professional Practice of Internal Auditing, whereby a summary of HIGH and/or MODERATE findings will be provided to the NiSource Audit Committee. NiSource IT Audit would like to thank both IT and Finance/Accounting management for their cooperation and time in support of this effort.

Beginning in November 2017, NiSource commenced an initiative to upgrade the enterprise's application version of Powerplant that currently enables functional Asset Management and Corporate Tax process execution. In addition, NiSource concurrently deployed an upgrade to the PowerPlant Asset and Tax system in November 2018 to maintain system currency and enable Power Plant's new Lease Accounting suite to support new FASB (Financial Accounting Standards Board) lease accounting mandates which go into effect starting January 1, 2019.

The PowerPlant Upgrade initiative incorporated the following project team structure to perform ongoing project management and delivery activities.



Audit Scope and Approach

For testing purposes, IT Audit reviewed the following:

- Governance standards enablement and adherence
- Delivery model execution
- IT SOX control identification and engagement

IT Audit additionally attended regular project status and governance meetings along with having as-required meetings with relevant personnel over the course of the review period.

Objective 1: **Review NiSource PowerPlant Upgrade program delivery-based controls to provide a perspective on organizational risk inherent in project delivery.**		
#	**Procedures**	**Findings Summary (Refer to Appendix A for rating scale)**
1	Assess whether project scope, cost and schedule controls continue to operate and comply with NiSource's IT Project Management Methodology (PMM).	**No Findings Noted**
2	Assess whether project quality controls over solution conformance to requirements are operating as designed.	**No Findings Noted**
3	Assess whether controls over communications and stakeholder alignment are operating as designed.	**No Findings Noted**
4	Review on-going project user acceptance, approval activities, third-party service provider management, and deployment plans/activities (where applicable) to provide reasonable assurance NiSource corporate policy and/or program standards are followed.	**No Findings Noted**

Audit Scope and Approach (cont'd)

Objective 2: Review NiSource PowerPlant Upgrade program solution-based controls to provide a perspective on any nonconformance risks associated with corporate control requirements.		
#	**Procedures**	**Findings Summary (Refer to Appendix A for rating scale)**
1	Assess whether business process controls (automated and manual) were included in testing and deployment processes for the NiSource PowerPlant Upgrade project with relevant stakeholder engagement on fit for use status.	**No Findings Noted**
2	Assess whether interface controls were considered and included in the test and deployment processes for the NiSource PowerPlant Upgrade project with relevant testing results documentation and stakeholder engagement on fit for use status.	**No Findings Noted**
3	Assess on-going NiSource enterprise IT change management compliance for the NiSource PowerPlant Upgrade project.	**No Findings Noted**
Objective 3: Review overall NiSource PowerPlant Upgrade project team conduct in helping to achieve project objectives.		
#	**Procedures**	**Findings Summary (Refer to Appendix A for rating scale)**
1	Monitor on-going integration, alignment and communications between the NiSource PowerPlant Upgrade Project Team, IT Project Management Office (PMO), Third-Party Providers and Business Stakeholders to provide feedback on both project approach and process execution during the review period.	**No Findings Noted**

Report Distribution

Appendix A

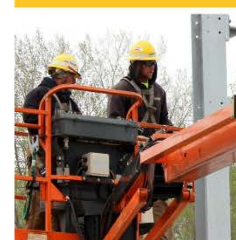
Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.</u>*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.</u>*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *<u>Internal Audit does not perform follow-up review procedures on low risk findings.</u>*

NiSource Capitalization Audit

February 13, 2019

To: Matt Ruth, Manager Asset Accounting (Columbia Companies)
Kirk Isley, Manager Asset Accounting (NIPSCO)

From: Shelley Duling, Senior Auditor
Natalie Ladd, Lead Auditor
Jaclyn Callahan, Manager Internal Audit
Ryan Binkley, Director Internal Audit



NiSource®

Executive Summary

Internal Audit performed a review for all NiSource companies to determine whether capital additions during the audit period adhered to the Plant/Fixed Asset Capitalization Policy issued on January 1, 2017 and the Software Capitalization Policy updated on July 1, 2016.

Audit Procedure:
For a sample of ***60*** selections, determine that the expense is properly classified as capital in accordance with the Plant/Fixed Asset Capitalization Policy and the Software Capitalization Policy.

Summary Conclusions:

Internal Audit randomly selected ***60*** additions to capital for the period January 1, 2017 through May 31, 2018 spread across all NiSource companies based on their proportionate share of total additions. Internal Audit reviewed support for each selection (invoice, work order system support, etc.) and verified that the amount was properly capitalized. Internal Audit identified 1 Low Risk recommendation for management as a result of our procedures as noted below:

- Internal Audit identified ***3*** instances where items were improperly capitalized; however, the total amount of the exceptions was deemed immaterial (less than ***$10,000***). Further there were no identifiable trends related to the exceptions as they were spread across various states (Kentucky and Pennsylvania) and cost elements (other materials and supplies, meters and instrumentation, etc.). Internal Audit classified this audit finding as ***low*** and issued the following recommendation:

  Recommendation: Fixed Asset Accounting Management should consider reinforcing capitalization policies; however, even with reinforcement, there is some inherent risk of inaccurate interpretation of the policies by the employees coding or approving expense transactions that may result in items being improperly capitalized or expensed.

Audit Scope and Approach

Internal Audit performed a review to determine whether capital additions during the audit period adhered to the Plant/Fixed Asset Capitalization Policy issued on January 1, 2017 in addition to the Software Capitalization Policy updated on July 1, 2016 for all NiSource Companies.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. Internal Audit would like to thank Accounting staff and management for their cooperation and time in support of this follow-up review.

Objective 1: Determine that expenses are properly classified as capital in accordance with capitalization policies.		
#	**Procedures**	**Findings Summary** **(Refer to Appendix A for rating scale)**
1	For a sample of 60 capital additions, determine that the expense is properly classified as capital in accordance with the Plant/Fixed Asset Capitalization Policy or Software Capitalization Policy.	**Finding #1** **See Slide #4**

Findings

Objective #1, Procedure #1: For a sample of ***60*** capital additions, determine that the expense is properly classified as capital in accordance with the Plant/Fixed Asset Capitalization Policy or Software Capitalization Policy.	**Risk Rating**
Finding #1: There were ***3*** selections that were improperly capitalized in accordance with capitalization policies; however, the total amount of these instances was deemed immaterial (less than ***$10,000***). The exceptions were spread across various states and expense types.	**Low**

Process Owner: Asset Accounting Managers

Executive Council Member Responsible: Donald Brown, Executive Vice President and Chief Financial Officer

Observation

Criteria: Expenses should be classified as capital when the purchased items meet the capitalization criteria as outlined in the Plant/Fixed Asset Capitalization policy issued on January 1, 2017 or the Software Capitalization Policy updated on July 1 2016.

Condition: Internal Audit selected a sample of ***60*** capital additions for the period January 1, 2017 through May 31, 2018 spread across all NiSource companies based on their proportionate share of the total capital additions. There were ***3*** instances that were improperly capitalized in accordance with policy. These instances were deemed immaterial (less than ***$10,000***) and were spread across various states (Kentucky and Pennsylvania) and cost elements (meters and instrumentation, other materials and supplies, etc.) as such there were no trends identified related to the exceptions.

Risk/Impact: Financial statements could be misstated if items are improperly classified as capital or operating and maintenance expense.

Recommendation

Fixed Asset Accounting Management should reinforce capitalization policies; however, even with reinforcement, there is an inherent risk of inaccurate interpretation of the policies by the employees coding or approving expense transactions that could result in items being improperly capitalized or expensed.

Management Response

Not Required for Low Risk Findings

Report Distribution

CC:

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Inside and Inaccessible Meter and Pipeline Inspection Follow-Up - CKY, CVA, CPA and CMD

March 6, 2019

To: All NiSource Gas Distribution Presidents
All NiSource Gas Distribution General Managers
Kimra Cole, VP Distribution Operations

From: Shelley Duling, Senior Auditor
Jaclyn Callahan, Manager Internal Audit
Ryan Binkley, Director Internal Audit

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Executive Summary

The Columbia Companies perform inspections for both atmospheric corrosion and leakage simultaneously for process efficiency. As such, the frequency of inspections must align with the shortest cycle outlined within the Department of Transportation (DOT) regulation (Code of Federal Regulations, Title 49, Section 192: Subpart I (*Requirement for Corrosion Control*) and Subpart M (*Maintenance*)). In addition, required frequency of performing inspections (meeting the cycle timeframe for both atmospheric corrosion and leakage) on inside and inaccessible meter sets and pipelines is based on whether the site is located in a business district or a non-business district.

See the chart below which outlines the required cycle timeframes:

Business District	Non-Business District
Once each calendar year (not to exceed 15 months)	Once every 3 years (not to exceed 39 months)

As part of a review performed in 2018, Internal Audit issued *a* ***moderate*** risk audit finding related to non-compliance with inside and inaccessible meter and pipeline inspections for Columbia Gas of Virginia (CVA), Columbia Gas of Kentucky (CKY), Columbia Gas of Pennsylvania (CPA) and Columbia Gas of Maryland (CMD). The recommended action item and result of Internal Audit's testing are summarized below (continued on ***Slide 3***):

2018 Audit Finding: As a December 31, 2017, there were non-compliant inside and inaccessible meter and pipeline inspections at CVA, CKY, CPA and CMD.

Recommendation: Integration Center Management in collaboration with Operations should develop a plan and process to address the non-compliant locations at CVA, CKY, CPA and CMD and ensure ongoing compliance of all inside and inaccessible meters and pipelines.

Executive Summary (Cont'd)

Internal Audit Conclusion: A summary of a COGNOS dashboard* created by the Integration Center to monitor non-compliant inside and inaccessible meters and pipelines is provided to Integration Center and Operations management on a weekly basis for CVA, CKY, CPA, and CMD. Internal Audit reviewed the dashboard data provided by Integration Center management as of December 26, 2018 and compared the number of non-compliant accounts to the amounts previously reported as of December 31, 2017. Internal Audit noted that CVA was in full compliance with inside and inaccessible meter and pipeline inspections as of December 26, 2018. Refer to the table below for the status of the remaining companies:

		12/31/2017		12/26/2018	
	# of Accounts Requiring Inspection (1)	# of Non-Compliant Accounts	%	# of Non-Compliant Accounts	%
CPA	66,294	3,061	4.6%	820	1.2%
CKY	10,164	1,494	14.7%	807	7.9%
CMD	6,033	475	7.9%	129	2.1%

(1) There was not a significant fluctuation in the number of accounts requiring inspection for the two time periods reviewed. As such, Internal Audit used the December 31, 2017 amounts for the percentage calculations in the table.

Given the reduction in non-compliant accounts and monitoring procedures in place, Internal Audit considers that the ***action plan has been adequately addressed by Integration Center and Operations Management***. As such, Internal Audit will close the prior finding. No additional findings were noted during the review.

*Internal Audit did not verify the criteria of the COGNOS dashboard as part of this review; however, through corroboration with Integration Center management, it was confirmed that the report was generated using the same criteria that is used for the COH dashboard, which was verified by Internal Audit as part of the COH Inside and Inaccessible Meter and Pipeline Inspection Review performed in 2017.

Audit Scope and Approach

Internal Audit has completed audit procedures to follow-up on ***1*** moderate risk audit finding identified as part of an audit performed in 2018 related to inside and inaccessible meter and pipeline inspections at COH and the other NiSource Companies using DIS. Internal Audit verified that the non-compliant inspections at CVA, CKY, CPA and CMD have been resolved and Integration Center Management is monitoring ongoing compliance.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. Internal Audit would like to thank the Integration Center and Operations staff and management for their cooperation and time in support of this follow-up review.

Objective 1: Determine that inside and inaccessible meter and pipeline inspections are performed timely for Columbia Gas of Virginia (CVA), Columbia Gas of Kentucky (CKY), Columbia Gas of Pennsylvania (CPA) and Columbia Gas of Maryland (CMD).		
#	**Procedures**	**Findings Summary (Refer to Appendix A)**
1	Verify that non-compliant inside and inaccessible meter and pipeline inspections at CVA, CKY, CPA and CMD have been addressed along with a monitoring process to ensure ongoing compliance	**No Findings noted.**

Report Distribution

CC:

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- S.K. Surface
- D.T. Williamson
- M. Downing
- N. Drew
- S. J. Jain
- K.H. Cole
- S. Anderson
- G. Shoemaker
- Deloitte & Touche, LLP

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

2018 Abnormal Operating Conditions (AOC) - Columbia Gas of Pennsylvania and Maryland

March 11, 2019

To: All NiSource Gas Distribution Presidents
All NiSource Gas Distribution General Managers
K. H. Cole, VP Distribution Operations

From: L. Black, Senior Internal Auditor
C. Marlatt, Lead Auditor
J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

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Executive Summary

Internal Audit conducted a review of the processes and controls in place for Columbia Gas of Pennsylvania (CPA) and Columbia Gas of Maryland (CMD) to identify Abnormal Operating Conditions (AOC), recorded through the use of the NiSource Field Application Survey Tool (NiFAST), and to ensure identified AOCs are remediated within timeframes set forth by management and/or in accordance with regulatory requirements.

The focus of the review was to ensure that AOCs identified from January 1 to December 31, 2017 properly interfaced from NiFAST into the Work Management System (WMS) or the appropriate system report as designed by NiFast Programming Rules*. Additionally, Internal Audit will verify that appropriate job orders are created and completed to remediate AOCs identified based on results of leakage and corrosion inspections.

Summary Conclusions:

As a result of our procedures, it appears that the NiFast application is functioning as designed and NiFast survey data is properly interfacing to WMS or the appropriate system report (i.e. Exception Report or Further Action Needed (FAN) Report).

Internal Audit identified **1 High Risk** audit finding related to the remediation of identified encroachments as follows:

- Formal policies, processes and procedures have not been established and implemented to ensure the risk-based resolution of encroachments (over both main and service lines) in a timely manner.
    - **Recommendation:** As determining resolution of encroachment AOCs involves input from various departments, NiSource Management should form cross–functional teams to develop policies and procedures for resolving identified encroachments in a manner which adequately defines appropriate timelines to address the associated safety and compliance risks. Roles and responsibilities should be defined for each department involved.

      Note: *Internal Audit previously conducted a review on COH processes in addition to this current CPA & CMD review, resulting in a similar finding specific to encroachments. As was noted in the previous finding, Internal Audit recommends that NiSource management develop and implement a consistent process across* ***all NiSource Gas Companies****.*

    - **Management Response:** Management will adopt the encroachment process that was implemented in Ohio during Q1 2018 across all states by the end of Q4 2019. This is a process that assigns clear roles and responsibilities for the process, develops a prioritized list of encroachments with time and cost estimates, and provides a consistent process across NiSource.

* During the period of January 1, 2017 – December 31, 2017, programming changes were made within NiFast to align with three (3) versions of the NiFast Programming Rules. Additionally, Internal Audit noted that a subsequent version was created in May 2018. To complete this review, Internal Audit utilized the criteria set forth in the NiFast Programming Rules effective in the application as of November 18, 2017.

Executive Summary

Summary Conclusions (Cont'd):

Internal Audit identified **2 Moderate Risk** audit findings related to the remediation of AOCs as follows:

- Formal policies, processes and procedures have not been established to address AOCs identified on customer-owned service lines for **CPA**.
  - **Recommendation:** As communicating and addressing AOCs on customer-owned service lines (reported on the Customer Notification List) involves input from various departments, CPA Management should form cross–functional teams to develop risk-based policies and procedures for addressing these types of AOCs. Roles and responsibilities should be defined for each department involved.

    Note: *CPA is the only NiSource Gas Company with customer-owned service lines.*

  - **Management Response:** Management and IT will be submitting a RIT for the April IT demand meeting to notify customer through automated process. This process will entail Identifying a customer in NiFAST and sends a communication in letter format that notifies them to take certain actions. The solution will be linked to NiFAST: When a customer is identified, letter needs to be triggered. After letter is sent, it needs documented and recorded as such in NiFAST. This IT solution will be in place by the end of the 3rd quarter.

    This change in process will be used when the condition is not deemed to be hazardous. In addition to the IT automated notification, Management will also be putting together a cross-functional team consisting of Regulatory, Legal, Compliance, System Operations and the Integration Center to design the appropriate communication message for any possible AOC on a customer owned service line.

- Internal Audit identified certain process gaps regarding the mitigation of AOC's. These gaps have been consolidated into one recommendation as follows:
  - Formal policies, processes and procedures have not been established and implemented to ensure the resolution of "Possible Theft of Gas/Vandalism" AOCs in a timely manner
  - Based on progress to-date, AOCs sent to the Further Action Needed (FAN) Report** may not be incorporated into current and future work plans to ensure compliance with established commit dates; AND
  - Based on progress to-date, AOCs sent to the Exception Report** may not be incorporated into current and future work plans
  - Formal processes to address the impact of go-forward programming changes on non-remediated populations of previously identified AOCs have not been established

** While the scope of this review was limited to AOCs identified during 2017, Internal Audit noted that the recommendation below would apply to all outstanding AOCs identified since the inception of NiFast at CPA/CMD in 2015.

Executive Summary

Summary Conclusions (Cont'd):

Moderate risk audit findings – Cont'd:

- **Recommendation:** IC Management and NiSource Gas Operations across the various states should work together to ensure resolution of identified "Possible Theft of Gas/Vandalism" AOCs in a manner which adequately addresses the associated safety and compliance risks. Roles and responsibilities should be defined for each department involved. While this review focused on CPA & CMD, Internal Audit recommends that NiSource Management develop and implement a consistent process across **all NiSource Gas Companies**.

- **Management Response:** NiSource Management agreed with the need to develop a NiSource-wide strategic approach to risk-ranking and remediating AOCs.

  NiSource Management agrees to utilize the SMS framework and process to evaluate and rank risk identified AOCs. The SMS team, working with compliance and standards, will recommend appropriate changes to Gas Standards that incorporate a common view of compliance requirements for AOCs. By end of Q2 2020 the AOCs will be ranked and included in the risk register.

  In addition, NiFast AOC data is not currently available in the data warehouse, creating challenges and risks to visibility and management of this body of work. This process will require an IT solution to be completed to get data out of NiFast into the data warehouse for additional reporting requirements to align with other systems, i.e. WMS, DIS, Maximo, CIS. The required IT solution will be presented at the March Demand meeting with a delivery date of the solution by end of Q4 2019.

  Once the analysis of the work and the priority is established, a plan will be developed to work backlog and maintain compliance in the future.

  A new IT solution was installed at the end of December 2018 that automatically generates a WMS work order for Level 0 AOCs identified in NiFast. This new tool was put into use in mid-January. In addition the Integration Center has implement a process where all Level 0 exceptions are verified or escalated appropriately to assure they are worked. The coordinators will verify that an order was worked for the Level 0 or they will escalate to the appropriate ops scheduling leader. This will be documented on each occurrence in NiFast so that we have an audit trail.

** While the scope of this review was limited to AOCs identified during 2017, Internal Audit noted that the recommendation below would apply to all outstanding AOCs identified since the inception of NiFast at CPA/CMD in 2015.

Background

CPA and CMD implemented NiFast, a survey application tool, in February and April 2015, respectively, to replace the legacy paper based process of conducting and documenting leak inspections in the field. Additionally, the NiFast application allows for the systematic identification and tracking of abnormal operating conditions (AOCs) identified during the course of the inspection. The Code of Federal Regulations, Title 49, Section 192: Subpart I (*Requirements for Corrosion Control*) defines an abnormal operating condition as a condition identified by the operator that may indicate a malfunction of a component or deviation from normal operations that may: (a) indicate a condition exceeding design limits; or (b) result in a hazard(s) to persons, property, or the environment.

To complete an inspection, NiFAST prompts the inspectors to answer standard questions to confirm or deny the existence of AOCs. The answers to each survey question are recorded within NiFast and transmitted to WMS nightly. The NiFAST application is programmed according to criteria set forth in the NiFast Programming Rules created by CPA/CMD Field Operations & Compliance and maintained by Technology and Application Support. Based on the types of AOCs identified during the inspection process, the NiFast application is programmed to classify remediation work into the following four (4) categories:

1. Automatic WMS Job Order: Certain AOCs identified will result in the systematic creation of a WMS job order wherein the target date and commit date are assigned to ensure timely remediation of the identified AOC and the charge code is set to ensure the proper allocation of associated costs (i.e. operating vs. capital).

2. Further Action Needed (FAN): Specific types of AOCs are sent to the FAN Report and are assigned target dates and commit dates as set forth in the NiFAST Programming Rules; however, work orders are manually scheduled by the Integration Center based on location work load availability and timeframes set by management.

3. Exception Report: NiFAST sends certain AOCs to the Exception List as Integration Center associates must apply judgement to determine the necessary next steps for remediation of the identified AOCs.

> NOTE: Exception Report items are not assigned target dates and commit dates as the types of AOCs assigned to this report should represent conditions that may not have the same path to resolution and require judgement.

4. Customer Notification List: AOCs identified on customer-owned service lines are also recorded within NiFAST; however only leaks have a formal communication process established. If there is a leak identified on a customer-owned service line, a post card will be sent to the customer and a Distributive Information System (DIS) order will be manually created for a service technician to follow up and ensure repairs were completed.

* Field personnel other than Leakage Inspectors may still identify AOCs during the course of their work; however as they do not have access to the NiFAST application, they are instructed to report an AOC to the Integration Center through the MDT system, phone call, or manual paper form.

Internal Audit reviewed the processes and controls in place for Columbia Gas of Pennsylvania (CPA) & Columbia Gas of Maryland's (CMD) identification of Abnormal Operating Conditions (AOC), recorded through the use of the NiSource Field Application Survey Tool (NiFAST), to ensure identified AOCs are remediated within timeframes set forth by management and/or in accordance with regulatory requirements. Internal Audit reviewed AOCs identified from January 1 to December 31, 2017 to ensure that the AOCs properly interfaced from NiFAST into WMS. Additionally, Internal Audit verified that appropriate job orders were created and completed based on the inspection results.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. Internal Audit would like to thank the Integration Center and Field and System Operations staff and management for their cooperation and time in support of this follow-up review.

Objective 1: Review the monitoring processes and controls over the AOC population to ensure the AOCs identified are properly addressed and WMS job orders were executed in accordance with CPA/CMD requirements.

#	Procedures	Findings Summary (Refer to Appendix A)
1	Review CPA/CMD survey data generated from NiFAST for the period January 1, 2017 - December 31, 2017 to verify that AOCs identified properly interfaced to WMS or the appropriate system report (i.e. FAN Report, Exception Report, or Customer Notification List) in accordance with the criteria outlined in the applicable* NiFAST Programming Rules.	**No Findings Noted.**
2	Verify that job orders created automatically in WMS as a result of AOCs identified in NiFast were completed within the commit dates established within the NiFAST Programming Rules.	**No Findings Noted.**
3	Review the processes in place to notify customers of identified AOCs on customer-owned service lines (i.e. Customer Notification List).	**Finding #1 - See page 6**
4	Analyze the population of AOCs sent to the FAN Report to determine whether they have been remediated in accordance with the NiFAST Programming Rules.	**Finding #2 – See pages 8-12**
5	Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with the NiFAST Programming Rules.	**Finding #2 – See pages 8-12** **Finding #3 – See page 13**

* During the period of January 1, 2017 – December 31, 2017, programming changes were made within NiFast to align with three (3) versions of the NiFast Programming Rules. Additionally, Internal Audit noted that a subsequent version was created in May 2018. To complete this review, Internal Audit utilized the criteria set forth in the NiFast Programming Rules effective in the application as of November 18, 2017.

Findings

Objective 1, Procedure #3: Review the processes in place to notify customers of identified AOCs on customer-owned service lines (i.e. Customer Notification List).	**Risk Rating**
Finding #1: Formal policies, processes and procedures have not been established to address AOCs identified on customer-owned service lines for CPA.	**Moderate #1**
Process Owner(s): Michael Davidson, VP & GM CPA/CMD, Kimra Cole, VP Distribution Operations **Executive Council Member(s) Responsible:** Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]	**Target Remediation Date** **Q3 2019**

Observation:

Criteria: Customers are notified of AOCs identified on their service lines.

Condition: AOCs identified on customer-owned service lines in CPA are recorded on the Customer Notification List. Per discussion with the Integration Center, consistent processes have not been established to ensure that customers are notified of all identified AOCs on their lines.

Note: Per discussion with the Integration Center, only identified leaks are communicated to customers via postcard.

Risk/Impact: Customers may not be aware of and may not remediate AOCs on customer-owned service lines, which could pose a risk to public safety or asset integrity.

Recommendation: As communicating and addressing AOCs on customer-owned service lines (reported on the Customer Notification List) involves input from various departments, CPA Management should form cross–functional teams to develop risk-based policies and procedures for addressing these types of AOCs. Roles and responsibilities should be defined for each department involved.

Management Response: Management and IT will be submitting a RIT for the April IT demand meeting to notify customer through automated process. This process will entail Identifying a customer in NiFAST and sends a communication in letter format that notifies them to take certain actions. The solution will be linked to NiFAST: When a customer is identified, letter needs to be triggered. After letter is sent, it needs documented and recorded as such in NiFAST. This IT solution will be in place by the end of the 3rd quarter.

This change in process will be used when the condition is not deemed to be hazardous. In addition to the IT automated notification, Management will also be putting together a cross-functional team consisting of Regulatory, Legal, Compliance, System Operations and the Integration Center to design the appropriate communication message for any possible AOC on a customer owned service line.

Findings (Cont'd)

Objective 1, Procedure #4: Analyze the population of AOCs sent to the FAN Report to determine whether they have been remediated in accordance with the NiFast Programming Rules.	**Risk Rating**
Finding: Based on progress to-date, AOCs sent to the Further Action Needed (FAN) Report may not be incorporated into current and future work plans to ensure compliance with established commit dates.	**Moderate #2** **(See Page 12)**

Process Owner(s): All Presidents and General Managers & Kimra Cole, VP Distribution Operations

Executive Council Members: Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]

Observation:

Criteria: AOCs sent to the FAN Report are remediated in accordance with the timeframes set forth in the NiFast Programming Rules.

Condition: Internal Audit obtained a listing of all AOCs sent to the FAN Report during 2017 (based on programming in place at the time the AOC was identified within NiFast). Using the commit dates set forth in the NiFast Programming Rules (effective in the application as of November 18, 2017), Internal Audit noted that all but 1 of the FAN Report AOCs will not be required to be remediated until 2022 (i.e. 5 years from the date of identification).

Internal Audit compared the number of FAN Report AOCs ***identified*** to the number of FAN Report AOCs ***worked*** (as of the date of the query pull as of July 26, 2018), noting that the majority of the population have not been remediated. (Refer to **Appendix B** for the types of 2017 AOCs sent to the FAN.)

2017 FAN Report AOCs			
	# Identified	# Worked	% Worked
CPA	4,777	7	0.1%
CMD	499	-	0.0%

Risk/Impact: The work plan may not currently incorporate FAN Report AOCs that require remediation in future years to ensure compliance with established commit dates.

Note: AOCs will continue to be identified through additional inspections performed in the following years. Additionally, once a location with an outstanding AOCs comes upon its next inspection cycle (either a 1 year or 3 year period), there is a risk of duplicate identification.

Recommendation: Since the number of AOCs could increase over time as additional inspections are performed, Field Operations, System Operations, the Integration Center, and Planning should continue to assess the risk related with each AOC type and develop a risk-based work plan to ensure remediation of both FAN Report AOCs in accordance with established commit dates.

Internal Audit identified certain process gaps regarding the mitigation of AOCs as noted on slides 8-11. These gaps have been consolidated into one overall moderate finding and management has responded with an overall strategic approach as noted on slide 12.

Management Response: Refer to ***page 12*** as NiSource Management is providing a strategic plan to address this risk at enterprise level.

Findings (Cont'd)

Objective 1, Procedure #5: Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with NiFAST Programming Rules.	**Risk Rating**
Finding: Based on progress to-date, AOCs sent to the Exception Report may not be incorporated into current and future work plans.	**Moderate #2** (See Page 12)

Process Owner(s): All Presidents and General Managers & Kimra Cole, VP Distribution Operations

Executive Council Members: Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]

Observation:

Criteria: The workload created as a result of identified AOCs that are sent to the Exception Report is adequately monitored and managed.

Condition: Internal Audit obtained a listing of all AOCs sent to the Exception Report during 2017 (based on programming in place at the time the AOC was identified within NiFast).

Note: Exception Report items require judgement to resolve and do not have assigned commit dates within the NiFast Programming Rules.

Internal Audit compared the number of FAN Report AOCs ***identified*** to the number of FAN Report AOCs ***worked*** (as of the date of the query pull as of July 26, 2018), noting that the majority of the population have not been remediated. (Refer to **Appendix C** for further detail of the types of AOCs sent to the Exception Report during 2017.)

2017 Exception Report AOCs			
	# Identified	# Worked	% Worked
CPA	131,036	661	0.5%
CMD	2,992	-	0.0%

Risk/Impact: The work plan may not currently incorporate Exception Report AOCs that require remediation.

Recommendation: Since the number of AOCs could increase over time as additional inspections are performed, Field Operations, System Operations, the Integration Center, and Planning should continue to assess the risk related with each AOC type and develop a risk-based work plan to ensure timely remediation.

Internal Audit identified certain process gaps regarding the mitigation of AOC's as noted on slides 8-11. These gaps have been consolidated into one overall moderate finding and management has responded with an overall strategic approach as noted on slide 12.

Management Response: Refer to ***page 12*** as NiSource Management is providing a strategic plan to address this risk at enterprise level.

Findings (Cont'd)

Objective 1, Procedure #5: Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with NiFAST Programming Rules.	**Risk Rating**
Finding: Formal processes to address the impact of go-forward programming changes on non-remediated populations of previously identified AOCs have not been established.	**Moderate #2** **(See Page 12)**

Process Owner(s): All Presidents and General Managers & Kimra Cole, VP Distribution Operations

Executive Council Members: Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]

Observation:

Criteria: Programming changes are made to ensure alignment with changes to the NiFast Programming Rules and existing AOC populations are assessed for the impact of the change.

Condition: During the period of January 1, 2017 – December 31, 2017, programming changes were made 3 times to align with changes made to the NiFast Programming Rules.

Upon review of the various versions of the NiFast Programming Rules, Internal Audit noted that changes within the Programming rules pertained to:

- Re-classifying certain AOCs within the four remediation categories (i.e. Automatic WMS Job Order, FAN Report, Exception Report, and Customer Notification List)
- Adding additional drop down options to provide more detail about specific AOCs
- Adjusting commit date timeframes

However, as programming changes are made on a go forward basis, Internal Audit inquired about how populations of previously identified AOCs would be addressed, noting that formal processes to assess the impact and make necessary adjustments to ensure alignment with current NiFast Programming Rules have not been established.

Please see **Appendix D** for examples of the risks created as a result of programming changes.

Risk/Impact: AOCs identified prior to programming changes may not be worked within commit dates established in the current NiFAST Programming Rules or duplicate efforts may occur to resolve identified AOCs.

Recommendation: When programing changes are made to NiFast, the impact of changes to the existing population of AOCs should be considered.

Internal Audit identified certain process gaps regarding the mitigation of AOC's as noted on slides 8-11. These gaps have been consolidated into one overall moderate finding and management has responded with an overall strategic approach as noted on slide 12.

Management Response: Refer to ***page 12*** as NiSource Management is providing a strategic plan to address this risk at enterprise level.

Findings (Cont'd)

Objective 1, Procedure #5: Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with NiFAST Programming Rules.	**Risk Rating**
Finding: Formal policies, processes and procedures have not been established and implemented to ensure the resolution of "Possible Theft of Gas/Vandalism" AOCs in a timely manner.	**Moderate #2** **(See Page 12)**

Process Owner(s): All Presidents and General Managers & Kimra Cole, VP Distribution Operations

Executive Council Members: Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]

Observation:

Criteria: Policies, processes, and procedures have been implemented to ensure the timely resolution of identified "Possible Theft of Gas/Vandalism" AOCs.

Condition: Per discussion with the Integration Center, Internal Audit noted that "Possible Theft of Gas/Vandalism" AOCs identified through NiFast do not have clearly defined processes and controls to ensure resolution.

- During 2017, CPA/CMD identified 9 "Possible Theft of Gas/Vandalism" AOCs within NiFast; however, 6 of the 9 did not have a service order created to resolve the AOC at the time of testing. Per discussion with IC Management, similar populations exist for the other NiSource Gas Companies utilizing NiFast.

Risk/Impact: The Company may not be adequately addressing "Possible Theft of Gas/Vandalism" AOCs, which could pose a risk to public safety or asset integrity.

Recommendation: IC Management and NiSource Gas Operations across the various states should work together to ensure resolution of identified "Possible Theft of Gas/Vandalism" AOCs in a manner which adequately addresses the associated safety and compliance risks. Roles and responsibilities should be defined for each department involved.

Note: While this review focused on CPA & CMD, Internal Audit recommends that NiSource Management develop and implement a consistent process across **all NiSource Gas Companies**. Field Operations, System Operations, the Integration Center, and Planning should continue to assess the risk related with each AOC type and develop a risk-based work plan to ensure timely remediation.

Internal Audit identified certain process gaps regarding the mitigation of AOC's as noted on slides 8-11. These gaps have been consolidated into one overall moderate finding and management has responded with an overall strategic approach as noted on slide 12.

Findings (Cont'd)

Objective 1, Procedure #5: Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with NiFAST Programming Rules.	**Risk Rating**
Finding: Formal policies, processes and procedures have not been established and implemented to ensure the resolution of "Possible Theft of Gas/Vandalism" AOCs in a timely manner.	**Moderate #2**
Process Owner(s): All Presidents and General Managers & Kimra Cole, VP Distribution Operations **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities [Operations] & Donald Brown, EVP & Chief Financial Officer [IT]	**Target Remediation Date** **Q2 2020**

Overall Strategic Management Response:

NiSource Management agreed with the need to develop a NiSource-wide strategic approach to risk-ranking and remediating AOCs.

NiSource Management agrees to utilize the SMS framework and process to evaluate and rank risk identified AOCs. The SMS team, working with compliance and standards, will recommend appropriate changes to Gas Standards that incorporate a common view of compliance requirements for AOCs. By end of Q2 2020 the AOCs will be ranked and included in the risk register.

In addition, NiFast AOC data is not currently available in the data warehouse, creating challenges and risks to visibility and management of this body of work. This process will require an IT solution to be completed to get data out of NiFast into the data warehouse for additional reporting requirements to align with other systems, i.e. WMS, DIS, Maximo, CIS. The required IT solution will be presented at the March Demand meeting with a delivery date of the solution by end of Q4 2019.

Once the analysis of the work and the priority is established, a plan will be developed to work backlog and maintain compliance in the future.

A new IT solution was installed at the end of December 2018 that automatically generates a WMS work order for Level 0 AOCs identified in NiFast. This new tool was put into use in mid-January. In addition the Integration Center has implement a process where all Level 0 exceptions are verified or escalated appropriately to assure they are worked. The coordinators will verify that an order was worked for the Level 0 or they will escalate to the appropriate ops scheduling leader. This will be documented on each occurrence in NiFast so that we have an audit trail.

Findings (Cont'd)

Objective 1, Procedure #5: Analyze and sample the population of AOCs sent to the Exception Report to determine whether they have been remediated in accordance with NiFAST Programming Rules.	**Risk Rating**
Finding #3: Formal policies, processes and procedures have not been established and implemented to ensure the risk-based resolution of encroachments (over both main and service lines) in a timely manner.	**High**
Process Owner(s): All General Managers & Kimra Cole, VP Distribution Operations **Executive Council Member Responsible:** Pablo Vegas, Chief Operating Officer	**Target Remediation Date:** **Q4 2019**

Observation:

Criteria: Policies, processes, and procedures have been implemented to ensure the timely resolution of identified encroachment AOCs.

Condition: Per discussion with Legal, Operations, Land and Survey, and the Integration Center, Internal Audit noted that formal and consistent policies, processes and procedures have not been implemented to ensure the resolution of all encroachments (i.e. both main and service line) AOCs in a timely manner.

- During 2017, CPA/CMD identified 109 encroachments over service lines within NiFast; however, none of the identified AOCs are shown as resolved in the system at the time of testing.
    - Per discussion with various members of NiSource Management across the Integration Center, Operations, Land and Survey and Legal, similar populations (including both main line and service line encroachments) exist for the other NiSource Gas Companies utilizing NiFast and processes to resolve these items is not risk-based and consistent.

Risk/Impact: The Company may not be adequately addressing encroachments, which could pose a risk to public safety or asset integrity.

Recommendation: As determining resolution of encroachment AOCs involves input from various departments, NiSource Management should form cross–functional teams to develop policies and procedures for resolving identified encroachments in a manner which adequately defines appropriate timelines to address the associated safety and compliance risks. Roles and responsibilities should be defined for each department involved.

Note: Internal Audit previously conducted a review on COH processes in addition to this current CPA & CMD review, resulting in a similar finding specific to encroachments. As was noted in the previous finding, Internal Audit recommends that NiSource Management develop and implement a consistent process across **all NiSource Gas Companies**.

Management Response: Management will adopt the encroachment process that was implemented in Ohio during Q1 2018 across all states by the end of Q4 2019. This is a process that assigns clear roles and responsibilities for the process, develops a prioritized list of encroachments with time and cost estimates, and provides a consistent process across NiSource.

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

2017 FAN Report AOCs - # Identified vs. # Worked

FAN Report AOCs - CMD				
Type of AOC	**# Identified**	**%**	**# Worked**	**%**
Metallic Riser Not Sleeved	493	98.8%	0	0.0%
Improper Regulator Vent near Electric Source	6	1.2%	0	0.0%
Total CMD Exception List AOCs - 2017	**499**	100.0%	**0**	0.0%

FAN Report AOCs - CPA				
Type of AOC	**# Identified**	**%**	**# Worked**	**%**
Meter Protection	5	0.1%	0	**0.0%**
Inadequate Meter Support	12	0.3%	0	**0.0%**
Buried Meter	30	0.6%	0	**0.0%**
Buried Meter Inlet Riser	2	0.0%	0	**0.0%**
Improper Regulator Vent Termination	233	4.9%	0	**0.0%**
Improper Regulator Vent by Forced Air Opening	26	0.5%	0	**0.0%**
Improper Regulator Vent near Electric Source	1,516	31.7%	**5**	**0.3%**
Metallic Riser Not Sleeved	1,492	31.2%	**2**	**0.1%**
Paint Meter Set	1,455	30.5%	0	**0.0%**
Damaged Coating	5	0.1%	0	**0.0%**
Pipeline Markers	1	0.0%	0	**0.0%**
Total CPA Exception List AOCs - 2017	**4,777**	99.0%	7	**0.1%**

2017 Exception Report AOCs - # Identified vs. # Worked

Exception Report AOCs - CMD				
Type of AOC	**# Identified**	**%**	**# Worked**	**%**
Field Assembled Riser	2,445	81.7%	0	0.0%
Exposed Service Line*	2	0.1%	0	0.0%
Damaged Coating*	10	0.3%	0	0.0%
Improper Regulator Vent near Electric Source*	25	0.8%	0	0.0%
Paint Meter Set*	510	17.0%	0	0.0%
Total CMD Exception List AOCs - 2017	**2,992**	100.0%	**0**	0.0%

Exception Report AOCs - CPA				
Type of AOC	**# Identified**	**%**	**# Worked**	**%**
Atmospheric Corrosion	670	0.5%	0	0.0%
Field Assembled Riser	36,539	27.9%	0	0.0%
Possible Theft of Gas or Vandalism	9	0.0%	0	0.0%
Encroachments	109	0.1%	0	0.0%
Buried Meter Inlet Riser*	2,857	2.2%	0	0.0%
Damaged Coating*	1,090	0.8%	0	0.0%
Exposed Service Line*	124	0.1%	0	0.0%
Improper Regulator Vent near Electric Source*	3,051	2.3%	**6**	**0.2%**
Metallic Riser Not Sleeved*	3,823	2.9%	0	0.0%
Meter Protection*	1,736	1.3%	0	0.0%
Paint Meter*	81,028	61.8%	**655**	**0.8%**
Total CPA Exception List AOCs - 2017	**131,036**	100.0%	**661**	**0.5%**

* Programming logic based on the version of the NiFast Programming rules in place at the time these AOCs were identified, required that these AOCs be sent to the Exception Report. In the last 2017 version and the current 2018 NiFAST Programming Rules, these AOCs are now directed to have an automatic WMS job order created or will be sent to the FAN Report with an established commit date. (Note: AOCs on customer-owned service lines will go to the Customer Notification list.) Refer to **Appendix D** for further information.

Risks Created Due to NiFast Programming Changes

During 2017, programming changes were implemented that changed the remediation category for several types of AOCs that had originally been programmed to go to the Exception Report.

- The first change moved AOCs that were originally going to the Exception Report with no defined commit date to the creation of an automatic WMS Job Order with an established commit date (all the items below moved to a 60 month time frame). Internal Audit noted that 9,642 AOCs created in 2017 would need to be adjusted to adhere to the subsequent programming changes. It does not appear that processes have been established to address how to handle this population of AOCs to ensure alignment with new NiFast Programming Rules.

2017 Exception Report AOCs Now Going to WMS Job Order (CPA/CMD)	
Type of AOC	**# Identified**
Buried Meter Inlet Riser	2,857
Damaged Coating	1,100
Exposed Service Line	126
Metallic Riser Not Sleeved	3,823
Meter Protection	1,736
TOTAL 2017	9,642

- The second change moved AOCs that were originally going to the Exception Report with no defined commit date to the FAN Report with an established commit date. Internal Audit noted that 84,614 AOCs created in 2017 would need to be adjusted to adhere to subsequent programming changes. It does not appear that processes have been established to address how to handle this population of AOCs to ensure alignment with new NiFast Programming Rules.

2017 Exception Report AOCs Now Going to FAN Report (CPA/CMD)	
Improper Regulator Vent near Electric Source	3,076
Paint Meter	81,538
TOTAL 2017	84,614

Internal Audit noted that programming changes create the following risks specific to the population of AOCs existing prior to the date of the change:

- If a new commit date has been established, previously identified AOCs may not be addressed within the proper timeframe as they will still be attached to old programming criteria.
- If the subsequent inspection occurs before the previously identified FAN report AOC is resolved, a WMS job order could be auto-created, creating the possibility of duplicate efforts to resolve the same AOC once the Integration Center manually releases the first AOC from the FAN Report.

Meter Barrier Protection - NiSource Gas Distribution Companies

March 11, 2019

To: All NiSource Gas Distribution Presidents
All Nisource Gas Distribution General Managers
K. H. Cole, VP Distribution Operations

From: L. Black, Senior Internal Auditor
J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

NiSource®

Executive Summary

Internal Audit conducted a review of the processes and controls across the NiSource Gas Distribution Companies to ensure that residential and small commercial meters at risk of vehicular damage were protected in accordance with applicable Gas Standards for the audit period of September 1, 2016 through September 1, 2018.

The review focused on the processes and controls in place to assess the need for meter protection for both existing meters as well as new or replaced meters. Additionally, Internal Audit reviewed the population of damages to meters for the audit period to assess whether meters damaged by vehicles were subsequently protected after the initial damage.

Summary Conclusions:

Internal Audit identified **2 moderate risk** audit findings* related to ensuring that there are processes established to include identified abnormal operating conditions (AOCs) in work plans to ensure timely resolution:

- Based on progress to-date, Meter Protection AOCs may not be incorporated into current and future work plans to ensure compliance with established commit dates.
    - **Recommendation:** Since the number of all types of AOCs could increase over time as additional inspections are performed, Field and System Operations, the Integration Center, and Planning should work together (identifying clear roles and responsibilities) to assess the risk related with each AOC type, including Meter Protection, and develop a risk-based work plan to ensure remediation of identified AOCs in accordance with established processes and commit dates.
    - **Management Response:** Management agrees to utilize the SMS framework and process to evaluate and rank risk identified AOCs, including Meter Protection. The SMS team, working with Compliance and Standards, will recommend appropriate changes to Gas Standards that incorporate a common view of compliance requirements for AOCs. By end of Q2 2020 the AOCs will be ranked and included in the risk register. In addition, NiFast AOC data is not currently available in the data warehouse, creating challenges and risks to visibility and management of this body of work. This process will require an IT solution to be completed to get data out of NiFast into the data warehouse for additional reporting requirements to align with other systems, i.e. WMS, DIS, Maximo, CIS. The required IT solution will be presented at the March Demand meeting with a delivery date of the solution by end of Q4 2019. Once the analysis of the work and the priority is established, a plan will be developed to work backlog and maintain compliance in the future. *[Note – this response is part of an overall strategic plan to address AOC's across all NiSource Gas Companies.]*

* While the scope of this review was limited to AOCs identified during September 1, 2016 through September 1, 2018, Internal Audit noted that the recommendations would apply to all outstanding AOCs identified since the inception of NiFAST across the NiSource Footprint.

Summary Conclusions (Cont'd):

- Meter Protection is not always installed after vehicular damage has occurred.

  - **Recommendation:** Management should utilize data related to damages to install protection in locations where vehicular damages have occurred and no changes have been made to the meter location.

  - **Management Response:** Management agrees to put in place a process that places the accountability on the Operation Center Manager to ensure that an order is created to install meter barrier protection any time a meter is damaged by a vehicle. This order will be assigned a commit date of 45 days.

Background

Columbia Gas Distribution Companies

All Columbia Gas Distribution Companies are subject to Gas Standard (GS) 3020.040: Meter Set Assembly Protection Residential and Small Commercial *. The standard sets forth the following requirements for protecting new, replaced, and existing residential and small commercial outside meter set assemblies (and service regulators):

> "Each meter and service regulator, whether inside or outside a building, shall be installed in a readily accessible location and be protected from corrosion and other damage, including, if installed outside a building, vehicular damage that may be reasonably anticipated."

Additionally, when it is determined that protection for existing meters does not meet the requirements of GS 3020.040 (e.g. no meter protection or inadequate meter protection, such as smaller bollards or inadequate bollard spacing), it is considered an AOC.

Each meter set is subject to inspection for leakage, atmospheric corrosion, and AOCs on a one or three year cycle based upon its placement in either a business district or non-business district. If it is determined during the inspection that an AOC exists related to meter protection, the Inspector will note the condition within the NiSource Field Application Survey Tool (NiFast), and resolution of the identified AOC will be scheduled according to standard timeframes established by Management.

NIPSCO

While not covered under a specific Gas Standard, NIPSCO Gas Engineering and/or Gas Operations will consider whether protection should be installed when completing a new or replacement service line job order. As with the Columbia Companies, each NIPSCO Gas meter set is subject to inspection for leakage, atmospheric corrosion, and AOCs; however, all survey results for NISPCO Gas are manually entered into spreadsheets by the Inspectors and any necessary follow up work is scheduled manually through the creation of job orders in NIPSCO's work management system, Maximo. NIPSCO Gas Operations has established an AOC matrix, which defines an AOC related to meter protection as a low priority.

Note: NIPSCO Gas Management noted that they are considering the future implementation of a data collection tool called "Collector" which would allow for the systematic recording of identified AOCs, similar to NiFast in the Columbia Companies.

* The audit period was determined as Gas Standard 3020.040 became effective June 1, 2016 and was considered fully implemented by September 1, 2016 for all Columbia Companies.

Audit Scope and Approach

Internal Audit reviewed the processes and controls established across the NiSource Gas Distribution Companies to verify the residential and small commercial meters at risk of vehicular damage were protected in accordance with applicable Gas Standards for the audit period of September 1, 2016 through September 1, 2018.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. Internal Audit would like to thank the Integration Center and Field and System Operations staff and management for their cooperation and time in support of this follow-up review.

Objective: Review the processes and controls in place to ensure new, replaced (at the time of installation), and existing meters are properly protected. Additionally, verify action is taken to properly protect damaged meters from future damages.

#	Procedures	Findings Summary (Refer to Appendix A)
1	Assess the process and controls, and documentation/data related to determining the need for and installing meter protection across all of the NiSource Gas Distribution Companies.	**No Findings Noted.**
2	Obtain a listing of AOCs identified within NiFast specific to meter protection for the audit period and analyze the population to identify trends and assess compliance with established commit dates. (Columbia Companies only)	**Finding #1 – See page 6-7**
3	Obtain detail of damages across all of the NiSource Gas Distribution Companies monitored by the Damage Prevention Center of Excellence for the audit period. For each location where a damage to a meter occurred due to vehicular damage, determine whether adequate action was taken.	**Finding #2 – See page 8**

.

Findings (Cont'd)

Procedure #2: Obtain a listing of AOCs identified within NiFast specific to meter protection for the audit period and analyze the population to identify trends and assess compliance with established commit dates. (Columbia Companies only)	**Risk Rating**
Finding #1: Based on progress to-date, Meter Protection AOCs may not be incorporated into current and future work plans to ensure compliance with established commit dates.	**Moderate**
Process Owner(s): K. H. Cole, VP Distribution Operations, All NiSource Gas Distribution Presidents and General Managers Executive Council Member Responsible: Pablo Vegas, Chief Operating Officer	**Target Remediation Date:** **Q2 2020**

Observation

Criteria: The workload created as a result of identified Meter Protection AOCs is adequately monitored and managed to ensure remediation in accordance with established commit dates.

Condition: **8%** of the Meter Protection AOCs **identified within NiFast** during the period of September 1, 2016 through September 1, 2018 **and eligible for remediation** for all of the Columbia Gas Companies have been remediated through the **execution of a WMS job order**.

	Eligible for Remediation	Executed	%	Past Due	%
COH	31,657	157	0.5%	17,435	57.3%
CKY	2,335	-	0.0%	24	1.1%
CMA	2,324	651	28.0%	279	12.0%
CPA	10,050	22	0.2%	45	0.4%
CMD	606	6	1.0%	-	0.0%
CGV	4,598	3,289	71.5%	52	1.6% *
TOTAL	51,570	4,125	8.0%	17,835	36.0%

Each of the Columbia Gas Companies utilizes different levels to classify Meter Protection AOCs identified, which determines the commit date, or the date required for remediation. Internal Audit noted **~18K** (**36%** of the ~**52K** identified and eligible for remediation) of the Meter Protection AOCs noted above are past their required commit date as of December 31, 2018. Please refer to **Appendix B** and **Appendix C** for further details.

* CGV provided support for the status of all 52 accounts identified by Internal Audit. Upon review of the detail, Internal Audit noted that 48 of the 52 accounts related to Farm Taps, which CGV Management noted are scheduled to be addressed in 2019 as part of a program specific to Farm Tap locations.

Findings (Cont'd)

Procedure #2: Obtain a listing of AOCs identified within NiFast specific to meter protection for the audit period and analyze the population to identify trends and assess compliance with established commit dates. (Columbia Companies only)	**Risk Rating**
Finding #1: (Cont'd)	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; K. H. Cole, VP Distribution Operations **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities [Operations]; Donald Brown, EVP & Chief Financial Officer [IT]	**Target Remediation Date:** **Q2 2020**

Observation (Cont'd)

Risk/Impact:

Damages due to vehicular damage may not be prevented if meter protection is not installed on at risk meters. Based on current remediation rates, the workplan may not currently incorporate identified Meter Protection AOCs that require remediation in future years to ensure compliance with established commit dates.

Note: Meter Protection AOCs will continue to be identified through additional inspections performed in the following years. Additionally, once a location with an outstanding Meter Protection AOC comes upon its next inspection cycle (either a 1 year or 3 year period), there is a risk of duplicate identification.

Recommendation: Since the number of all types of AOCs could increase over time as additional inspections are performed, Field Operations, System Operations, the Integration Center, and Planning should work together (identifying clear roles and responsibilities) to assess the risk related with each AOC type, including Meter Protection, and develop a risk-based work plan to ensure remediation of identified AOCs in accordance with established processes and commit dates.

Management Response: NiSource Management agrees to utilize the SMS framework and process to evaluate and rank risk identified AOCs, including meter barrier protection. The SMS team, working with compliance and standards, will recommend appropriate changes to Gas Standards that incorporate a common view of compliance requirements for AOCs. By end of Q2 2020 the AOCs will be ranked and included in the risk register.

In addition, NiFast AOC data is not currently available in the data warehouse, creating challenges and risks to visibility and management of this body of work. This process will require an IT solution to be completed to get data out of NiFast into the data warehouse for additional reporting requirements to align with other systems, i.e. WMS, DIS, Maximo, CIS. The required IT solution will be presented at the March Demand meeting with a delivery date of the solution by end of Q4 2019.

Once the analysis of the work and the priority is established, a plan will be developed to work backlog and maintain compliance in the future.

Findings (Cont'd)

Procedure #3: Obtain detail of damages across all of the NiSource Gas Distribution Companies monitored by the Damage Prevention Center of Excellence for the audit period. For each location where a damage to a meter occurred due to vehicular damage, determine whether adequate action was taken.	**Risk Rating**
Finding #2: Meter Protection is not always installed after vehicular damage has occurred or after a Meter Protection AOC has been identified by an Inspector.	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; K. H. Cole, VP Distribution Operations **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities [Operations]	**Target Remediation Date:** **Q1 2019**

Observation

Criteria: Once it is determined that vehicular damage may be reasonably anticipated (i.e. after a damage due to a vehicle has occurred), bollards shall be installed to protect the meter set assembly.

Condition:

Internal Audit obtained the listing of all damages across all of the NiSource Gas Distribution Companies monitored by the Damage Prevention Center of Excellence and filtered to identify those damages that occurred as a result of vehicular damage at the meter. Internal Audit selected a sample of 40 to determine whether adequate action was taken to protect the meter subsequent to the damage. Internal Audit identified the following:

- 19 of the 40 locations did not have evidence that meter protection was installed subsequent to the damage occurring.

Additionally, Internal Audit also looked to see if any Meter Protection AOCs had been identified at locations where damages had occurred (both criteria occurring the period of audit). Internal Audit noted the following:

- 17 locations had Meter Protection AOCs identified prior to the damage occurring.

Risk/Impact: Damage to meter sets which, possibly could have been prevented if meter protection were installed.

Recommendation

Management should utilize data related to damages to install protection in locations where vehicular damages have occurred and no changes have been made to the meter location.

Management Response

Management agrees to put in place a process that places the accountability on the Operation Center Manager to ensure that an order is created to install meter barrier protection any time a meter is damaged by a vehicle. This order will be assigned a commit date of 45 days.

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*</u>
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*</u>
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* <u>*Internal Audit does not perform follow-up review procedures on low risk findings.*</u>

Appendix B - Meter Protection Levels and Commit Dates Utilized by Company

	A	B	C	D	E	F
	Level 0	**Level 1**	**Level 3**	**Level 4**	**Level 6**	**Level 7**
Commit Date	*Immediate Action*	*60 days*	*End of Next Year*	*Not Specified*	*Not Specified*	*60 months*
COH		X	X			
CKY		X	X			
CMA		X	X			
CPA	X		X	X	X	X
CMD	X		X	X		X
CGV			X			

A	Level 0s are uilized by CPA and CMD only. The Level description is noted as "Immediate Action - CALL Integration Center."
B	Level 1s are utilized by COH, CKY and CMA only. The Level Description is noted as "evidence of previous vehicle damage".
C	Level 3s were utilized by all companies during the audit period; however, Level 3 will only be available to COH, CKY, and CMA going forward. The Level Description is described as "Needs Protection".
D	Level 4s were utilized by CPA and CMD only during the audit period; however, this category has been eliminated going forward. Previously described as "DIMP" with no defined commit date timeframe.
E	Level 6s are utilized by CPA only to identify those AOCs on customer owned service lines. These are sent to the Customer Notification List but do not have a defined commit date timeframe.
F	Level 7s are utilized by CPA and CMD only. The Level Description is noted as "Needs Protection". The Commit date is noted as 60 months from the date of the inspection.

Appendix C – Summary of Past Commit

	Level 0				Level 1				Level 3			
Commit Date	*Immediate Action*				*60 days*				*End of Next Year*			
	Eligible for Remediation	***Executed***	***Past Commit***	***%***	***Eligible for Remediation***	***Executed***	***Past Commit***	***%***	***Eligible for Remediation***	***Executed***	***Past Commit***	***%***
COH					266	154	112	42%	31,391	3	17,323	55%
CKY					24	0	24	100%	2,311	0	0	0%
CMA					293	163	130	56%	2,031	488	149	24%
CPA	46	1	45	2%					4,914	0	*	0%
CMD	0	0	0	N/A					406	0	*	0%
CGV									4,598	3,289	52	1% **
TOTAL	**46**	**1**	**45**	**2%**	**583**	**317**	**266**	**54%**	**45,651**	**3,780**	**17,524**	**8%**

*Internal Audit excluded the Level 3 populations for CPA and CMD from the population of "Past Commit" as CPA and CMD will not use Level 3s going forward. CPA plans to utilize Level 7 with a commit date of 60 months (instead of the end of the next calendar year) to classify a meter which "Needs Protection". However, under the old commit dates, 5,365 Level 3 Meter Protection AOCs would be past due.

** CGV provided support for the status of all 52 accounts identified by Internal Audit. Upon review of the detail, Internal Audit noted that 48 of the 52 accounts related to Farm Taps, which CGV Management noted are scheduled to be addressed in 2019 as part of a program specific to Farm Tap locations.

Note: Level 4 and Level 6 Meter Protection AOCs do not have a defined commit date timeframe. Level 7s have a timeframe of 60 months; however, as the audit period started on September 1, 2016, none of the AOCs classified in that Level would be "past commit" as of December 31, 2018.

Procure-To-Pay SDLC - Core Release 1 (Design & Build Phases)

To: Jennifer Tipton, VP – Enterprise Applications
Dave Speas, Director – Dir. Procurement Operations
Ron Harper , Director – Work Planning

From: John Manfreda, Project Manager - Infor. Systems Audit
Greg Wancheck, Director - Infor. Systems Audit

March 12, 2019

NiSource IT Audit conducted our Procure-To-Pay SDLC (System Development Lifecycle) assessment for the solution's Core Release 1 Design & Build phases between September 2018 and January 2019 to provide an independent perspective around program/project governance, delivery service activities and inclusion of relevant solution control considerations. This Procure-To-Pay SDLC – Core Release 1 evaluation will be directly followed by a Procure-To-Pay SDLC - Core Release 2 (Buying and Invoicing) review that will provide a perspective on the program's subsequent activities.

IT Audit's Procure-To-Pay SDLC - Core Release 1 (Design & Build Phases) analysis noted the following three (3) findings:

High risk finding:

- **The existing NiSource enterprise IT solution delivery model does not include a comprehensive intake and on-going management process for non functional requirements.**

➢ Recommendation: NiSource IT Leadership should;

1. Help facilitate the alignment of applicable NiSource domain owners, both IT and business, in determining the current state of higher risk, non functional requirement criteria (cybersecurity, SOX, data, etc.) in the IT delivery model.
2. Coordinate the process of maturing relevant higher risk, non functional requirement criteria with appropriate NiSource domain owners (if required).
3. Absorb the higher risk, non functional requirements into the IT delivery model with appropriate responsibility/accountability.

Moderate risk finding (#1):

- **The current IT PMO delivery framework does not have a standardized governance model artifact/deliverable at the project and/or program level delineating accountability, scope of engagement, and responsibility to relevant stakeholders.**

➢ Recommendation: The NiSource IT PMO should align with the relevant IT Towers in creating and embedding a standardized project/program governance model into the current IT solutions delivery framework. This standardized governance artifact should lay out accountability, scope of engagement, and responsibility to all relevant project/program stakeholders, whether they be IT resources or members of the NiSource business.

Moderate risk finding (#2):

- **The NiSource IT PMO estimating and planning process does not account for potential SOX controls design and execution modifications required in the solution delivery process.**

➢ Recommendation: The NiSource IT PMO should enhance the existing IT PMO estimating and planning process to include considerations for SOX controls design and execution modifications. This would include engagement of external SOX control subject matter experts who would have the background to disposition relevant risks and develop mitigating solution specific controls.

Due to the nature of the findings noted above, IT Audit will continue to monitor the P2P Program Team's solution delivery activities and future alignment with the NiSource IT PMO in our subsequent P2P SDLC – Core Release 2 (NIPSCO) and 3 (NCS/Columbia) assessments.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing, whereby a summary of HIGH and/or MODERATE findings will be provided to the NiSource Audit Committee. NiSource IT Audit would like to thank both P2P Program Management and the NiSource IT PMO for their cooperation and time in supporting this effort.

Beginning in May 2018, NiSource commenced an initiative to transform the enterprise's Procure-to Pay (P2P) capabilities by implementing process, organizational and technology changes for both materials and services procurement. The initiative is focused on the deployment of the following two (2) externally hosted cloud, aka: Software-as-a-Service (Saas), applications for solution implementation.

- SAP-Ariba for materials and core procurement
- SAP-Fieldglass for services procurement enablement

NiSource's P2P initiative has the following goals over the program lifecycle:

- Re-engineered P2P processes that are aligned with updated operating model/roles enabled by Cloud/SaaS applications and will provide the desired efficiency to build appropriate P2P capability maturity
- Use of proper buying channels, services platform and preferred suppliers to maximize use of negotiated pricing, drive discounts / rebates, supplier self-service and to control spend leakage
- Use of electronic invoice submission and supplier self-service to drive automation and efficiency of payment
- Use of best-in-class payment terms to optimize working capital
- Availability of quality data harmonized by company/commodity to enable sourcing savings

IT Audit's on-going alignment with the P2P program initiative will continue throughout the remainder of 2019 and will center around subsequent phase execution activities of planned Core and Services Procurement module releases.

Audit Scope and Approach

IT Audit aligned with the P2P Program Team, the NiSource IT Project Management Office (PMO), and other P2P program stakeholders to review evidence on the setup of processes, procedures, and controls used to manage P2P program execution. The methods used by NiSource IT Audit may include (but are not limited to) interviews of key process owners, documentation review, observation and independent testing of appropriate, standards, metrics, and system configurations.

Review procedures included the following objective(s) and associated action steps listed within the results below:

Objective 1: Review P2P program delivery-based controls design and execution to provide a perspective on organizational risk inherent in delivering the solution.		
#	**Procedures**	**Findings Summary (Refer to Appendix A for rating scale)**
1	Assess whether Project Scope, Cost and Schedule controls are in place and compliant with NiSource's IT Project Management Methodology (PMM).	**Finding #1 (see Slide 7)**
2	Assess whether Project Quality controls over solution conformance to requirements are in place and are operating as designed.	**No Findings Noted**
3	Assess whether controls over communications and stakeholder alignment are in place and are operating as designed.	**No Findings Noted**
4	Review project user acceptance, approval activities, third-party service provider management, and deployment plans (where applicable) to provide reasonable assurance NiSource corporate policy and/or program standards are followed.	**Finding #2 (see Slide 8)**

Audit Scope and Approach (Cont'd)

Objective 2: Review P2P program solution-based controls to provide a perspective on any nonconformance risks associated with corporate control requirements.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Assess whether business process controls (automated and manual) were included in the solution development, testing and deployment processes.	**Finding #3 (See Slide 10)**
2	Assess whether interface controls were considered and included in the solution development, test and deployment processes.	**No Findings Noted**
3	Assess whether data conversion activities controls (where applicable) were considered and included in solution deployment processes.	**No Findings Noted**

Objective 3: Review overall Program Team conduct in helping to achieve project objectives.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Monitor on-going integration, alignment and communications between the NiSource P2P Program Team, IT Project Management Office (PMO), Third-Party Providers and NiSource P2P Business stakeholders to provide feedback on the approach and execution process during the review period.	**No Findings Noted**

Findings

Objective #1, Procedure #1: Assess whether scope, cost and schedule controls are designed, in place and compliant with NiSource's IT Project Management Methodology (PMM).	**Risk Rating**
Finding: The current IT PMO delivery framework does not have a standardized governance model artifact/deliverable at the project and/or program level delineating accountability, scope of engagement, and responsibility to relevant stakeholders.	**Moderate**
Process Owner(s): Sandeep Hattarki (Manager Methodology – PMO), Greg Kovacs (Director – PMO), Kevin Johannsen (VP – IT Services)	**Target Remediation**
Executive Council Member Responsible: Donald Brown (Chief Financial Officer)	**Q3 2019**

Observation

Criteria: To provide key project and program stakeholders with a detailed description of accountability, scope of engagement definition, and responsibility.

Condition: The existing IT PMM framework allots for only the Project Charter being the high-level artifact whereby roles and scope of the project/program are defined. Each NiSource IT project/program can further define its own governance structure, stakeholder reporting mechanism and delivery standards/practices.

Risk/Impact: Without a clear delineation of stakeholder scope, accountability, and roles/responsibilities in a universal governance model structure, each NiSource project and/or program are reliant on a Program Managers' experience to provide ongoing delivery governance. This approach could lead to the risk of inconsistent solution delivery management and decision-making authority.

Recommendation

The NiSource IT PMO should align with the relevant IT Towers in creating and embedding a standardized project/program governance model into the current IT solutions delivery framework. This standardized governance artifact should lay out accountability, scope of engagement, and responsibility to all relevant project/program stakeholders, whether they be IT resources or members of the NiSource business.

Management Response

IT Management aligns with this recommendation. The IT PMO team will create a program governance structure that will cover role definitions, RACI and templates with a plan to roll-out by end of Q3 2019.

Findings

Objective #1, Procedure #4: Review user acceptance, approval activities, third-party service provider management, and deployment plans (where applicable) to provide reasonable assurance NiSource corporate policy and/or program standards are followed.	**Risk Rating**
Finding: The existing NiSource enterprise IT solution delivery model does not include a comprehensive intake and on-going management process for non functional requirements.	**High**
Process Owner(s): Mike Rozsa (CIO) **Executive Council Member Responsible**: Donald Brown (Chief Financial Officer)	**Target Remediation** **Q4 2019**

Observation

Criteria: To provide NiSource IT Service Delivery practitioners with a comprehensive intake and on-going management model for non functional requirements to reduce the inherent risk(s) of delivering ineffective and/or non compliant solutions.

Condition: The existing NiSource enterprise IT solution delivery model does not include a comprehensive intake and on-going management process for non functional requirements.

Risk/Impact: Not having a comprehensive intake and on-going management process for non functional requirements may lead to ineffective solution delivery and/or delivery of non-compliant solutions.

Recommendation

NiSource IT Leadership should:

1. Help facilitate the alignment of applicable NiSource domain owners, both IT and business, in determining the current state of higher risk, non functional requirement criteria (cybersecurity, SOX, data, etc.) in the IT delivery model.
2. Coordinate the process of maturing relevant higher risk, non functional requirement criteria with appropriate NiSource domain owners (if required).
3. Absorb the higher risk, non functional requirements into the IT delivery model with appropriate responsibility/accountability.

Findings

Management Response

All policies and standards for non-functional requirements (Cybersecurity, SOX, etc) will be placed into a common repository and a link to this repository will be obtained from the PMO site. Additionally, each IT project will be assigned a Technical Solution Owner (normally the assigned Solution Architect) who will have accountability and responsibility for adherence to comply with these requirements.

Findings

Objective #2, Procedure #1: Assess whether business process controls (automated and manual) were considered and included in the solution design, development, testing and deployment processes.	**Risk Rating**
Finding: The NiSource IT PMO estimating and planning process does not account for potential SOX controls design and execution modifications required in the solution delivery process.	**Moderate**
Process Owner(s): Kevin Johannsen (VP- IT Services) **Executive Council Member Responsible**: Donald Brown (Chief Financial Officer)	**Target Remediation** **Q4 2019**

Observation

Criteria: To prevent delivery of IT solutions without the consideration and inclusion of SOX risks and relevant controls at the appropriate stage of delivery.

Condition: The NiSource IT PMO estimating and planning process does not account for potential SOX controls design and execution modifications required in the solution delivery process.

Risk/Impact: Lack of appropriate estimating and planning for potential SOX controls design and execution modifications may lead to both non-conforming solutions and related re-work risks.

Recommendation

The NiSource IT PMO should enhance the existing IT PMO estimating and planning process to include considerations for SOX controls design and execution modifications. This would include engagement of external SOX control subject matter experts who would have the background to disposition relevant risks and develop mitigating solution specific controls.

Management Response

Through engagement with key stakeholders, NiSource IT Services will define an approach to assess potential SOX impacts and consider associated effort and cost in the defined project estimation model and process. The defined enhancements will roll-out by the end of Q4 2019.

Report Distribution

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*</u>
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*</u>
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* <u>*Internal Audit does not perform follow-up review procedures on low risk findings.*</u>

NiSource Corporate Services Company Cost Allocation Audit

May 6, 2019

To: Adolfo Acevedo, Director Shared Services Center, Corporate Accounting

From: Chris Marlatt, Audit Project Manager
Jaclyn Callahan, Manager Internal Audit
Ryan Binkley, Director Internal Audit

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Executive Summary

Internal Audit performs an annual review of the accounting systems, source documents, allocation methods, and billing procedures used by NiSource Corporate Services Company (NCSC) to allocate costs/expenses to the various subsidiary companies ("affiliates"), including the holding company.

The focus of the audit includes the following procedures:

- Determine that costs are fairly and equitably allocated to all subsidiary companies, including the holding company; and
- Verify procedures are in place to ensure that all costs have been allocated monthly and are accurately reflected in the FERC Form 60 Financial Report.

Summary Conclusions:

Based on our audit results, the methods and procedures used to allocate costs/expenses and bill subsidiary companies, including the holding company, are reasonable. Amounts reported as convenience and contract billing payments in the FERC Form 60 appear appropriate.

Note: there is an inherent risk related to the proper application of these methods by employees (i.e. manual application of billing pool codes to invoices or timesheets).

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided to Corporate Accounting Management. Internal Audit would like to thank NCSC staff and management for their cooperation and time in support of this audit.

Background

- In February 2006, the Public Utility Holding Company Act (PUHCA) was repealed and replaced with the PUHCA of 2005. Prior to this date, NiSource Corporate Services Company (NCSC) was required to obtain prior approval from the Securities and Exchange Commission on new allocation methods used to allocate costs and expenses. The PUHCA of 2005 is primarily a "books and records" statute and provides the Federal Energy Regulatory Commission (FERC) with the authority over the books and records, the ability to prescribe standards, and gives access to the books and records of the holding company to the public utility commissions, but only to the extent relevant to the costs of the subsidiaries.

- NCSC uses various allocation methods to assign expenses to companies (including the holding company), or groups of companies, to classify and disclose expenses in the financial statements. Such allocation methods are defined in the service agreements ("agreements") between NCSC and the affiliates. Affiliates are billed by NCSC via contract and convenience billings. Contract billings represent labor and expenses billed to an affiliate. The allocation between affiliates is based on a billing pool which is a four digit code that identifies the company or company's benefiting from the charge. Convenience billings are accommodation payments that are rendered when NCSC makes a payment to a vendor for goods or services that are for the benefit of more than one or all affiliates, and can be made for an affiliate who may not have the means to wire money to outside vendors. Each affiliate is billed monthly for their proportional share of the payments made in that respective month.

Audit Scope and Approach

Internal Audit has completed a review of the accounting systems, source documents, allocation methods, and billing procedures used by NCSC to allocate costs/expenses to the various subsidiary companies, including the holding company, for the period January 1, 2018 through December 31, 2018.

NOTE: *Costs associated with the Merrimack event were included in the population of allocated NCSC costs and subject to our audit procedures. We will be issuing a separate memo regarding the processes of ensuring certain Merrimack event costs (I.e. internal labor) were properly recorded to CMA.*

Objective 1: **Costs are fairly and equitably allocated to all subsidiary companies including the holding company.**

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Determine if allocation factors are updated regularly to reflect current statistical data to ensure that NCSC charges are billed relative to current operations.	**No Findings Noted.**
2	Verify contract and convenience billings are properly billed to affiliates.	**No Findings Noted.**
3	Verify holding company costs incurred are properly segregated and paid by the holding company.	**No Findings Noted.**
4	Verify executive time allocation accurately reflects the companies benefiting from their services.	**No Findings Noted.**
5	Verify costs charged by department are in accordance with the NCSC cost allocation guidelines.	**No Findings Noted.**

Objective 2: **Processes and procedures are in place to ensure that all costs have been allocated monthly and are accurately reflected in the FERC Form 60 Financial Report.**

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Determine that all costs are appropriately allocated to affiliates.	**No Findings Noted.**
2	Verify that contract billings and accommodation payments are accurately reported in the FERC Form 60 Financial Report.	**No Findings Noted.**

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Corporate Credit Cards Expense Review & Analytics (2018 Annual Period)

June 19, 2019

To: A. Acevedo, Director Shared Services Center

From: L. Black, Senior Auditor
M. Eich, Lead Data Analyst
J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

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Executive Summary

Internal Audit conducted an audit of expense transactions incurred by employees on behalf of NiSource to analyze trends in employee spending and aid in identifying instances of non-compliance during the period of January 1, 2018 to December 31, 2018*. Refer to the chart below for a breakdown of spend by the various card types in use during 2018.

Card Type	Administrator	Total 2018 Spend (MM)	Total 2017 Spend (MM)	Variance (MM)	% of Change
Employee Expense Cards**	American Express JPMorgan Chase "One Card" Visa	$ 50.4	$ 26.0	$ 24.4	94%
Purchasing Cards	Citibank	$ 27.7	$ 23.4	$ 4.2	18%
Fuel Cards	ARI/WEX	$ 17.5	$ 14.3	$ 3.3	23%
Fleet Cards	ARI	$ 0.0	$ 0.0	$ 0.0	17%
Total Corporate Credit Card Spend		$ 95.6	$ 64	$ 32	50%

The focus of the audit includes the following procedures:

- Analyze corporate card and other reimbursable expenses to identify any unusual items and/or trends;
- Determine whether corporate card and other reimbursable expenses are processed in accordance with corporate policy and Internal Revenue Service (IRS) guidelines; and
- Determine whether corporate card and other reimbursable expenses incurred as a result of the Greater Lawrence Incident were processed in accordance with corporate policy and IRS guidelines.
    - On September 13, 2018, a series of fires and explosions occurred in Lawrence, Andover and North Andover, Massachusetts related to the delivery of natural gas by Columbia of Massachusetts (CMA), referred to herein as the “Greater Lawrence Incident” (GLI). Employees from all of the NiSource companies assisted in the efforts to replace the gas pipeline system in the affected area and restore service to affected customers. As these efforts resulted in additional expense transactions totaling ~$44 million, Internal Audit applied a higher level of focus on the expenses incurred as a result of the Incident.

*Expense population determined by utilizing the GL Extraction Date, the date the expense posted to the General Ledger.

** Employees who are not issued corporate credit cards or who incur out of pocket expenses may still incur legitimate reimbursable business expenses. These expenses are submitted within the MySpend expense reporting system and are included in the Employee Expense Cards total referenced above.

Executive Summary

Summary Conclusions:

Refer to **Appendix B** for a summary of the total number and amount of selections reviewed by Internal Audit as well as the breakdown between GLI expenses and Non-GLI. The results of the selection testing is noted below:

Non-GLI Expense Selections:

Internal Audit identified minor exceptions to corporate policies related to providing cash or cash equivalent gifts to non-employee. (Refer to **Appendix C** for transaction details.) As a result, Internal Audit created one (1) **Low Risk** Finding, recommending that Accounts Payable, Tax Department and the P2P team provide clarification and additional guidance to all NiSource employees to ensure employees understand to whom cash or cash equivalent gifts can be provided.

GLI Expense Selections:

Internal Audit noted that the GLI expenses reviewed were properly supported when required (i.e. receipts and business purpose provided); however, Internal Audit did identify the following minor policy deviations:

- Cash equivalents (gift cards) were provided to customers (non-employees); and
- Cash was provided to customers to compensate for the customer's product loss as a result of GLI

While these transactions were exceptions to company policy, Internal Audit declined to include these transactions in the finding noted above as the extenuating circumstances created as a result of the GLI necessitated being able to quickly address customer losses.

Additionally, Internal Audit noted other unique transactions (e.g. expenses related to dog boarding or overnight babysitting for employees who were working in CMA). While these transactions were unique as compared to the types of transactions typically expensed for business purposes, the employees documented the business need and the expenses were properly approved by their supervisor. As such, Internal Audit declined to create an audit finding.

Background

During 2018, NiSource consolidated the types of cards employees could use to make purchases on the Company's behalf. As a result, the JPMorgan Chase Visa "One Card" replaced the American Express (AMEX) Cards and Citibank Purchasing Cards (Pcards).

Refer to the chart below for a breakdown of each card type and the period utilized:

Card Type	Administrator	Time Period Available in 2018
Employee Expense Cards	American Express – "AMEX"	January 1, 2018 - September 7, 2018
	JPMorgan Chase Visa - "One Card"	August 27, 2018 - December 31, 2018
Purchasing Cards*	Citibank – "PCard"	January 1, 2018 - December 31, 2018
Fuel Cards	ARI/WEX	January 1, 2018 - December 31, 2018
Fleet Cards	ARI	January 1, 2018 - December 31, 2018

To align with the changes in card types, NiSource also updated the corporate policy related to employee expenses. The NiSource Corporate Credit Card policy was effective for the audit period of January 1, 2018 through August 26, 2018 and the updated Business Expense Policy was effective for the audit period of August 27, 2018 through December 31, 2018.

Employee Expense Corporate Cards

AMEX cards were available for employees to utilize from January 1, 2018 - September 7, 2018 to pay for appropriate business expenses. As the Company transitioned to the use of the JPMorgan Visa One Card, all AMEX card accounts were closed as of September 7, 2018. Final AMEX expense reports were required to be submitted by August 31, 2018.

All charges incurred through AMEX or "One Cards" were auto-fed into the NiSource expense reporting system, Concur Expense Solutions (referred to herein as "MySpend") and then processed by individual employees.

*Supply Chain noted that all Purchasing Cards, with the exception of two (2), were closed as of November 22, 2018. The remaining two (2) cards were utilized solely for GLI expenses (managed by Supply Chain personnel) and were closed as of February 22, 2018.

Background (Cont'd)

Employee Expense Corporate Cards (Cont'd)

Accounts Payable performs pre-payment audits on expense reports meeting programmed criteria within MySpend, including audits of all Officer Expense statements. Additionally, MySpend allows for "hard stops" which will generate an automatic system response if a transaction does not meet specific criteria and will not allow the expense report to be processed until all required criteria has been entered.

- **Note:** Subsequent to the GLI, an increased amount of expense transactions were incurred to support employee travel to and from CMA and the rebuild efforts. Accounts Payable noted that the receipt requirements within MySpend were lifted for a two month period between September 14, 2018 through November 14, 2018 to expedite the expense report payment process and to ensure that maximum credit limits were not exceeded. The receipt requirements were lifted again two more times for roughly ten minutes each time to allow Supply Chain to process cards which were utilized to incur large volumes of GLI expenses.

Purchasing Cards

Prior to the transition to "One Card", P-Cards were used as a payment method for small purchases (usually less than $1,000 per transaction) of materials, supplies, and certain services. Once expenses were incurred, cardholders were responsible for providing a monthly packet (including matching receipts) to their supervisors for approval (evidenced via manual signature). Approved packets were then sent to an outside vendor, 3SG, for review.

This process was manually intensive, lacked automated controls and quality assurance/quality control processes. As part of an audit conducted in 2017, Internal Audit reviewed expense transactions processed through P-Cards which deviated from Company policy, resulting in the creation of a moderate risk audit finding to address the risk created as a result of the process.

To address the audit finding, NiSource made the decision to stop using Citibank P-Cards. All P-Cards were scheduled to be closed as of September 21, 2018; however, as a result of the need for employees to be able to quickly incur expenses related to GLI, the deactivation of the cards was delayed until November 22, 2018.

Background (Cont'd)

Purchasing Cards (Cont'd)

All P-Cards, with the exception of two (2), were closed as of November 22, 2018. The remaining two (2) cards were utilized solely for remaining GLI expenses (managed by Supply Chain personnel) and closed as of February 22, 2019. Supply Chain collected 99% of the required packets and passed further pursuit of the $79.7k remaining missing packets for 2018. See **APPENDIX E** for further detail.

– **NOTE:** Internal Audit noted that expenses incurred using Employee Expense and P-Cards are subject to supervisor approval, and supervisors are responsible for performing an adequate review and ensuring expenses align with company policy. A supervisor's assessment of the reasonableness of the expense in accordance with policy is limited to the information available for review.

Fuel Cards

Fuel cards are used to purchase fuel or very limited vehicle-related expenses (e.g. a car wash, quart of oil, or diesel additive). Fuel cards are restricted using the Merchant Category Code (MCC) to limit the types of purchases that can be made using the card. Cards are assigned to a vehicle within a NiSource company and must remain with the vehicle at all times. Each card is assigned a cost accounting code and changes to the code require management approval.

In order to use a Fuel card, an employee must sign the NiSource Automotive Resource International (ARI) Wright Express Card User Agreement and submit the form with manager approval to the NiSource Credit Card Program Administrator. Employees are then assigned a unique PIN number which allows purchases to be traced to the individual employee using a vehicle card.

Background (Cont'd)

Fuel Cards (Cont'd)

ARI monitors spend for compliance with NiSource policy and potential fraud and will communicate with the Fleet Administration team when transactions need further review. In addition to the controls outlined above, exception reporting is also available to supervisors of employees using Fuel cards. Each supervisor may determine what criteria they would like to monitor related to fuel spend and the Fleet Administration team will communicate the results of the daily exceptions to the supervisors. Examples of exception reports are (but not limited to): cardholders with more than 3 transactions per day, transactions greater than $150, cardholders who made a purchase in gallons which exceeded the vehicle's tank capacity, and a purchase of premium fuel when vehicle calls for regular.

Fleet Cards

Fleet cards are not credit cards but they do contain ARI billing information which allow users to make purchases at automotive parts stores via a purchase order process managed for NiSource by ARI. Purchases under $50 don't require approval, however, any purchase over $50 is required to go through an ARI approval process. Cardholders are instructed to only use the incidental card for small items (i.e. lights bulbs, oil, windshield wipers) as a way to be cost effective and not use a garage for replacing the items.

Note: Cardholders who incur Fuel and Fleet (incidental) spend are not required to submit receipts or "process" expenses. ARI (Wright Express) maintains the detail of all spend transactions and monitors spend on a daily basis.

Audit Scope and Approach

Internal Audit performed an audit of the processes and controls in place related to the use of NiSource Corporate Cards and other employee expense reimbursements. The purpose of the audit is to assess overall compliance with the requirements of the corporate policies for the period January 1, 2018 through December 31, 2018.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, was provided to Management. Internal Audit would like to thank Accounts Payable, Supply Chain, and Tax Management for their cooperation and time in support of this audit.

Objective 1: Analyze corporate card and other reimbursable expenses to identify any unusual items and/or trends.		
#	**Procedures**	**Findings Summary** (Refer to Appendix A for rating scale)
1	Analyze a two-year period of corporate card expenses and examine historical spending patterns to detect significant variations over time.	**Refer to Appendix D**
2	Analyze the current audit period's corporate card expenses to identify outliers, anomalies, or potential fraud indicators.	**Refer to Objective 2 & 3**

Audit Scope and Approach

Objective 2: Determine whether corporate card and other reimbursable expenses are processed in accordance with corporate policy and IRS guidelines.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Review the procedures performed by Accounts Payable and Supply Chain to monitor spend and/or periodically audit transactions incurred by cardholders.	**No Findings Noted**
2	Using a risk-based approach, review selected corporate card expense transactions identified as part of our analytic procedures in Step 3 of Objective 1 and evaluate their compliance with corporate policies. *NOTE: Upon reviewing the controls and processes in place to monitor Fuel and Fleet spend and performing an independent analysis of the Fuel and Fleet transactions to identify potential fraud indicators and/or significant outliers, Internal Audit noted that additional sample testing was not necessary to assess the risk related to Fuel and Fleet transactions. As such, the sample testing performed herein focused on transactions from Employee Expense Cards (AMEX & One Card) and P-Cards.*	**Findings #1 – See Page 11**
3	Review procedures followed to identify expenses incurred on behalf of the cardholder's spouse and ensure proper treatment for tax purposes.	**No Findings Noted**
4	Verify that taxable travel has been identified and properly included in income as required by IRS reporting requirements for employees with unique working arrangements, including travel with the use of the Company-leased aircraft for compliance.	**No Findings Noted**

Audit Scope and Approach

Objective 3: Determine whether corporate card and other reimbursable expenses incurred as a result of the Greater Lawrence Incident were processed in accordance with corporate policy.		
#	**Procedures**	**Findings Summary** (Refer to Appendix A for rating scale)
1	Review the procedures to ensure that expenses incurred as a result of the Greater Lawrence Incident were properly supported (e.g. all required documentation submitted).	**No Findings Noted**

Findings

Objective 2, Procedure #2: Review selected corporate card expense transactions identified as outliers, anomalies, or potential fraud indicators and evaluate their compliance with corporate policies.	**Risk Rating**
Finding #1: Expenses incurred deviated from established policy requirements.	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Member Responsible: Donald Brown (Chief Financial Officer)**	

Observation

Criteria:

Employee expenses are for valid business purposes, are adequately supported and reviewed, and are in compliance with corporate policy.

Condition:

As a result of reviewing 164 selections (Refer to **Appendix C** for further detail on the selection process), Internal Audit identified 4 minor deviations from the established policy requirements:

- Four (4) transactions classified under various gift categories did not properly indicate a cash or cash equivalent was given, as is required for proper tax treatment. Internal Audit noted that these cash or cash equivalents were incurred through crowdfunding websites, such as GoFundMe or We Pay. The beneficiaries of the transactions appeared to be non-employees, which is an exception to corporate policy.

Risk/Impact:

Expenses may not be properly classified within MySpend to ensure accurate reporting and inclusion within the established tax assessment and income reporting processes.

Recommendation:

Internal Audit recommends that the Accounts Payable, Tax Department and the P2P team provide clarification and additional guidance to NiSource employees to ensure employees understand to whom cash or cash equivalent gifts can be provided.

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Report Distribution

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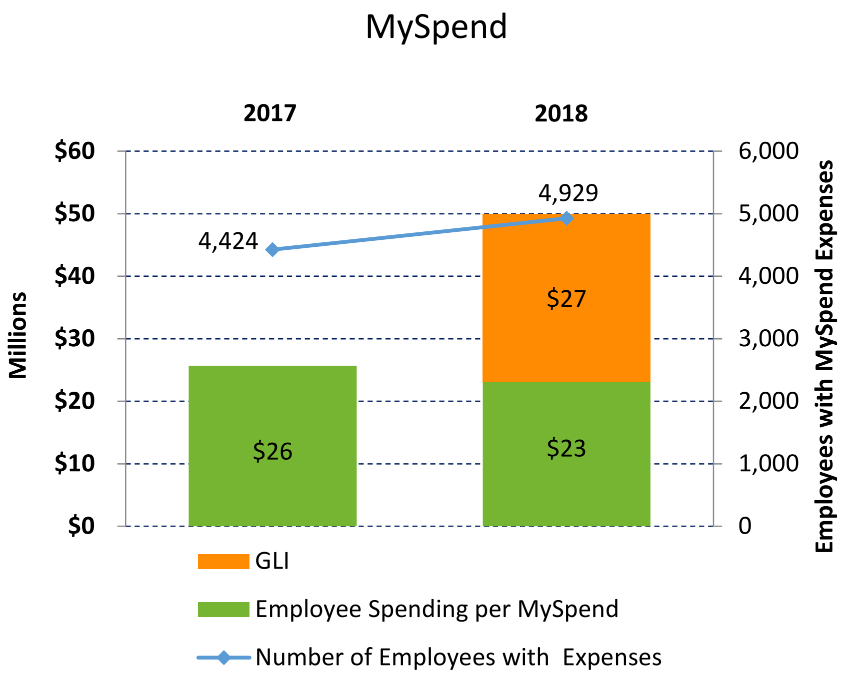
IA Selections							
Payment Type	**Total Spend by Payment Type**	**NON-GLI $**	**NON-GLI #**	**GLI $**	**GLI #**	**Total $ Tested**	**Total # Tested**
Cash	*$ 2,893,549*	*$ 5,392*	*9*	*$ 2,506*	*11*	*$ 7,898*	*20*
AMEX	*$ 11,988,174*	*$ 53,814*	*39*	*$ -*	*0*	*$ 53,814*	*39*
One Card	*$ 35,529,948*	*$ 9,203*	*25*	*$ 531,086*	*40*	*$ 540,290*	*65*
P-Card	*$ 27,659,112*	*$ 8,088*	*38*	*$ 29,455*	*2*	*$ 37,543*	*40*
Total	***$ 78,070,783***	***$ 76,496***	***111***	***$ 563,048***	***53***	***$ 639,544***	***164***

Note: Internal Audit made a sample using a risk based approach, including 53 selections of transactions incurred as a result of GLI.

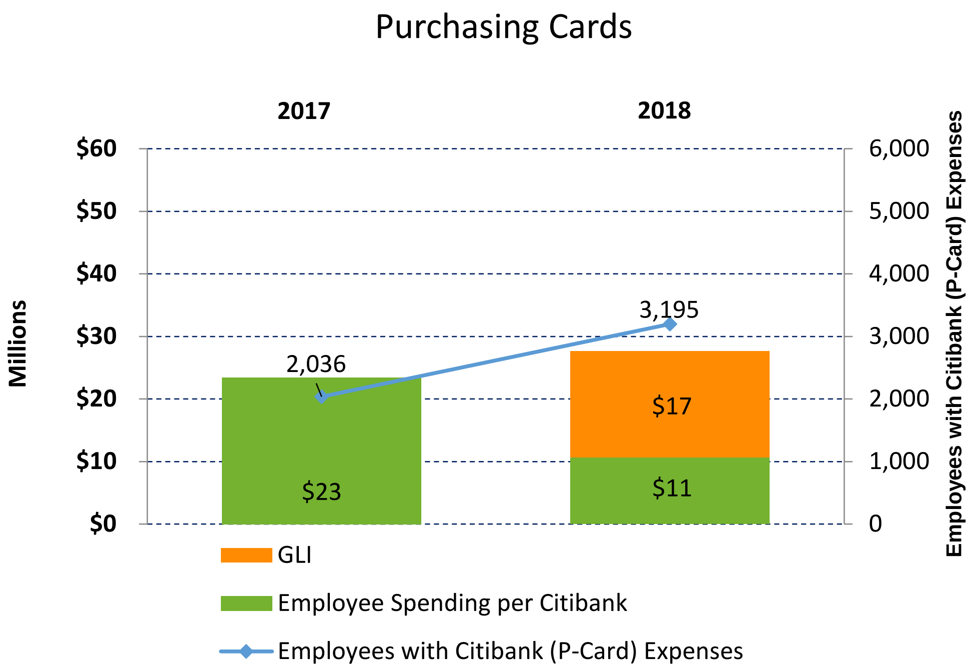
Minor Policy Deviations			
Amount	**Category Selected by Employee Who Processed Expense**	**Recipient of Crowdfunding Donation**	**Exception Identified**
$100	Bereavment - Flowers / Food	Family of a deceased employee	Cash donation not properly identfied for tax purposes
$150	Safety Award - Non Taxable		
$15	Safety Award - Non Taxable		
$100	Bereavement - Flowers / Food	Family member of current employees	Cash donation not properly identfied for tax purposes

$365 **TOTAL of Identified Policy Deviations**

NiSource Employee Expense Cards (MySpend) and P-Card Expenses 2017-2018

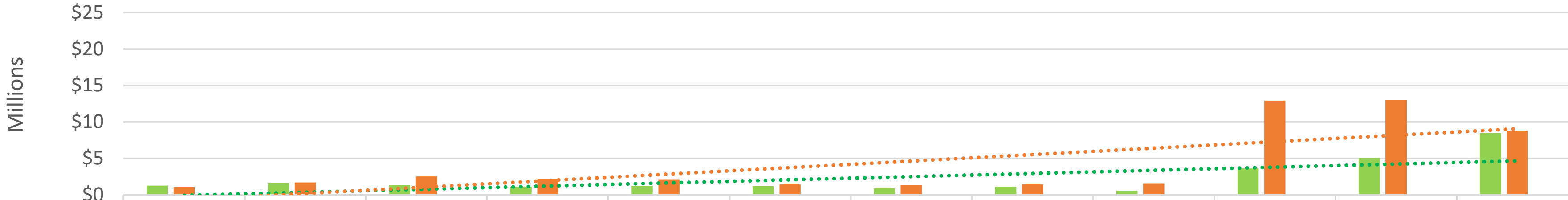


Overall total MySpend expenses increased ~95% from 2017 to 2018. The primary driver of this increase was spend resulting from the Greater Lawrence Incident. The total number of employees submitting expenses increased by ~ 11% during 2018 (4,424 – 4,929).



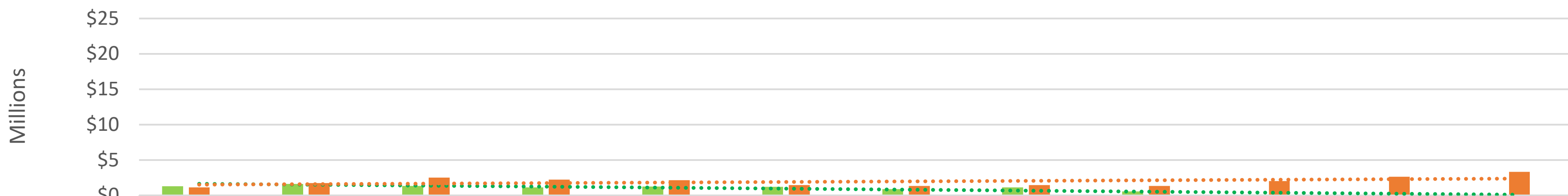
Overall total Purchasing Card spending increased ~18% from 2017 to 2018. The primary driver of this increase was spend resulting of the Greater Lawrence Incident. The total number of employees submitting expenses increased ~ 57% during 2018 (2,036 – 3,195).

Total 2018 MySpend vs PCard Spend
Trend by Month
(GLI included)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pcard 2018	$1.3	$1.6	$1.3	$1.1	$1.3	$1.2	$0.9	$1.1	$0.6	$3.6	$5.1	$8.5
MySPend 2018	$1.1	$1.7	$2.5	$2.2	$2.1	$1.5	$1.3	$1.4	$1.6	$12.9	$13.1	$8.8
Total	$2.4	$3.4	$3.9	$3.4	$3.4	$2.7	$2.2	$2.6	$2.2	$16.6	$18.1	$17.3

Total 2018 MySpend vs PCard Spend
Trend by Month
(GLI not included)

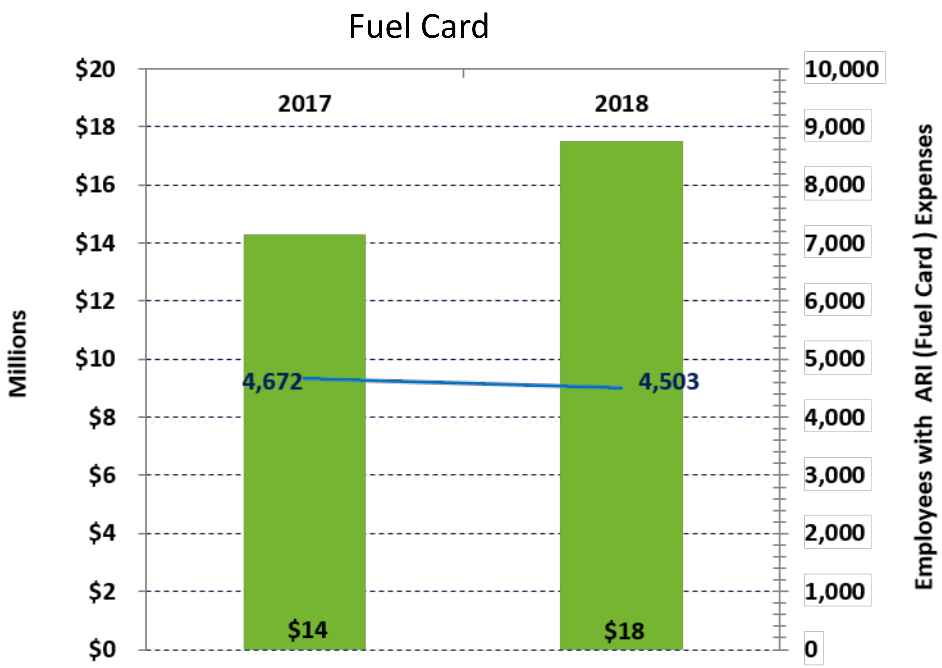


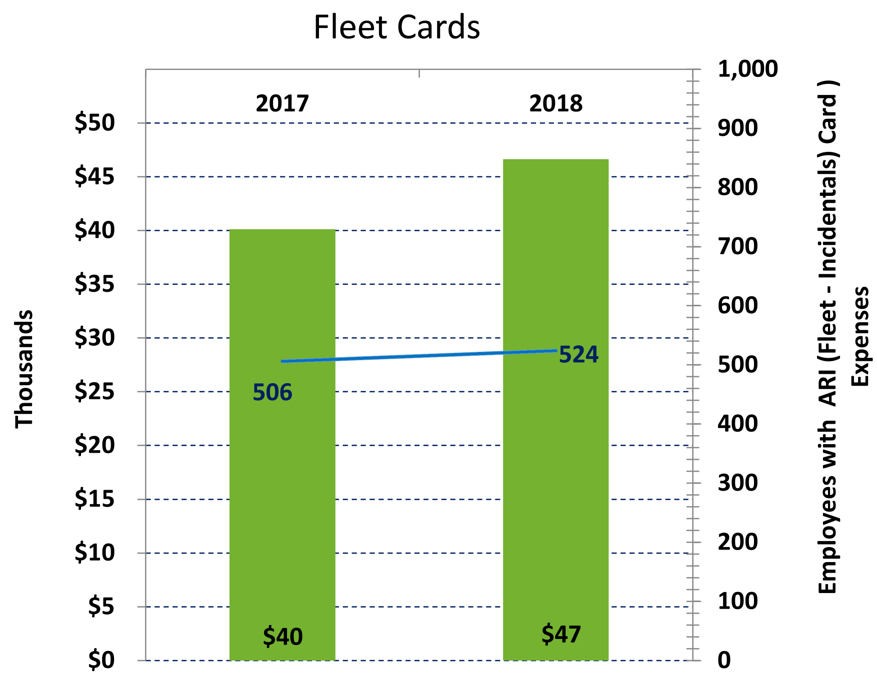
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pcard 2018	$1.3	$1.6	$1.3	$1.1	$1.3	$1.2	$0.9	$1.1	$0.6	$0.1	$0.1	$0.0
MySPend 2018	$1.1	$1.7	$2.5	$2.2	$2.1	$1.5	$1.3	$1.4	$1.3	$2.0	$2.6	$3.4
Total	$2.4	$3.4	$3.9	$3.4	$3.4	$2.7	$2.2	$2.6	$1.9	$2.1	$2.7	$3.4

Note: The 2018 MySpend total consists of the following types of transactions AMEX, One Card and Cash Reimbursable (out of pocket).

Appendix D – Fuel and Fleet Card Analysis

NiSource Fuel Card and Fleet Card Expenses 2017-2018

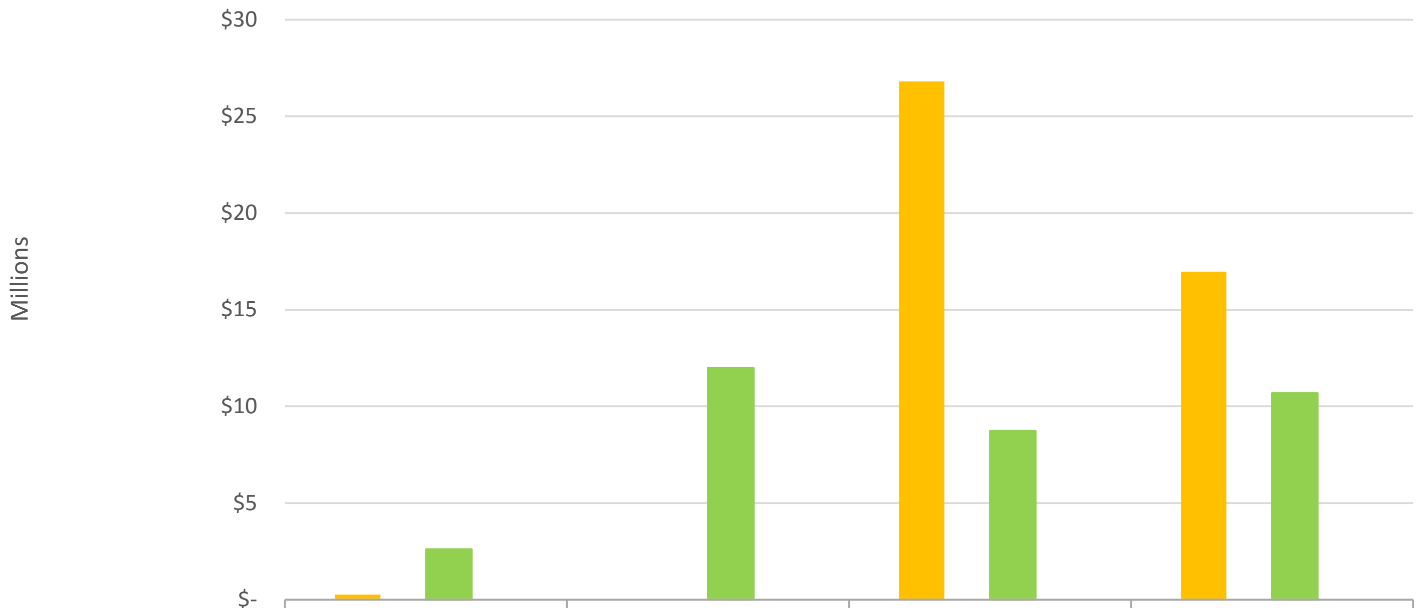




Overall total Fuel Card Expense spending increased ~23% from 2017 to 2018. The total number of employees submitting expenses decreased by ~ 4% during 2018 (4,672 – 4,503).

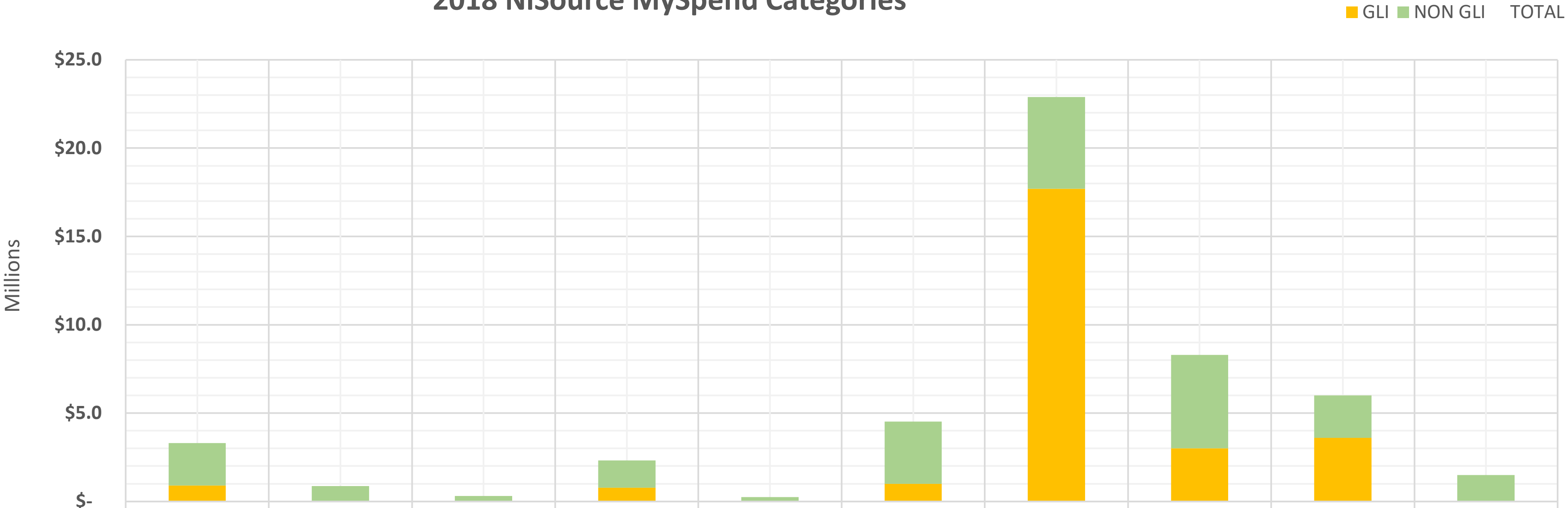
Overall total Fleet (incidental) spending increased ~16% from 2017 to 2018. The total number of employees submitting expenses increased by ~ 4% during 2018 (506 – 524).

2018 NiSource All MySpend Payment Types



	Cash	AMEX	One Card	Pcard
GLI	$274,968	$-	$26,804,050	$16,967,617
GLI % of Total Spend	10%	0%	75%	61%
NON GLI	$2,618,581	$11,988,174	$8,725,897	$10,691,495
NON GLI % of Total Spend	90%	100%	25%	39%

2018 NiSource MySpend Categories



	Air	Company Vehicles	Entertain	Field	Gifts & Safety Awards	Ground	Hotel Services	Meals	Other	Training
TOTAL	$3.3	$0.9	$0.3	$2.3	$0.2	$4.5	$22.9	$8.3	$6.0	$1.5
NON GLI	$2.4	$0.9	$0.3	$1.6	$0.2	$3.5	$5.2	$5.3	$2.4	$1.5
GLI	$0.9	$0.0	$0.0	$0.8	$0.0	$1.0	$17.7	$3.0	$3.6	$0.0

Total MySpend Expenses Category 2018

2018 MySpend Categories			
Expense Categories	**GLI**	**Non-GLI**	**Grand Total**
Air Transportation	$ 943,559	$ 2,368,988	**$ 3,312,547**
Communications	$ 13,469	$ 46,162	**$ 59,630**
Company Vehicles	$ 2,937	$ 876,393	**$ 879,329**
Entertainment	$ 219	$ 316,569	**$ 316,788**
Field	$ 740,118	$ 1,186,886	**$ 1,927,004**
Gifts/Safety Awards	$ 7,061	$ 232,356	**$ 239,417**
Ground Transportation	$ 951,057	$ 3,518,366	**$ 4,469,423**
Hotel Services	$ 17,734,866	$ 5,236,230	**$ 22,971,097**
Meals	$ 3,043,959	$ 5,337,096	**$ 8,381,055**
Meetings	$ 27,479	$ 325,584	**$ 353,063**
Office	$ 320,446	$ 1,072,552	**$ 1,392,998**
Other	$ 3,257,740	$ 903,658	**$ 4,161,398**
PAC	$ -	$ 4,091	**$ 4,091**
Safety/Clothing	$ 29,946	$ 362,491	**$ 392,438**
Training, Dues & Memberships	$ 6,162	$ 1,545,232	**$ 1,551,394**
Grand Total	**$ 27,079,018**	**$ 23,332,653**	**$ 50,411,671**

NOTE: New Expense Descriptions were created during 2017 to provide further clarity on the type of transactions purchased and related tax implications. Additionally, in August of 2018, New Expense Descriptions were created as a result of the Company's decision to move to a One Card for business expenses. As a result, a comparison to prior year(s) spend by expense description is not meaningful. Internal Audit re-grouped some of the MySpend categories for analytical purposes.

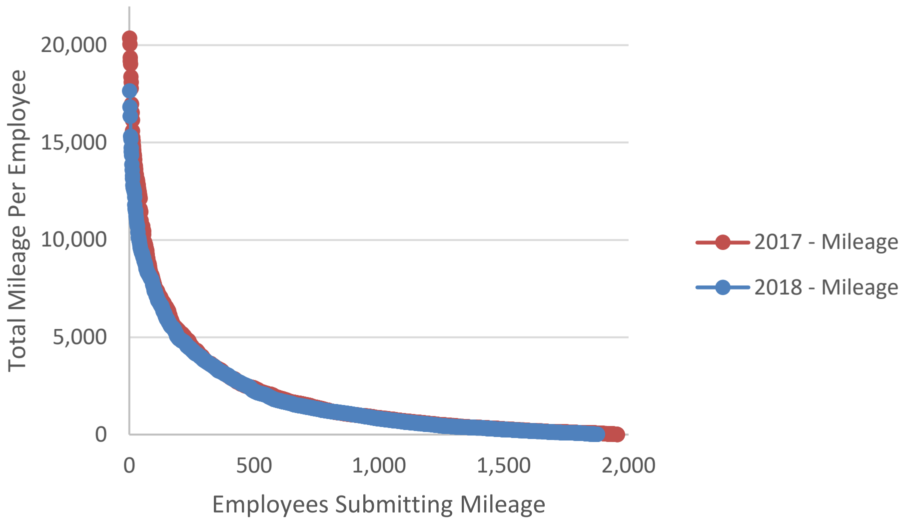
Total "Gift" MySpend Expenses Category 2017 - 2018

TOTAL MySpend GIFT TRANSACTIONS			
Expense Description	2017	2018	
	My Spend	My Spend	% Change Y/Y
TOTAL MySpend GIFT TRANSACTIONS	**$ 465,937**	**$ 239,417**	**(49%)**

TOTAL MySpend GIFT TRANSACTIONS			
Expense Description	2018		
	GLI	Non-GLI	Total
Bereavement (Flowers, Food, etc.)		$ 26,776	$ 26,776
Employee - Flowers		$ 5,039	$ 5,039
Employee - Gift Card / Certificate		$ 13,312	$ 13,312
Employee - Merchandise		$ 26,476	$ 26,476
Employee - NiSource Raffle		$ 813	$ 813
Employee - Retirement Gift Card		$ 967	$ 967
Employee - Retirement Merchandise		$ 2,805	$ 2,805
Gifts / Safety Awards	$ 1,370	$ 141,558	$ 142,928
Non Employees - Merchandise	$ 691	$ 10,987	$ 11,677
Pre-Paid Cards	$ 5,000	$ -	$ 5,000
Safety Award - Non-Taxable		$ 2,387	$ 2,387
Safety Award - Taxable		$ 1,236	$ 1,236
TOTAL MySpend GIFT TRANSACTIONS	**$ 7,061**	**$ 232,356**	**$ 239,417**

NOTE: New Expense Descriptions were created during 2017 to provide further clarity on the type of gift purchased and related tax implications. Additionally, in August of 2018, New Expense Descriptions were created as a result of the Company's decision to move to a One Card for business expenses. As a result, a comparison to prior year(s) spend by expense description is not meaningful. Internal Audit did note that the Gift Transactions for the years of 2014 – 2018 the expenses averaged of ~$383k.

2017 vs 2018 MySpend Mileage Submissions



Miles Submitted for Reimbursement	2017 Number of Employees	2018 Number of Employees
1 - 100	150	126
101 - 500	557	530
501 - 1,000	335	308
1,001 - 5,000	692	719
5,001 - 12,000	179	172
> 12,000 *	43	21
Total number of Employees Submitting Mileage	**1,956**	**1,876**

* The Vehicle Policy states "An employee ***is eligible*** to be assigned a passenger type Company vehicle if the position requires that the employee travel in excess of 12,000 business miles on an annual basis or if the employee's job duties make the use of a personal vehicle unreasonable". Internal Audit provided a list of the twenty-one (21) employees noted above who submitted more than 12,000 miles to Fleet Management to determine eligibility for a fleet vehicle. Fleet Management noted that there are plans to increase the mileage threshold to 14,000 miles, which would result in nine (9) employees during 2018 exceeding the new proposed limit.

NOTE: The Vehicle Policy was revised effective March 20, 2019; which states in Section 2 Eligibility: "2.2. An employee may be eligible to be assigned a Company vehicle if such employee's job function requires a vehicle to perform the job function and the employee will travel at least 14,000 business miles on an annual basis."

2018 – Missing PCard Packets No Longer Pursued

Citibank 2018 (payments):	Total	Packets Not Required*	Packets Required	Missing Packets	Percentage of Required Packets Collected
Sep	$ 569,039	$ 44,618	$ 524,421	$ 39,791	92%
Oct	$ 3,636,930	$ 1,429,654	$2,207,275	$ 35,656	98%
Nov	$ 5,065,080	$ 2,588,934	$2,476,146	$ 4,278	100%
Dec	$ 8,482,936	$ 3,978,202	$4,504,733	$ -	100%
Grand Total	**$ 17,753,984**	**$ 8,041,409**	**$9,712,576**	**$ 79,725**	99%

*Packets not required:

UniGrp
Uniforms
HR Incidents
IT
CPA Tech Depot
Corporate Services
Supply Chain-Merrimack Valley Incident

Note: Internal Audit noted the chart (above) and the following was statement was provided by Supply Chain Management: “Since the majority of the required packets as per the amount of spend have been received, we will no longer be pursuing missing packets. We are scheduled to move all packets on 3SG to Open Text by the end of March 2018. 3SG will maintain the data for the month of April. At the end of April, once NiSource has approved, 3SG will destroy all information they have relating to packets”.

NiSource Officer Expense Review

June 19, 2019

To: J. Hamrock, Chief Executive Officer

From: L. Black, Senior Internal Auditor

M. Eich, Lead Data Analyst

J. Callahan, Manager Internal Audit

R. Binkley, Director Internal Audit

* Officers were defined as Executive Council members as of December 31, 2018.

Executive Summary

Internal Audit conducted an audit of the controls and processes associated with Officer* expense reimbursements for the period of January 1, 2018 to December 31, 2018.

The focus of the audit included the following procedures:

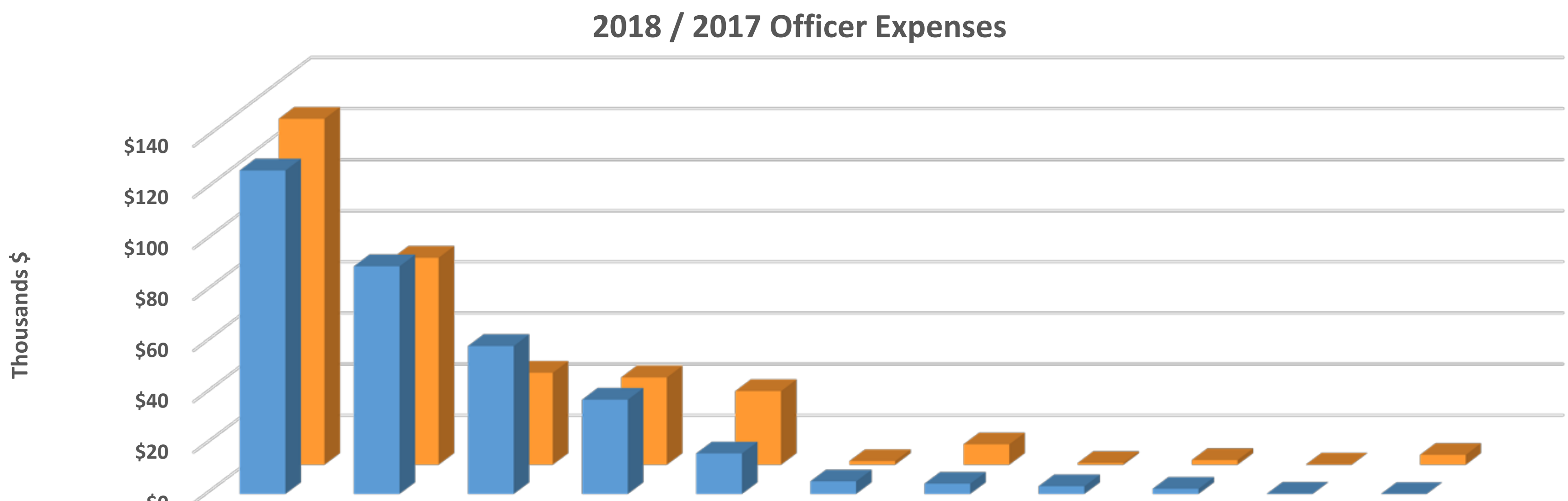
- Review Officer expense reimbursements to identify any potential unusual items and/or trends;
- Determine whether Officer expense reimbursements are incurred and reimbursed in accordance with Corporate Policy and Internal Revenue Service (IRS) guidelines, as applicable; and
- Determine whether Officer expense reimbursements incurred as a result of the Greater Lawrence Incident were processed in accordance with Corporate Policy and Internal Revenue Service (IRS).
    - On September 13, 2018, a series of fires and explosions occurred in Lawrence, Andover and North Andover, Massachusetts related to the delivery of natural gas by Columbia of Massachusetts (CMA), referred to herein as the “Greater Lawrence Incident” (GLI). Officers and employees from all of the NiSource companies assisted in the efforts to replace the gas pipeline system in the affected area and restore service to affected customers.
        - As these efforts resulted in additional Officer expense transactions of **$80.8k** (~**24%** of the total **$342.3k** Officer spend), Internal Audit made 40 additional selections from the population of expenses incurred by Officers as a result of the incident.

Summary Conclusions:
As a result of our procedures, no exceptions to policy or receipt requirements were identified in the eighty (**80**) Officer expense transactions reviewed.

* Officers were defined as Executive Council members as of December 31, 2018. (Note: Mike Finissi left NiSource in 2019; however, as he was an Executive Council member for the entirety of 2018, his expense reimbursements were included in this review.

Executive Summary (Cont'd)

The chart below represents comparative spend for all Officer expenses submitted through the expense reporting system during the two-year period of January 1, 2017 through December 31, 2018.



	Meals	Hotel	Air Trans.	Ground Trans.	Training	Other	Office	Meetings	Gifts & Awards	Comm.	Entertain-ment
2018	$127,001	$89,486	$58,270	$37,267	$16,065	$4,983	$4,058	$3,040	$2,045	$65	$0
2017	$135,664	$81,266	$36,242	$34,409	$29,057	$1,459	$8,098	$700	$1,877	$101	$3,933
Percent Change	-6%	10%	61%	8%	-45%	241%	-50%	334%	9%	-36%	-100%

Background – Officer Expense Reimbursement

The NiSource Corporate Credit Card Policy applies to all employees and representatives of the Company that are issued company sponsored credit cards. During 2018, NiSource eliminated Purchasing Cards and transitioned from an American Express Employee Expense card to a JPMorgan Chase ("One Card") Visa. Refer to the chart below for a breakdown of each card type, the period utilized, and whether the card type was utilized by Officers during 2018.

Card Type	Administrator	Time Period Available in 2018	Utilized by Officers (Y, N)
Employee Expense Cards	American Express	January 1, 2018 - September 7, 2018	Y
	JPMorgan Chase (One Card) Visa	August 27, 2018 - December 31, 2018	Y
Purchasing Cards	Citibank	January 1, 2018 - November 22, 2018	N
Fuel Cards	ARI/WEX	January 1, 2018 - December 31, 2018	N
Fleet Cards	ARI	January 1, 2018 - December 31, 2018	N

During 2018, Officers held both AMEX cards & JPMorgan Chase Visa "One Cards to pay for appropriate Company related expenses. AMEX & One Card charges were auto-fed into the NiSource expense reporting system, Concur Expense Solutions (referred to herein as "MySpend"), and then processed by individual employees. Officers who incur out of pocket expenses may still incur legitimate reimbursable business expenses. These expenses are submitted within MySpend and approved on an employee expense statement. Once expense reports are processed and approved within MySpend, payments are remitted to the card administrator.

Accounts Payable performs pre-payment audits on expense reports meeting programmed criteria within MySpend, including audits of all Officer Expense statements. Additionally, MySpend allows for "Hard Stops" which will generate an automatic web response if a transaction does not meet specific criteria and will not allow the expense report to be processed until all required criteria has been entered.

- Note: Subsequent to the GLI, an increased amount of expense transactions were incurred to support employee travel to and from CMA and the rebuild efforts. Accounts Payable noted that the receipt requirements within MySpend were lifted for a two month period between September 14, 2018 through November 14, 2018 to expedite the expense report payment process and to ensure that maximum credit limits were not exceeded. The receipt requirements were lifted again two more times for roughly ten minutes each time to allow Supply Chain to process cards which were utilized to incur large volumes of GLI expenses.

Audit Scope and Approach

Objective 1: Analyze Officer expense to identify any unusual items and/or trends.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Analyze a two-year period of corporate card expenses and examine historical spending patterns to detect significant variations over time;	**No Findings Noted – Refer to Appendix B**
2	Analyze all current audit period's corporate card expenses to identify outliers, anomalies, or potential fraud indicators.	**No Findings Noted**

Objective 2: Determine that employee expenses are processed in accordance with Corporate Policy and Internal Revenue Service guidelines.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Review the procedures performed by Accounts Payable and Supply Chain to monitor spend and/or periodically audit transactions incurred by Officers (and their administrative assistants);	**No Findings Noted**
2	Review selected corporate card expense transactions incurred by Officers identified as part of our analytic procedures in Step 2 of Objective 1 and evaluate their compliance with Corporate Policies;	**No Findings Noted**
3	Review procedures followed to identify expenses incurred on behalf of the Officer's spouse; ensure proper treatment for tax purposes;	**No Findings Noted**
4	Verify that taxable travel (including the use of the Company-leased aircraft or instances of unique commuting arrangements) has been identified and properly included in income as required by IRS reporting requirements for Officers; and	**No Findings Noted**
5	Assess the accuracy and completeness of perquisite information disclosed in the most recent NiSource, Inc. Proxy (Schedule 14A) for the applicable Officers.	**No Findings Noted**

Objective 3: Determine that employee expenses incurred as a result of the Greater Lawrence Incident were processed in accordance with Corporate Policy and Internal Revenue Service guidelines.		
#	**Procedures**	**Findings Summary** (Refer to Appendix A for rating scale)
1	Review the procedures to ensure that expenses incurred as a result of the Greater Lawrence Incident were properly supported (e.g. all required documentation).	**No Findings Noted**
2	Review the expenses were correctly coded for accounting purposes (e.g. allocation to the proper company and classified properly between capital and O&M).	**No Findings Noted**

Report Distribution:

Cc:	D.E. Brown	A.A. Acevedo
	P.T. Disser	M.D. McCuen
	C.J. Hightman	N. Drew
	V. Sistovaris	S.J. Jain
	S. Surface	R.L. Bond
	P.A. Vegas	T.M. Smith
	S.J. Kelly	R.C. Rosenbrock
	J.M. Konold	Deloitte & Touche, LLP
	J.W. Mulpas	

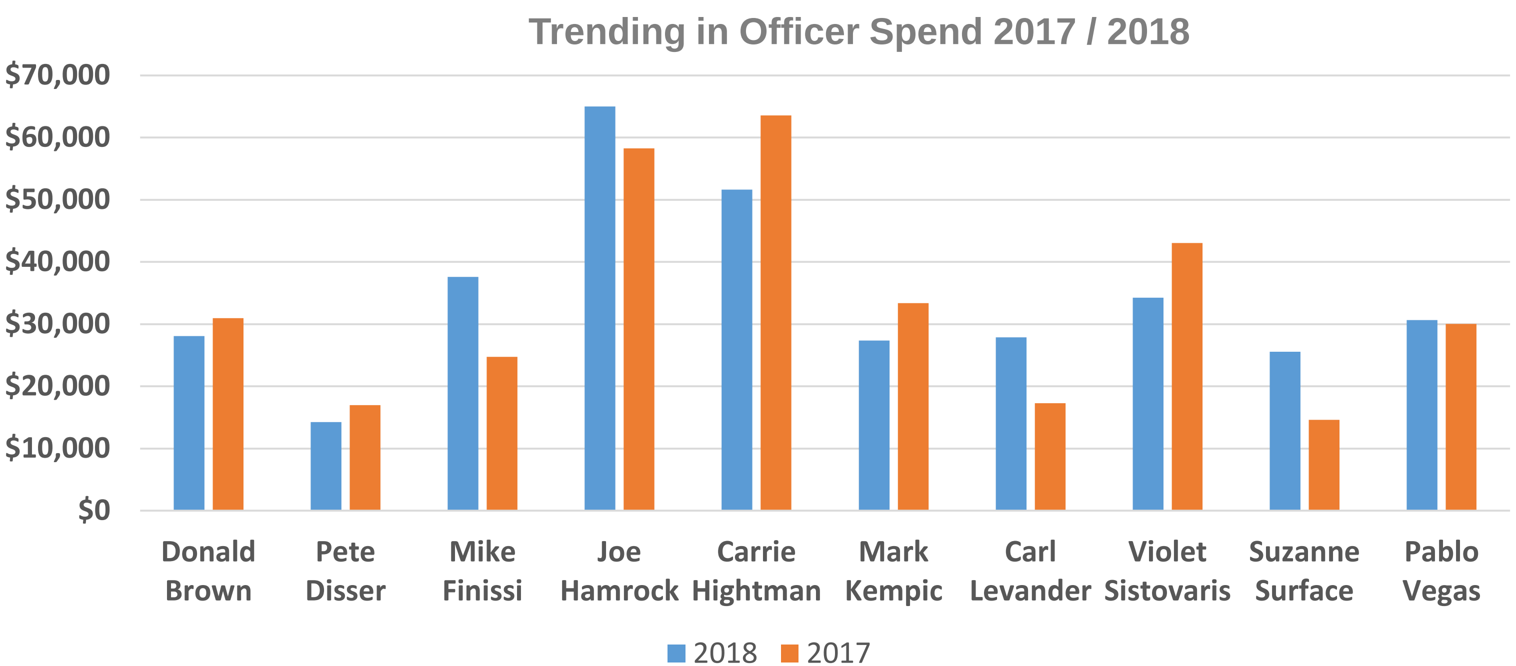
Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Appendix B

Spend By Officer	2018	2017	$ Change	% Change
Donald Brown	28,098	30,972	(2,873)	(9%)
Pete Disser	14,240	16,981	(2,741)	(16%)
Mike Finissi	37,577	24,742	12,835	52%
Joe Hamrock	64,993	58,282	6,710	12%
Carrie Hightman	51,636	63,554	(11,918)	(19%)
Mark Kempic	27,377	33,379	(6,002)	(18%)
Carl Levander	27,873	17,267	10,607	61%
Violet Sistovaris	34,236	43,016	(8,780)	(20%)
Suzanne Surface	25,575	14,587	10,987	78%
Pablo Vegas	30,674	30,027	647	2%
Total	**342,279**	**332,807**	**9,472**	**3%**

	2018			
Spend By Officer	GLI	NON GLI	Total	GLI %
Donald Brown	804	27,295	28,098	3%
Pete Disser	0	14,240	14,240	0%
Mike Finissi	14,892	22,684	37,577	40%
Joe Hamrock	11,368	53,625	64,993	17%
Carrie Hightman	11,003	40,633	51,636	21%
Mark Kempic	5,830	21,547	27,377	21%
Carl Levander	14,381	13,492	27,873	52%
Violet Sistovaris	0	34,236	34,236	0%
Suzanne Surface	6,998	18,577	25,575	27%
Pablo Vegas	15,521	15,153	30,674	51%
Total	**80,798**	**261,481**	**342,279**	**24%**



Note: Refer to Pages 10-14 for detailed comments regarding any significant officer spend fluctuations from 2017 to 2018

Appendix B (Cont'd)

Joe Hamrock				
Expense Type	**2018**	**2017**	Change	% Change
Air Transportation	5,735	4,172	1,563	37%
Ground Transportation	7,770	7,555	215	3%
Entertainment	0	2,920	(2,920)	(100%)
Gifts & Awards	0	110	(110)	(100%)
Meals	22,486	26,806	(4,320)	(16%)
Communications	41	54	(14)	(25%)
Hotel	26,587	12,869	13,718	107%
Meetings	0	0	0	0%
Training	2,295	3,290	(995)	(30%)
Office	115	506	(391)	(77%)
Other	(35)	0	(35)	(100%)
Total	**64,993**	**58,282**	**6,710**	**12%**

- **Total GLI Spend:** $11.3K (~1.7k Ground, $3.8k Hotel & ~$6.2k Meals)
- **Air Transportation –** Increased ~ $1.6k in 2018 from 2017. Number of transactions and average cost per flight increased year-over-year [2017 average was $144 (29 transactions) compared to 2018 of $151 (38 transactions)].
- **Entertainment** –No transactions associated with entertainment in 2018.
- **Meals -** Decreased ~$4.3k in 2018 from 2017. Number of transactions increased while the average cost per meal decreased year-over-year [2017 expense was $362 (74 transactions) compared to 2018 of $267 (84 transactions)]
- **Hotel -** Increased ~$13.7k in 2018 from 2017. Number of transactions and average cost per hotel increased year over year [2017 expense was $357 (36 transactions) compared to 2018 of $566 (47 transactions)].

Donald Brown				
Expense Type	**2018**	**2017**	Change	% Change
Air Transportation	7,397	3,468	3,929	113%
Ground Transportation	3,153	2,776	377	14%
Entertainment	0	0	0	0%
Gifts & Awards	0	0	0	0%
Meals	5,964	12,071	(6,107)	(51%)
Communications	0	0	0	0%
Hotel	9,250	9,572	(322)	(3%)
Meetings	40	0	40	100%
Training	2,295	3,045	(750)	(25%)
Office	0	0	0	0%
Other	0	40	(40)	(100%)
Total	**28,098**	**30,972**	**(2,873)**	**(9%)**

- **Total GLI Spend:** $804 ($20 Air, $303 Ground, $457, $24 Meals)
- **Air Transportation** – Increased ~$4k in 2018 from 2017. Number of transactions increased year-over-year. [28 transactions in 2017 (average spend $124) compared to 55 transactions in 2018 (average spend $134)]
- **Meals** – Decreased ~$6.1k in 2018 from 2017. Number of transactions and average cost per meal decreased year-over-year [2017 expense was $127 (95 transactions) compared to 2018 of $82 (73 transactions)]

Note: *In general, observations were included for fluctuations ~$2K or greater in any noted Expense Type category.*

Appendix B (Cont'd)

Carrie Hightman				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	8,649	1,672	6,977	417%
Ground Transportation	4,789	6,752	(1,964)	(29%)
Entertainment	0	0	0	0%
Gifts & Awards	121	0	121	100%
Meals	20,911	36,527	(15,616)	(43%)
Communications	24	214	(190)	(89%)
Hotel	6,438	11,185	(4,747)	(42%)
Meetings	3,000	0	3,000	100%
Training	7,406	6,629	777	12%
Office	263	525	(263)	(50%)
Other	35	50	(15)	(30%)
Total	**51,636**	**63,554**	**(11,918)**	**(19%)**

- **Total GLI Spend:** ~$11k ($7k Air, $1.6k Ground, $2.3k, $35 Meals)
- **Air Transportation –** ~$6.9k increase was driven by GLI.
- **Ground Transportation** - ~$2k decrease in 2018 from 2017. Number of transactions and the average cost per transaction decreased year-over-year [2017 expense was $37 (184 transactions) compared to 2018 of $33 (144 transactions)].
- **Meals -** Decreased ~$15.6k in 2018 from 2017. Number of transactions increased while the average cost per meal decreased year-over-year [2017 expense was $318 (115 transactions) compared to 2018 of $361 (58 transactions)].
- **Hotel -** Decreased ~$4.7k in 2018 from 2017. [2017 expense was $215 (52 transactions) compared to 2018 of $109 (59 transactions)].
- **Meetings –** $3k spend in 2018 related to a deposit for Legal Summit 2018 (This meeting was subsequently cancelled due to travel restrictions).

Carl Levander				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	8,927	3,362	5,565	166%
Ground Transportation	1,733	963	770	80%
Entertainment	0	0	0	0%
Gifts & Awards	0	110	(110)	(100%)
Meals	4,341	3,133	1,208	39%
Communications	0	0	0	0%
Hotel	10,356	5,273	5,083	96%
Meetings	0	0	0	0%
Training	1,845	3,410	(1,565)	(46%)
Office	672	1,015	(343)	(34%)
Other	0	0	0	0%
Total	**27,873**	**17,267**	**10,607**	**61%**

- **Total GLI Spend:** ~$14.4k ($5.4k Air, $774 Ground, $6.8k Hotel, $1.4k Meals)
- **Air Transportation** – ~$5.5k increase was driven by GLI.
- **Hotel** - ~$5.2k increase was driven by GLI.

Note: *In general, observations were included for fluctuations ~$2K or greater in any noted Expense Type category.*

Appendix B (Cont'd)

Violet Sistovaris				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	3,096	3,162	(66)	(2%)
Ground Transportation	6,315	5,785	599	10%
Entertainment	0	0	0	0%
Gifts & Awards	1,924	1,657	268	16%
Meals	11,660	13,879	(2,192)	(16%)
Communications	0	0	0	0%
Hotel	7,626	10,345	(2,785)	(27%)
Meetings	0	200	(200)	(100%)
Training	2,295	3,293	(998)	(30%)
Office	1,076	4,471	(3,396)	(76%)
Other	244	225	(9)	(4%)
Total	**34,236**	**43,016**	**(8,780)**	**(20%)**

- **Total GLI Spend:** $0
- **Meals -** Decreased ~$2.2k in 2018 from 2017 (46 transactions [average cost $302] in 2017 compared to 54 transactions [average cost $216] in 2018).
- **Hotel** – Decreased ~$2.8k in 2018 from 2017. Number of transactions decreased while the average cost per transaction increased year-over-year [2017 average was $192 (54 transactions) compared to average cost of $231 (33 transactions) in 2018].
- **Office -** Decreased ~$3.4k in 2018 from 2017. While the number of transactions stayed the same, the average cost per transaction decreased. (15 transactions [average cost $298] in 2017, compared to 15 transactions [average cost $72] in 2018.)

Pablo Vegas				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	942	4,562	(3,620)	(79%)
Ground Transportation	2,795	2,517	279	11%
Entertainment	0	492	(492)	(100%)
Gifts & Awards	0	0	0	0%
Meals	12,420	8,014	4,406	55%
Communications	0	0	0	0%
Hotel	10,890	7,213	3,677	51%
Meetings	0	0	0	0%
Training	2,295	5,955	(3,660)	(61%)
Office	1,297	811	485	60%
Other	35	463	(428)	(92%)
Total	**30,674**	**30,027**	**647**	**2%**

- **Total GLI Spend:** ~$15.5k ($206 Air, $2.2k Ground, $7.4k Hotel, $4.4k Meals, $262 Office, $1.1k Other)
- **Air Transportation –** Decreased ~$3.6k in 2018 from 2017. (Travel Restrictions were place in 2018. Additionally, Mr. Vegas used the Company plane to travel to Greater Lawrence area)
- **Meals** – Increased ~$4.4k in 2018 from 2017. Increase primarily related to Greater Lawrence Incident.
- **Hotel –** Increased ~$3.6k in 2018 from 2017. Increase primarily related to Greater Lawrence Incident.
- **Training –** Decreased ~$3.6k in 2018 from 2017 (9 transactions [average cost $662] in 2017 compared to 2 transactions [average cost $1148] in 2018).

Note: *In general, observations were included for fluctuations ~$2K or greater in any noted Expense Type category.*

Appendix B (Cont'd)

Suzanne Surface				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	4,179	2,957	1,222	41%
Ground Transportation	1,513	983	530	54%
Entertainment	0	250	(250)	(100%)
Gifts & Awards	0	0	0	0%
Meals	15,752	7,040	8,711	124%
Communications	0	0	0	0%
Hotel	4,093	2,982	1,111	37%
Meetings	0	31	(31)	0%
Training	0	345	(345)	(100%)
Office	38	0	38	100%
Other	0	0	0	0%
Total	**25,575**	**14,587**	**10,987**	**75%**

- **Total GLI Spend:** ~$7k ($2.3k Air, $1.5k Ground, $2.7k Hotel, $468 Meals)
- **Meals –** Increased ~$8.7k in 2018 from 2017. The increase is partially attributed to change in Leadership roles. (41 transactions [average cost $172] in 2017 compared to 71 transactions [average cost $222] in 2018.)

Pete Disser				
Expense Type	**2018**	**2017**	**Change**	**% Change**
Air Transportation	2,624	3,824	(1,200)	(31%)
Ground Transportation	1,960	2,628	(667)	(25%)
Entertainment	0	0	0	0%
Gifts & Awards	0	0	0	0%
Meals	4,073	3,372	701	21%
Communications	0	0	0	0%
Hotel	5,258	6,188	(930)	(15%)
Meetings	0	0	0	0%
Training	325	895	(570)	(64%)
Office	0	75	(75)	0%
Other	0	0	0	0%
Total	**14,240**	**16,981**	**(2,741)**	**(16%)**

- **Total GLI Spend:** $0
- Internal Audit noted no fluctuations ~$2k or greater

Note: *In general, observations were included for fluctuations ~$2K or greater in any noted Expense Type category.*

Appendix B (Cont'd)

Michael Finissi				
Expense Type	**2018**	**2017**	Change	% Change
Air Transportation	3,719	2,560	1,159	45%
Ground Transportation	3,586	2,352	1,234	52%
Entertainment	0	0	0	0%
Gifts & Awards	0	0	0	0%
Meals	23,115	15,064	8,051	53%
Communications	0	0	0	0%
Hotel	5,131	3,321	1,810	55%
Meetings	0	500	(500)	(100%)
Training	1,490	550	940	171%
Office	536	395	141	36%
Other	0	0	0	0%
Total	**37,577**	**24,742**	**12,835**	**52%**

- **Total GLI Spend:** ~$14.9k ($317 Air, $1.8k Ground, $2.6k Hotel, $10.2k Meals)
- **Meals –** Increased ~$8k from 2017 to 2018. The increase is mainly attributed to the Greater Lawrence Incident.
- **Hotels** – Increased ~$1.8k from 2017 to 2018. The increase is mainly attributed to the Greater Lawrence Incident.

Mark Kempic				
Expense Type	**2018**	**2017**	Change	% Change
Air Transportation	13,001	6,346	6,654	105%
Ground Transportation	3,653	2,290	1,363	60%
Entertainment	0	270	(270)	(100%)
Gifts & Awards	0	0	0	0%
Meals	6,279	18,067	(11,788)	(65%)
Communications	0	0	0	0%
Hotel	3,858	3,938	(80)	(2%)
Meetings	0	0	0	0%
Training	523	2,168	(1,645)	(76%)
Office	63	300	(237)	(79%)
Other	0	0	0	0%
Total	**27,377**	**33,379**	**(6,002)**	**(18%)**

- **Total GLI Spend:** ~$5.8k ($2.6k Air, $2.4k Ground, $189 Hotel, $545 Meals, $57 Office, $32)
- **Air Transportation** – Increased ~$6.7k in 2018 from 2017, primarily related to change in Leadership role and the Greater Lawrence Incident. (30 transactions [average cost $212] in 2017 compared to 51 transactions [average cost $255] in 2018.)
- **Meals** – ~$11.8k decrease from 2017 to 2018. Number of transactions and average cost per meal decreased year-over-year. (73 transactions [average cost $247] in 2017 compared to 61 transactions [average cost $103] in 2018).

Note: *In general, observations were included for fluctuations ~$2K or greater in any noted Expense Type category.*

2019 Disaster Recovery

To: Katy Perez, Manager – IT Infrastructure, DC & End User Delivery
Ishreth M Sameem, Director – IT Infrastructure, DC & End User Delivery

From: Brett Welsch, Project Manager – Infor. Systems Audit
Greg Wancheck, Director - Infor. Systems Audit

September 11, 2019

NiSource

NiSource®

NiSource IT Audit conducted our 2019 Disaster Recovery (DR) Exercise review between May 2019 and July 2019. The purpose of IT Audit's assessment was to verify the capability to recover data center operating hardware, operating systems, and applications and establish network connectivity to the NiSource enterprise from the Sungard recovery facility. IT Audit reviewed various planning, status and final reports created in order to gain an understanding of results associated with the June 2019 Disaster Recovery Exercise. In addition to interviewing key individuals associated with the NiSource IT Disaster Recovery program, IT Audit reviewed contracts, presentations and other relevant documentation as a means to further understand the WIPRO / Sungard agreement.

IT Audit's 2019 Disaster Recovery Exercise analysis noted one (1) LOW risk finding:

Low Risk Finding (#1):

- **A review of the Disaster Recovery Exercise Runbook showed that while the Runbook contains enough information to assist relevant personnel in the recovery of both NiSource mainframe and open systems applications, there is an opportunity to enhance the Runbook with supplemental data. Additionally, although status reports distributed during the June 2019 DR Exercise contained some of the relevant exercise information, these can also be enhanced based on the details in the Recommendation below.**

➢ Recommendation: NiSource IT Management should engage with relevant DR support teams, vendors, business and IT application owners to determine whether additional information would be useful to the overall DR exercise planning and execution process. Included in this information could be:

- A detailed listing of responsibilities between NiSource, Sungard, WIPRO, and other major disaster recovery exercise participants, coupled with a more thorough contact information summary for DR exercise participants
- Additional clarity around the DR exercise objectives - both primary and secondary if applicable - and who is responsible for meeting each of those objectives including contact information for support personnel
- More detailed exercise timelines and the Recovery Point Objective (RPO) & Recovery Time Objective (RTO) for each application or component
- Tasks completed within the exercise timelines and timing of upcoming tasks to assist application and business participants with their involvement

Additionally, the NiSource IT DR Management team should have follow-up discussions with all recipients of the exercise status reports to determine whether information on the status report is useful or if more - or possibly less - information would be beneficial to include within the reports.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing, whereby a summary of HIGH and/or MODERATE findings will be provided to the NiSource Audit Committee. NiSource IT Audit would like to thank the NiSource IT DR Management Team for their cooperation and time in support of this effort.

Background

The NiSource IT Disaster Recovery program is commissioned to support the NiSource enterprise by identifying, defining, documenting and testing recovery plans that would be executed in the event of an unforeseen interruption in computing services.

The goal of NiSource's Disaster Recovery Exercise is to validate appropriate procedures are in place and adequately provide direction for the recovery of critical NiSource computing applications. The agreed to scope, objectives and type of exercise determines the extent to which the Disaster Recovery Exercise simulates the conditions of an actual disaster situation. By verifying the documented backup and recovery procedures, the Disaster Recovery Exercise is designed to identify gaps and areas for procedural improvement to ensure the company is prepared for a true disaster scenario.

NiSource, through its agreement with WIPRO, contracts with Sungard to provide the facilities, infrastructure and computing hardware required in the event of a disaster or prolonged service interruption. Twice a year, NiSource IT Management and WIPRO plan a joint exercise to test the viability of recovery plans for a defined set of applications.

The June 2019 Disaster Recovery Exercise was conducted between June 17 - 20, 2019 with an overall goal to recover eleven (11) Mainframe applications and twenty-one (21) Distributed applications.

During the June 2019 Disaster Recovery Exercise, NiSource recovered the Mainframe environment utilizing Sungard's hot-site rapid recovery procedure while the twenty-one (21) applications residing on the Distributed platform were recovered via tape backup.

Audit Scope and Approach

For testing purposes, IT Audit verified NiSource IT's capability to recover data center operating hardware, operating systems, and applications and establish network connectivity to the enterprise from the Sungard recovery facility, as specified in the Disaster Recovery Exercise Runbook, created by WIPRO.

Objective 1: Verify the adequacy, efficiency, and effectiveness of the IT disaster recovery plan, support personnel, and contracted services in restoring critical mainframe and distributed systems, related business applications, and network connectivity as required to meet management's expectations in the event of a prolonged IT service disruption.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Review management's objectives and expectations regarding the continuity of business operations to ensure they are clearly defined and communicated. Additionally, review user responsibilities to ensure responsibilities meet management's objectives.	**Finding #1 (See Slide #7)**
2	Ensure adequate human resources are assigned to the DR exercise team.	**No Findings Noted**
3	Verify timely and appropriate exercise status reports are completed and distributed reflecting issues or problems to be resolved in a quick and efficient manner to minimize plan disruption.	**No Findings Noted**
4	Review recovery issues, irregularities and other anomalies encountered during the exercise for adequate documentation to perform a post recovery review and adjust recovery plans as needed.	**No Findings Noted**
5	Ensure Recovery Time Objectives (RTOs) and Business Criticality are defined for each business application and ensure RTOs are met during the Disaster Recovery Exercise. Assess the process commenced by NiSource IT Disaster Recovery Management to evaluate (and update where needed) RTO's through alignment with NiSource business application owners.	**No Findings Noted**

Audit Scope and Approach (Cont'd)

Objective 2: Evaluate the Wipro Disaster Recovery services obligations, as detailed in the WIPRO Master Services Agreement (MSA), and compare covered applications with the status of NiSource tested applications.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Ascertain the full population of applications covered in the WIPRO contract to determine what applications are available to test.	**No Findings Noted**
2	Of those applications determined above, identify applications that have been tested and when was the last test conducted.	**No Findings Noted**
3	Of those applications determined in step 1 above, identify applications which have never been tested along with rational as to why.	**No Findings Noted**

Objective 3: Evaluate the WIPRO Disaster Recovery services obligations to determine requirements and ownership of documents related to recovery test "scripts" and application recovery procedures.		
#	**Procedures**	**Findings Summary (Refer to Appendix A for rating scale)**
1	Determine if recovery test "scripts" and application recovery procedures are documented and readily available from PlanningIT.	**No Findings Noted**
2	Assess the process by which recovery test "scripts" and application recovery procedures are determined to be up-to-date and re-evaluated on a periodic basis.	**No Findings Noted**
3	Identify who is responsible for ownership and maintenance of the recovery test "scripts" and application recovery procedures.	**No Findings Noted**
4	Determine if a process or procedure exists to have Business / Application owners update PlanningIT in a timely manner to ensure disaster recovery (and other application information) is being kept current.	**No Findings Noted**
5	Ensure key PlanningIT application fields for both recovery planning and executive reporting are utilizing change management procedures to minimize unauthorized updates.	**No Findings Noted***

*** In the second half of 2019, NiSource IT is starting an initiative to incorporate the APM (Application Program Management) module into ServiceNow. This module will replace Planning IT as the repository for applications and their properties. IT Audit will be engaged in this effort with the project team to ensure that the application data within PlanningIT is reviewed, updated, and 'cleaned' before the information is entered into the new SNOW APM module, with processes implemented to keep the APM information current.**

Findings

Objective #1, Procedure #1: Review management's objectives and expectations regarding the continuity of business operations to ensure they are clearly defined and communicated. Additionally, review user responsibilities to ensure responsibilities meet management's objectives.	**Risk Rating**
Finding: Review of the communication sent both prior to and during the exercise showed that there is an opportunity for enhancement in the information being communicated by both the NiSource and support teams. A review of the exercise runbook showed that while the runbook contains enough information to assist in the recovery of the mainframe and open systems applications, there is an opportunity to expand the runbook with additional information. Additionally, while status reports sent during the exercise have some of the relevant exercise information, these can also be enhanced to include additional information.	**Low**
Process Owner(s): Katy Perez (Manager IT Infrastructure), Ishreth Sameem (Director IT Infrastructure), Greg Skinner (VP – IT Infrastructure)	**Target Remediation** **N/A**

Observation

Criteria: The Disaster Recovery Exercise Runbook (Plan) is a complete document with all the information needed to ensure that participants know the exercise objectives, responsibilities and other useful information that will assist in the successful execution of the exercise.

Condition: The Disaster Recovery Exercise Runbook (Plan) is incomplete, leading to confusion about responsibilities, objectives or timing of activities.

Risk/Impact: The Disaster Recovery Exercise participants could be unsure of their objectives or responsibilities leading to an incomplete or unsuccessful recovery test.

Recommendation

NiSource IT Management should engage with relevant support teams, vendors, business and IT application owners to determine whether additional information would be useful to the overall exercise planning and execution process. Included in this information could be:

- A detailed listing of responsibilities between NiSource, Sungard, WIPRO, and other major disaster recovery exercise participants, coupled with a more thorough contact information summary for DR exercise participants
- Additional clarity around the DR exercise objectives - both primary and secondary if applicable - and who is responsible for meeting each of those objectives including contact information for support personnel
- More detailed exercise timelines and the Recovery Point Objective (RPO) & Recovery Time Objective (RTO) for each application or component
- Tasks completed within the exercise timelines and timing of upcoming tasks to assist application and business participants with their involvement

Additionally, the NiSource IT DR Management team should have follow-up discussions with all the recipients of the exercise status reports to determine if the information on the status report is useful or if more - or possibly less - information would be beneficial to include within the reports.

Management Response

The Disaster Recovery Management team will ensure to review the Communication Plan and the DR Exercise Run Book with all parties well in advance to ensure that all parties are in agreement with the timing and delivery of the communication channels during the DR exercise. As part of the planning the teams are working to ensure that more detailed listing of responsibilities as well as clear objectives are identified from all parties.

Report Distribution

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

2018 Pension Trust and Benefits

September 20, 2019

To: Jillian Hansen, Director of Benefits

From: Tammy Frazier, Internal Audit Lead
Lin Koh, Director Internal Audit

NiSource®

Executive Summary

Internal Audit performed an audit to assess the accuracy and completeness of pension plan information and payments for the period from January 1, 2018 through December 31, 2018.

Based on procedures performed, Internal Audit noted one moderate risk finding:

- For one NiSource participant, there was an error in Alight Solutions' qualified vs nonqualified account balance calculation.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. IA would like to thank NiSource staff and management for their cooperation and time in support of this audit.

Background

On an annual basis, Internal Audit performs a review of the Pension Trust Fund. During this year's review, our work was designed to assess the accuracy of plan benefit payments as well as demographic data for the period under review.

Pension benefits are maintained by Alight Solutions, an outside provider. There were no significant changes in how pension benefits are managed and maintained for NiSource during 2018.

Once a NiSource participant has met the annual contribution limits set by the IRS for qualified plans, they have the option to contribute to a non-qualified plan. Contributions to a non-qualified plan are unlimited. Non-qualified plans are supplemental benefits on top of those provided by a company's qualified retirement plans and are not guaranteed as they are not required to meet ERISA standards regarding eligibility, participation, documentation and vesting.

Audit Scope and Approach

The purpose of this audit was to assess the accuracy of the plan benefit payments for the period from January 1, 2018 through December 31, 2018.

Business Objective 1: Assess the accuracy of the benefit payments for the period under review.		
#	**Procedures**	**Findings Summary** (Refer to Appendix A for rating scale)
1	Perform a benefit payment recalculation on a sample selected by Deloitte & Touche.	**Finding #1 – See Page 5**
2	Review the accuracy of prior year annuity payments.	**No Findings Noted**

Audit Scope and Approach

The purpose of this audit was to assess the accuracy of the plan benefit payments for the period from January 1, 2018 through December 31, 2018.

Business Objective 2: Validation of Information through Demographic Testing		
#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Validate participant's demographic information by comparing information provided by Hewitt to PeopleSoft.	**No Findings Noted**

Findings

Objective 1: Perform a benefit payment recalculation on a sample selected by Deloitte & Touche.	**Risk Rating**
Finding #1: A small portion of one participant's benefit payment, out of a sample of 24, was incorrectly paid out from the qualified rather than the non-qualified account.	**Moderate**
Process Owner(s): Jillian Hansen, Director of Benefits	**Target Remediation Date:**
Executive Council Member: Responsible: Ken Keener, SVP & CHRO	**March 31, 2020**

Observation

Criteria: Pension benefits are calculated with complete and accurate information and are paid accordingly.

Condition: There was an error in Alight Solutions' qualified vs nonqualified account balance calculation. This resulted in approximately $1500 of the participant's benefit ($1.3M total) being incorrectly paid out of the qualified rather than non-qualified account. The error was a result of the February 2011 deferred performance based pay not being recorded in Alight's system for this participant. A reconciliation between PeopleSoft and Alight for all other participants with deferred performance based pay for February 2011 was performed and no additional discrepancies were noted.

Risk/Impact: Payment of non-qualified benefits from the qualified account could result in potential violation of funding rules established by ERISA.

Recommendation

Internal Audit recommends that benefits for participants contributing to a non-qualified plan be subject to additional review requirements.

Management Response

The error made in the qualified vs non-qualified balance of the participant in question was made back in 2011, prior to the implementation of an annual audit process of the non-qualified pension benefit which commenced around the 2015 time frame. The audit on the non-qualified pension benefit occurs annually and ensures the participant's deferred compensation for said year is accurately reflected in Alight's system. Additionally as a result of this issue, a further review of the deferred compensation was recently added to the monthly Retirement/Earnings review to ensure all deferred compensation is accurately reflected at commencement. A comprehensive review of all participants with an outstanding non-qualified benefit (approximately 100 participants) will be completed by March 31, 2020.

Report Distribution

CC: J. Hamrock
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N. Drew
Deloitte & Touche

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Abandonment of Service Line Facilities

Columbia Gas of Kentucky (CKY)
Columbia Gas of Ohio (COH)
Columbia Gas of Pennsylvania (CPA)
Columbia Gas of Maryland (CMD)
Columbia Gas of Virginia (CGV)

September 25, 2019

To: NiSource Gas Distribution Presidents
NiSource Gas Distribution General Managers
Don Eckstein, Senior Vice President Gas Support Services

From: J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

NiSource®

Executive Summary

Internal Audit conducted a review of the processes and controls in place related to the abandonment of service line facilities across the NiSource Gas Distribution Companies utilizing the Distribution Information System (DIS)* in accordance with both federal and state regulatory requirements as well as any internal Gas Standards. The review focused on the processes and controls in place to perform the following:

- Assessment for the prospect of future use at service locations in Inactive, Idle, or Pre-New Set Status;
- Response to changes at those locations (e.g. demolition); and
- Execution of a service line abandonment in accordance with NiSource Gas Standards.

Summary Conclusions:

Internal Audit identified **2 moderate risk** audit findings related to ensuring that there are processes established to complete abandonments in accordance with NiSource Gas Standards:

- Internal Audit identified instances where the use of a "Paper Abandon" may not have been appropriate. Refer the to scenarios below:
  - 1 instance where a "Paper Abandon" job order was executed in WMS where the service was identified as "unlocatable" (e.g. "House Not Here").
  - Multiple instances where a "Paper Abandon" job order was executed in WMS on a service identified as a single service in the system but no additional information was provided as to why a "paper" execute was appropriate.

    - **Recommendation:** NiSource Management should establish a process which outlines how to address "unlocatable" services when eligible for abandonment, including which resources and methods to locate should be attempted and how decisions should be made and documented. NiSource Management should also ensure that "paper abandons" are reviewed for proper execution and that the documentation in the systems of record support the use of the "paper abandon".

* NIPSCO Gas and Columbia Gas of Massachusetts (CMA) utilize the Customer Information System (CIS) to track information related to services. As such, those companies will be reviewed separately during 2019.

Summary Conclusions (Cont'd):

- **Management Response:** The state specific audit findings (referenced on the previous slide) have been assigned to the State Presidents/COOs for resolution by **December of 2019.** The SMS asset management team will utilize our risk-informed decision making model to prioritize the audit finding and determine the appropriate mitigation schedule. The asset management team will then work with internal SMEs, GMs, and State Presidents/COOs to develop a holistic mitigation plan to include appropriate layers of protection that will help prevent future occurrences; incorporating findings from each state. This action will be entered in CAP and assigned to the asset management team within SMS. The action plan will be developed by **November of 2019.**

- A population of ~**22K** Inactive, Idle, or Pre-New Set services have not been abandoned in accordance with the 60 month timeframe outlined in NiSource Gas Standards.

  - **Recommendation:** NiSource Management should work to resolve the population of services in Inactive, Idle or Pre-New Set Status that are past the timeframe for abandonment as established in NiSource Gas Standards. Additionally, NiSource Management should establish a process going forward to monitor Inactive, Idle, or Pre-New Set locations to ensure that they are abandoned in accordance with NiSource Gas Standards.

  - **Management Response:** The SMS asset management team will utilize our risk-informed decision making model to prioritize the audit finding and determine the appropriate mitigation schedule. The asset management team will then work with internal SMEs, GMs, and State Presidents/COOs to develop a holistic mitigation plan to include appropriate layers of protection that will help prevent future occurrences; incorporating findings from each state. This action will be entered in CAP and assigned to the asset management team within SMS. The action plan will be developed by **November of 2019.**

Additional Items Noted During the Audit: While performing testing procedures, Internal Audit identified instances of inaccurate or incomplete data within company systems of record related to the following key fields:

- Inaccurate or Blank Disconnect Dates
- Inaccurate or Blank Service Line Install Dates
- Duplicate PSIDs assigned to one service location
- Inaccurate Master Tap Codes (indicates when a manifold meter or split service exists)
- Inaccurate Meter Location Codes

Internal Audit discussed these items with Management and provided examples for their review.

Background

The Pipeline and Hazardous Materials Safety Administration's (PHMSA) Code of Federal Regulations (CFR) § 192.727 (d) states the following:

Whenever service to a customer is discontinued, one of the following must be complied with:

1. The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator.
2. A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly.
3. The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed.

The NiSource Gas Standard 1740.010 outlines the conditions requiring abandonment specific to Meters and Service Lines. (Note: Some of the requirements below are self-imposed while others are required by individual state commissions.) Refer to the chart below:

<table>
<tr><th>State</th><th>Meter Removal Requirement</th><th>Abandonment Requirement</th></tr>
<tr><td>OH</td><td rowspan="4">Meter may remain in place for up to 24 months after the gas service has been discontinued. The meter may continue to remain in place if circumstances indicate it is appropriate.</td><td rowspan="5">Service lines that have gas discontinued should be evaluated for the prospect of future use by the end of the 24th month from the day the gas service was discontinued. If no prospect for future use can be determined, then the service line shall be abandoned. Service Lines shall be abandoned not later than the end of the 60th month from either the date that the gas service was discontinued or when the service line was placed in service for a new service line that has not had a meter installed.</td></tr>
<tr><td>PA</td></tr>
<tr><td>MD</td></tr>
<tr><td>KY</td></tr>
<tr><td>VA</td><td>Meters and meter set assemblies <u>should be left in place until full abandonment</u> of the service line can occur.</td></tr>
</table>

Audit Scope and Approach

Internal Audit reviewed the processes and controls in place related to the abandonment of service line facilities across the NiSource Gas Distribution Companies utilizing DIS in accordance with both federal and state regulatory requirements as well as any internal company Gas Standards.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided to NiSource Management.

Objective 1: Review the population of inactive, idle, and pre-new set services to determine if the NiSource Gas Companies' systems of record indicate compliance with both federal and state regulatory requirements as well as any Gas Standards.

#	Procedures	Findings Summary (Refer to Appendix A)
1	Assess processes and controls established to evaluate services for future use, to respond to changes at those locations (e.g. demolition), and to abandon in accordance with NiSource Gas Standards.	**Finding #1 – See page 6**
2	Obtain the DIS population of all service locations with premise statuses of Inactive, Idle, and Pre-New Set (Service Line Installed) and assess for compliance with both federal and state regulatory requirements as well as any internal Gas Standards.	**Finding #2 – See page 8**

Objective 2: Review available data associated with service lines eligible for abandonment, completed abandonments, and facility damages to identify trends.

#	Procedures	Findings Summary (Refer to Appendix A)
1	Obtain a listing of all damages included in the Damage Prevention Tracking System (DPTS) for the period of 1/1/17 - 4/17/19. Using this data, identify damages which occurred on inactive or idle services and assess the associated risk.	**Refer to Appendix B**
2	To determine how frequently a new service is installed after performing an abandonment, obtain all locations with a completed abandonment job order during the period of 1/1/2015 – 3/31/2019, then identify any subsequent new service line install for those same locations.	**Refer to Appendix C**

Findings (Cont'd)

Objective #1, Procedure #1: The process of completing "paper" abandonments within WMS when the service is "unlocateable" results in the possibility of removing a live line from the system of record.	**Risk Rating**
Finding #1: Services may still exist at locations where "paper abandon" job orders were executed in WMS (thereby removing the service from company records) when services were identified as "unlocatable."	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; Don Eckstein, Senior Vice President Gas Support Services **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q4 2019**

Observation

Criteria: The company shall maintain accurate and complete records for all service lines.

Condition: Internal Audit identified the following:

- 1 instance where a "Paper Abandon" job order was executed in WMS where the service was identified as "unlocatable" (e.g. "House Not Here").
- Multiple instances where a "Paper Abandon" job order was executed in WMS on a service identified as a single service in the system but no additional information was provided as to why a "paper" execute was appropriate.

Internal Audit noted there are scenarios when utilizing the paper abandon process is appropriate (refer to NOTE below); however, it is difficult to ensure the capture of the complete population of "Paper Abandon" job orders for risk analysis and review as the phrase is manually typed into Job Order Summary within WMS and there are often differences in how the user references it (e.g. Paper Abandon, Paper ABN, Paper ABDN, PPR ABNDN, Execute Only, EXC Only).

NOTE: The process of "paper abandoning" was originally created to represent instances where a job order needed to be completed to ensure accurate records but where no work was actually performed on the service line. See below for the following examples of when utilizing the paper abandon process is appropriate:

- If service to the primary account on a manifold setting needed to be abandoned, the service line could not physically be cut as it still serviced the remaining accounts on the manifold. As a result, a "paper abandonment" would be completed by executing a 566 job order (service line abandonment) and including the term "Paper" or "Execute Only" in the Job Order Summary Description field within WMS.
- In certain cases, if a mainline is retired and moved to another location, the services associated with the original main would have "paper abandonments" completed as there was not a need to physically cut the services from the main as the main was no longer in service. These job orders would also include the term "Paper" or "Execute Only" in the Job Order Summary Description field within WMS.

Risk/Impact: Improperly executed "paper abandon" job orders create the risk that there is no longer a record of a service line which could potentially still be attached to a live main.

Findings (Cont'd)

Objective #1, Procedure #1: The process of completing "paper" abandonments within WMS when the service is "unlocateable" results in the possibility of removing a live line from the system of record.	**Risk Rating**
Finding #1: Services may still exist at locations where "paper abandon" job orders were executed in WMS (thereby removing the service from company records) when services were identified as "unlocatable."	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; Don Eckstein, Senior Vice President Gas Support Services **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q4 2019**

Recommendation

NiSource Management should establish a process which outlines how to address "unlocatable" services when eligible for abandonment, including which resources and methods to locate should be attempted and how decisions should be made and documented.

NiSource Management should also ensure that "paper abandons" are reviewed for proper execution and that the documentation in the systems of record support the use of the "paper abandon".

Management Response

The state specific audit findings (referenced on the previous slide) have been assigned to the State Presidents/COOs for resolution by **December of 2019.** The SMS asset management team will utilize our risk-informed decision making model to prioritize the audit finding and determine the appropriate mitigation schedule. The asset management team will then work with internal SMEs, GMs, and State Presidents/COOs to develop a holistic mitigation plan to include appropriate layers of protection that will help prevent future occurrences; incorporating findings from each state. This action will be entered in CAP and assigned to the asset management team within SMS. The action plan will be developed by **November of 2019.**

Findings (Cont'd)

Objective 1, Procedure #2: Obtain the DIS population of all service locations with premise statuses of INACTIVE, IDLE, and Pre-New Set (Service Line Installed) and assess for compliance with both federal and state regulatory requirements as well as any internal Gas Standards.	**Risk Rating**
Finding #2: Inactive, Idle, or Pre-New Set services have not been abandoned in accordance with the 60 month timeframe outlined in NiSource Gas Standards.	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; Don Eckstein, Senior Vice President Gas Support Services Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q4 2019**

Observation

Criteria: Services are abandoned in accordance with the timeframes set forth in the NiSource Gas Standards.

Condition: **19%** of the service locations in Inactive, Idle or Pre-New Set status are past the **60** month requirement for abandonment as established in NiSource Gas Standard 1740.010.

Company	Services in Status* Eligible for Abandonment	Services Past 60 Month Abandonment Standard**	% of Total Services in Eligible Status
Ohio	73,516	11,635	16%
Kentucky	15,200	6,636	44%
Virginia	12,647	2,294	18%
Pennsylvania	15,305	1,893	12%
Maryland	2,579	264	10%
TOTAL	119,247	22,722	19%

*These populations represent services with premise statuses of Inactive, Idle, or Pre-New Set as of a point in time (March 31, 2019). Subsequent changes at service locations (e.g. re-activation of service) would result in adjustments to the populations above.

** Manifold accounts were included in the population past the 60 month requirement noted above if there were no active related accounts.

Based on the data pulled as of March 31, 2019, the company could expect an additional ~**5.6K** and ~**7.0K** services to come due for abandonment in the next 12 and 24 months, respectively.

Refer to the following slide for an aging analysis of the ~**22K** noted above based on the Disconnect Date (Inactive or Idle Status) or Install Date (Pre-New Set Status).

Findings (Cont'd)

Objective #1, Procedure #2: (Cont'd)	Risk Rating
Finding #1: (Cont'd)	Moderate
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; Don Eckstein, Senior Vice President Gas Support Services Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities	Target Remediation Date: Q4 2019

Observation – Condition (Cont'd)

Disconnect Date (Inactive or Idle) Install Date (Pre-New Set)	Ohio	Kentucky	Virginia	Pennsylvania	Maryland	ALL COMPANIES
Date Blank or Invalid	1,560	381	144	318	64	2,467
1950s	7			1	-	8
1960s	12	-	1	1	-	14
1970s	9	1	-	3	-	13
1980s	946	244	66	107	7	1,370
1990s	2,142	464	152	258	18	3,034
2000s	3,911	3,504	510	506	62	8,493
2010s	3,048	2,042	1,421	699	113	7,323
TOTALS	**11,635**	**6,636**	**2,294**	**1,893**	**264**	**22,722**

Risk/Impact:

- The company may incur facility damages on inactive service lines, which could have been avoided had the abandonment been completed timely.
- Changes to service locations (e.g. demolition) are more likely to occur the longer the account is not active. If the company is not notified that a demolition occurred or if the company does not respond, it may result in difficulty to locate company assets.
- The company may incur potential fines or penalties if found to be out of compliance with NiSource Gas Standards.

Findings (Cont'd)

Objective #1, Procedure #2: (Cont'd)	Risk Rating
Finding #1: (Cont'd)	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; Don Eckstein, Senior Vice President Gas Support Services Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q4 2019**
Recommendation: NiSource Management should work to resolve the population of services in Inactive, Idle or Pre-New Set Status that are past the timeframe for abandonment as established in NiSource Gas Standards. Additionally, NiSource Management should establish a process going forward to monitor Inactive, Idle, or Pre-New Set locations to ensure that they are abandoned in accordance with NiSource Gas Standards.	
Management Response: The SMS asset management team will utilize our risk-informed decision making model to prioritize the audit finding and determine the appropriate mitigation schedule. The asset management team will then work with internal SMEs, GMs, and State Presidents/COOs to develop a holistic mitigation plan to include appropriate layers of protection that will help prevent future occurrences; incorporating findings from each state. This action will be entered in CAP and assigned to the asset management team within SMS. The action plan will be developed by **November of 2019.**	

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.</u>*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.</u>*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *<u>Internal Audit does not perform follow-up review procedures on low risk findings.</u>*

Appendix B – Facility Damages on Locations Past the 60 Month Abandonment Requirement

Internal Audit obtained the population of 3rd party damages on service lines from the period of January 1, 2017 through April 17, 2019 to analyze trends related to damages at locations in Inactive, Idle or Pre-New Set status. Out of the total 4,029 damages that occurred during the period review, 9 related to locations which were past the 60 month period for abandonment, resulting in additional costs of ~$12K. Refer to the chart below:

Company	# SL Damages	# Damages on Inactive/Idle/Pre-New Set	Past the 60 Month Period for Abandonment	Cost of Damage
Ohio	2,917	27	1	$ 895.14
Kentucky	307	12	6	$ 7,593.74
Virginia	368	9	1	$ 1,445.06
Pennsylvania	390	4	1	$ 3,009.76
Maryland	47	3	-	N/A
ALL COMPANIES	**4,029**	**55**	**9**	**$ 12,944**

Appendix C – New Service Line Install Subsequent to Abandonment

As it can be difficult to accurately predict the prospect for future use, Internal Audit performed an analysis to determine how frequently a NiSource company installed a new service line less than one year after abandoning a service line at that same location. As noted in the table below, this scenario occurred after ~**7%** of the completed abandonments.

Company	# SL Abandonments	New SL Install < 1 Year from Abandonment	%
Ohio	58,025	4,524	8%
Kentucky	4,561	143	3%
Virginia	4,336	187	4%
Pennsylvania	8,835	563	6%
Maryland	1,184	78	7%
ALL COMPANIES	**76,941**	**5,495**	**7%**

Robotics Process Automation (RPA) Design

To: Andy Zupfer, IT Program Manager – IT Applications – Ent/Corp.
Jennifer Tipton, VP – IT Applications

From: Goranka Kasic, Project Manager - Infor. Systems Audit
Greg Wancheck, Director - Infor. Systems Audit

October 8, 2019

NiSource

NiSource Information Technology (IT) Audit aligned with NiSource's Robotics Process Automation (RPA) Project Team to provide an independent, consultative perspective on RPA's initial design integration into existing IT Service Delivery procedures/processes and the organization's current technology stack. IT Audit also evaluated RPA's alignment with NiSource's experimental Agile delivery model aspirations, including adherence to NiSource IT Project Management Methodology (PMM) controls and requirements where deemed applicable.

IT Audit's assessment over RPA Controls Design noted a single (1) LOW Risk Finding:

- **NiSource's enterprise IT solution delivery execution model has not yet been modified to absorb emerging IT technologies. As a result, NiSource IT project delivery teams engaged in the emerging technologies space, including RPA, are forced to develop and implement their own governance model and risk management/control structure unique from what NiSource has available to leverage from its traditional IT solution delivery methodology.**

    - ➢ Although understanding and supportive of the flexibility required to bring emerging IT technologies into the NiSource enterprise environment, IT Audit recommends management engage an external Subject Matter Expert (SME) who specializes in emerging technology support model development and establishment of relevant IT controls. This SME engagement for how to best introduce emerging IT technologies into NiSource would provide coaching expertise and industry-specific best practices for our internal IT practitioners and business stakeholders to leverage – specifically targeted around appropriate emerging IT technology governance models, risk awareness, and timing of IT controls adoption.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing, whereby a summary of HIGH and/or MODERATE findings will be provided to the NiSource Audit Committee. NiSource IT Audit would like to thank NiSource IT Applications, NiSource IT Project Management Office (PMO), SOX, and other RPA business stakeholders and management teams for their cooperation and time in supporting this effort.

Robotic Process Automation (RPA) is a robotics solution software, commonly referred to as a “robot” or “bot”, whose function is to capture, emulate, and integrate human actions within IT applications/or systems and execute business processes. As such, this emerging technology allows organizations to automate a variety of high-volume, repetitive, and mundane business process tasks and simultaneously reduce costs. Governed by structured inputs and business rules, RPA bots can process a transaction, manipulate data, trigger responses as well as communicate with other IT applications and systems. For instance, RPA processes can range from a simple scenario such as the creation of an automatic response to an email, to the deployment of thousands of bots programmed to automate jobs in an ERP system.

RPA was initiated at NiSource in October 2018, with an objective to “establish the infrastructure, software, and governance framework to rapidly identify, develop, and deploy Robotics Process Automation (RPA) processes and bots that can automate existing manual tasks and redirect those manual efforts to innovation and more strategic tasks.” Additionally, RPA was selected to be the first “pilot” project and an “early adaptor” of NiSource IT’s transformational Agile delivery model, with an intent to collaborate with the NiSource IT PMO in exploring tools and deliverables applicable to an Agile methodology.

In October 2018, NiSource ‘s RPA Project Team also entered into a contractual agreement with UiPath, an industry leading RPA platform software provider, with an intent to utilize UiPath’s primary product suite (Studio, Robot, and Orchestrator) to design, schedule, deploy and manage automation processes.

IT Audit has been aligned with the RPA project since November 2018 and continues to provide an ongoing advisory input/feedback to the RPA Project Team as an early adaptor of Agile delivery practices. As of June 2019, the RPA Project Team has been able to automate 22 NiSource business processes in the Finance, Customer, and IT departments.

Audit Scope and Approach

IT Audit aligned with NiSource IT Applications, NiSource IT Project Management Office (PMO), SOX, and other RPA business stakeholders to review evidence on processes, procedures, and controls used to actively manage the RPA project. The methods used by NiSource IT Audit may include (but are not limited to) interviews of key process owners, documentation review, observation and independent testing of appropriate standards, metrics, and system configurations.

Review procedures included the following objective(s) and associated action steps listed within the Results below:

Objective 1: Review RPA project delivery processes, and any corresponding controls, to provide a perspective on the organizational risk inherent in delivering project releases.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Assess whether scope, cost and schedule process design and change controls are in place and compliant with NiSource's IT Project Management Methodology (PMM) framework and SOX (where applicable) requirements/controls.	**No Findings Noted**
2	Assess whether RPA project quality assurance controls over solution conformance to requirements are in place and are operating as designed.	**No Findings Noted**
3	Assess and evaluate the RPA project governance model and evaluate its alignment with NiSource's enterprise policies, procedures, and standards. Assess the definition of roles and responsibilities how the Project Team is managing accountability for RPA deliverables.	**Finding #1 (see Slide 6)**
4	Evaluate and test the execution of RPA project's user acceptance approval activities and deployment plans to provide reasonable assurance NiSource corporate policy and/or program standards are being followed as the solution is being delivered to business stakeholders.	**No Findings Noted**
5	Assess the alignment of RPA Agile Pilot Methodology with NiSource's IT Project Management Methodology (PMM) framework and best practices, especially those related to SOX requirements.	**No Findings Noted**

Audit Scope and Approach (Con't)

Objective 2: Review the overall RPA project team conduct in helping to achieve project objectives.		
#	Procedures	**Findings Summary** **(Refer to Appendix A for rating scale)**
1	Monitor and evaluate on-going integration, decision-making, alignment, governance, and communications between the RPA Project Team, IT Project Management Office (PMO), IT Applications, SOX, Finance, Customer Insights, Executive Stakeholders, vendors, and other key stakeholders to provide feedback on the approach and execution process during IT Audit's review period.	**No Findings Noted**
2	Review Lessons Learned activities performed post each Sprint completion, as well as staged Go-Live deployments, and determine how items identified are being addressed within the future/remaining RPA deployments.	**No Findings Noted**

Objective #1, Procedure #3: Assess and evaluate the RPA project governance model and evaluate its alignment with NiSource's enterprise policies, procedures, and standards. Assess the definition of roles and responsibilities how the Project Team is managing accountability for RPA deliverables.	**Risk Rating**
Finding #1: NiSource's enterprise IT solution delivery execution model has not yet been modified to absorb emerging IT technologies. As a result, NiSource IT project delivery teams engaged in the emerging technologies space, including RPA, are forced to develop and implement their own governance model and risk management/control structure unique from what NiSource has available to leverage from its traditional IT solution delivery methodology.	**Low**
Process Owner(s): Jennifer Tipton (VP – IT Applications) **Mike Rozsa (CIO)**	

Criteria: To provide NiSource IT's emerging technology program/project delivery teams, including RPA, with a governance support model and standardized operating framework that enforces accountability, consistency, and standardization.

Condition: Since both operating model and delivery execution standard(s) have not yet been defined for emerging IT technology introduction into NiSource, the RPA Project Team had to develop their own governance model and IT risk management criteria as part of its process automation deployment strategy.

Risk/Impact: Without a defined emerging technology delivery approach and adoptable standards which address risk and control considerations, there is potential for cyber risk exposure, inadequate solution functionality, and scalability challenges.

Recommendation Although understanding and supportive of the flexibility required to bring emerging IT technologies into the NiSource enterprise environment, IT Audit recommends management engage an external Subject Matter Expert (SME) who specializes in emerging technology support model development and establishment of relevant IT controls. This SME engagement for how to best introduce emerging IT technologies into NiSource would provide coaching expertise and industry-specific best practices for our internal IT practitioners and business stakeholders to leverage – specifically targeted around appropriate emerging IT technology governance models, risk awareness, and timing of IT controls adoption.
Management Response NiSource IT welcomed Audit to participate in our RPA roll-out acknowledging that processes and control structures would be evolving. We are pleased that 22 business processes have been automated in our first year which you also highlighted in your review. A working steering committee has been established including business participants. This group assists with program direction and prioritization, following Nisource standard practice. In addition, IT engaged a consultant to assist with further definition of the RPA governance structure in order to develop a scalable model for the enterprise. Technical development and deployment follow IT best practice change management processes ensuring bot deployment does not create new risk. Certain control points, already present in our PMM methodology, will be further developed for RPA/Agile, and we expect this to mature and evolve through 2020.

Report Distribution

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

2019 Emergency Preparedness and Response Plan Audit - NiSource

February 24, 2020

To: Don Eckstein, Senior VP Gas Operations Support
Pat Gyure, Director Corporate Compliance & Business Continuity

From: Natalie Ladd, Lead Auditor
Lin Koh, Director of Internal Audit

NiSource®

Executive Summary

Internal Audit performed a review over the new gas segment Emergency Preparedness and Response Plan (EPRP) created in 2019. The EPRP focuses on the gas segment and integrates the Incident Command System (ICS) as a standardized approach to command, control, and coordination of emergency response. Internal Audit evaluated the communication and training of the EPRP to management and employees. Internal Audit also assessed the adequacy of plan administration and reviewed how the EPRP integrates into the Corporate Crisis Management Plan (CCMP). The electric segment has a Storm Management Emergency Response Plan, which is out of scope for this audit. The audit period for review was January 1, 2019 through December 31, 2019.

Based on procedures performed, Internal Audit noted the following findings:

- *Moderate Risk Findings*
  - Vacant ICS roles with no identified backup or only 1 identified backup exists.
  - While general ICS training has occurred, position specific training and practical exercises have not occurred for individuals with roles below the Command and General Staff leadership level or for front line leaders/supervisors leaders/supervisors and a plan has not yet been established to train these levels.
  - Some Command and General Staff leaders have incomplete training.
  - Key actions resulting from After Action Reviews are not clearly prioritized, assigned, and tracked. A process for communicating lessons learned to incident/training participants has not been established.

- *Low Risk Findings*
  - Training has not yet exercised emergency response using ICS at LNG or Underground Gas Storage facilities.
  - The process for updating, tracking, and communicating ICS roles is not documented.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, will be provided to the Audit Committee.

Background

Emergency Preparedness & Response Plan

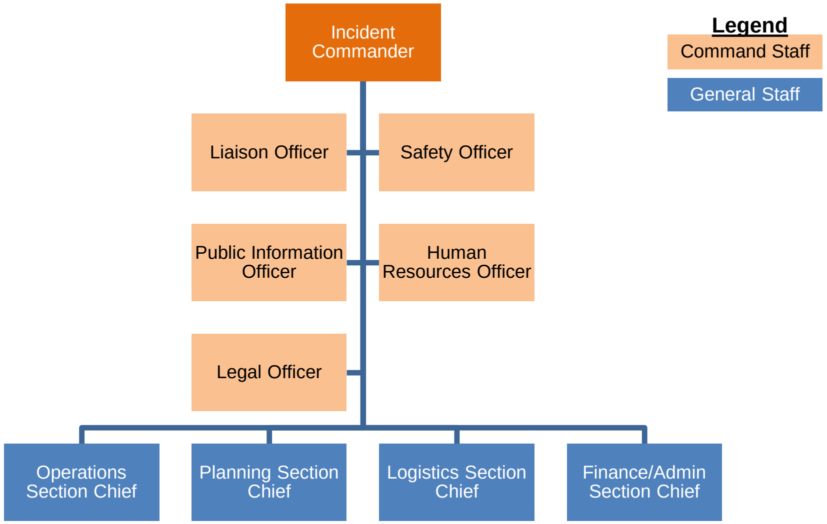
The Emergency Preparedness and Response (EP&R) team was formed in early 2019 to address and enhance NiSource's emergency response to gas incidents. The team created a new Emergency Preparedness and Response Plan (EPRP) to provide a framework for system-wide management of NiSource's response to gas related incidents. The plan was finalized in Q3 2019 and the beginning roll out of the plan, including role assignment and training, occurred in Q3 and Q4 2019. One of the guiding principles of the plan is to "collect feedback and measure our performance to ensure continuous improvement and the effectiveness of our processes."

Incident Command System (ICS)

The EPRP framework is based on the Incident Command System (ICS), an established management system designed to enable effective and efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is flexible and scalable, and can be used for incidents of any type, scope, or complexity.

ICS Organizational Structure and Roles

The ICS is organized around functional areas, each led by a Section Chief or Officer who reports directly to the Incident Commander. Each area has a structure of roles that serve a specific function and can either be sourced through internal or external resources. Each Section Chief or Officer has the responsibility of activating roles within their functional area. The EP&R team manages the assignment and training of ICS roles. Refer to the figure below for a high level view of the functional areas:



Background

Emergency Preparedness & Response Training

The EP&R team created a multi-year training and exercise framework to educate employees on the EPRP and ICS principles. Training in 2019 was organized in the following way:

All Employees	Anyone with an ICS Role	Command & General Staff	Level 1 & 2 Tabletop Exercise (Columbus, OH)	EP&R "Go Team"
~8,000 PEOPLE	~2,000 PEOPLE	~200 PEOPLE		20 PEOPLE
NiSource GAS SEGMENT EP&R FOUNDATIONS (LMS)	**IS-100.C Introduction to the Incident Command System** (FEMA) **IS-200.C Basic Incident Command System for Initial Response** (FEMA) **IS-700.C Introduction to the National Incident Management System** (FEMA) **OVERVIEW OF THE GAS SEGMENT ICS** (LMS)	**POSITION-SPECIFIC SELF-STUDY + Performance Support Knowledge Center** **POSITION-SPECIFIC COACHING** **ICS TRAINING SCENARIO** (In Person)		**IC-800.C National Response Framework** (FEMA) **ICS-300 Intermediate Incident Command System for Expanding Incidents** (FEMA)
Q3 2019	Q3 2019	Q3-Q4 2019	Q4 2019	Q4 2019

Third-Party Evaluation of the Training and Exercise Program

In late 2019, NiSource engaged Nixon & Associates to offer benchmarking and evaluation services related to the Training and Exercise program. Nixon & Associates provided the EP&R team with a written report evaluating NiSource's emergency preparedness and response program and specific observations from the December 9 Tabletop Exercise. The final section of this report includes recommendations for the company to consider as its emergency planning process moves forward.

Background

Corporate Crisis Management Plan

In 2019, NiSource also enhanced its corporate crisis response efforts by revising the NiSource Corporate Crisis Management Plan (CCMP). The CCMP defines a corporate crisis as any Level 1 or Level 2 incident, as defined by the NiSource Gas EPRP (see Appendix B). Once a corporate crisis has been determined, a Crisis Commander is named and a Crisis Management Team (CMT) is formed. For a gas operations related corporate crisis, the day-to-day responsibility for crisis management response is delegated to Incident Command and the Gas EPRP, while the Crisis Commander and CMT provide strategic direction and communicate with the Board of Directors and high-level elected and agency officials. The CCMP integrates the EPRP into the plan and clearly defines when a Gas Operations incident is deemed a Corporate Crisis. In addition, the role of the Crisis Management Team (CMT) is clearly defined for Gas Operations Incidents that are deemed a Corporate Crisis.

Audit Scope and Approach

The audit procedures are aligned as follows:

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
Objective 1: Assess whether the EPRP is communicated to management and employees.		
1	Evaluate whether identified ICS roles were communicated to specific individuals.	**Finding #1 – See Page 7**
2	Review whether individuals with ICS roles were trained over the plan.	**Finding #2 – See Page 8-9** **Finding #3 – See Page 10-11** **Finding #4 – See Page 12**
3	Review the protocols in place for identifying and capturing ICS role changes.	**Finding #5 – See Page 13**
Objective 2: Assess the adequacy of the EPRP administration and ownership.		
1	Observe EPRP drills and tabletop exercises and evaluate how lessons learned are incorporated into after action plans.	**Finding #6- See Page 14 (Refer to Appendix B)**
2	Review the process for capturing and integrating lessons learned after an emergency event.	**Finding #6 – See Page 14**
3	Review the protocols in place for plan revisions and updates.	**No Findings Noted**
Objective 3: Review how the EPRP is integrated into the CCMP.		
1	Evaluate whether clear lines of communication exist between the gas segment EPRP and Executive Management.	**No Findings Noted**
2	Review whether role alignment exists among the gas segment EPRP, the CCMP, and the Gas Emergency manual.	**No Findings Noted**

Findings

Audit Objective #1, Procedure #1: Evaluate whether identified ICS roles were communicated to specific individuals.	**Risk Rating**
Finding #1: 28 ICS roles (94 total designees) across NiSource are either 1) vacant with no identified backups or 2) only 1 designee was identified with no identified backup as of 12/13/2019. Note: These vacancies do not include any Command or General Staff leadership roles (Officers and Section Chiefs); rather, these roles are at deeper levels in the ICS.	**Moderate**
Process Owner(s): Don Eckstein, SVP Gas Operations Support **Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities**	**Target Remediation Date:** **12/31/2020**

Observation

Criteria: Qualified personnel are appointed to serve in ICS roles and backups have been identified for each role.

Condition: Vacant ICS roles with no identified backup or only 1 identified backup exists.

Risk/Impact: Vacant ICS roles may prohibit efficient and effective emergency response.

Recommendation

Management should work to identify individuals to fill vacancies and provide them with training. If a pool of candidates will be used to fill vacancies, management should have a plan for identifying, training, and activating pool candidates.

Management Response

This is a valid concern, and one that has been identified as a high priority for 2020. Currently we have filled 82% of ICS positions. Our target goal for 2020 is to fill 90% of our ICS positions. Our stretch goal is to fill 100% of our ICS positions, although we recognize that will remain an ongoing challenge because of turnover in the organization and ongoing training needs. We receive a monthly extract from NiSource's Human Resources department, which our team uses to make changes based on movement of people to other departments or leaving the company. Some roles were left vacant because we do not have equivalent positions or skillsets at NiSource, and we are creating new training by the end of 2020 for those vacant roles.

Findings

Audit Objective #1, Procedure #2: Review whether individuals with ICS roles were trained over the plan.	**Risk Rating**
Finding #2: Position specific training and practical ICS scenario training/exercises have not occurred for individuals with ICS roles below the Command and General Staff leadership level. In addition, limited training over ICS concepts and the EPRP has occurred for front line leaders/supervisors who play a role in responding to gas emergencies, but are not a part of the ICS structure. A plan has not yet been established to train these levels. Training of the EPRP has been focused at the Command and General Staff leadership level.	**Moderate**
Process Owner(s): Don Eckstein, SVP Gas Operations Support **Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities**	**Target Remediation Date:** **12/31/2020**

Observation

Criteria: Employees with ICS roles are trained and exercised in their assigned emergency roles.

Condition: While general ICS training has occurred, position specific training and practical exercises have not occurred for individuals with roles below the Command and General Staff leadership level or for front line leaders/supervisors and a plan has not yet been established to train these levels.

Risk/Impact: A lack of position specific and practical exercises for individuals below the Command and General Staff may prohibit efficient and effective emergency response.

Recommendation

Management should create a plan to provide training over ICS concepts, individual positions, and practical exercises for individuals with ICS roles below the Command and General Staff leadership levels. Management should determine how front line leaders/supervisors will be trained over ICS concepts and emergency response at NiSource.

Management Response

Refer to slide 9 for the Management Response to Finding #2.

Findings

Audit Objective #1, Procedure #2: Review whether individuals with ICS roles were trained over the plan.	Risk Rating
Finding #2 (Continued)	Moderate
Process Owner(s): Don Eckstein, SVP Gas Operations Support Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities	Target Remediation Date: 12/31/2020

Management Response

We created a tiered strategy for building ICS capabilities across the NiSource Gas Segment. The first tier of training focused on the Command and General Staff positions because of the critical need of a clear leadership structure during incident response.

Position specific training below the Command and General Staff is currently under development for roles that do not align with existing jobs at NiSource, and is scheduled to be delivered by the end of 2020. These ICS positions represent the next tier of roles that are critical to ensuring a well-organized, effective and efficient incident response. We are currently working with our training department to develop resources, such as position-specific workbooks and Learning Management System modules that will be assigned to those in this next wave of training.

It is important to recognize that numerous ICS roles do not require position-specific training because their day-to-day job aligns with their Incident Command System (ICS) role. Examples of these roles include Safety Branch Director, Work Planning and Prioritization Branch Director, Regulatory & Governmental Affairs Branch Director, Customer Care Center Branch Director, Corporate Security Branch Director, and Insurance and Claims Branch Director. While these roles do not require position-specific training the individuals identified for these roles have completed two LMS modules as well as the EPRP attestation.

All front line leaders/workers have completed the NiSource EP&R Foundations LMS module. We are currently developing additional training specifically for Operations Center Managers, Front Line Leaders and Front Line Workers in 2020. This training includes a field oriented LMS module to build greater awareness and understanding of the Gas Segment ICS, and a quarterly LMS module for reinforcing incident classification.

Tabletop exercises in each state, scheduled for Q1 2020, will involve participation from some positions below the Command and General Staff level to strengthen ICS capabilities. During the third quarter of 2020, we expect to conduct a functional exercise to simulate a severe or catastrophic incident, which will involve positions below the Command and General Staff, as well as external stakeholders.

Findings

Audit Objective #1, Procedure #2: Review whether individuals with ICS roles were trained over the plan.	**Risk Rating**
Finding #3: Some Command and General Staff leaders have incomplete Emergency Preparedness and Response training as of 12/13/2019. Out of 165 individuals assigned to Command and General Staff leadership roles: • 13 have incomplete FEMA training. • 17 did not complete a Coaching Session. • 25 did not participate in a Training Scenario.	**Moderate**
Process Owner(s): Don Eckstein, SVP Gas Operations Support **Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities**	**Target Remediation Date:** **12/31/2020**

Observation

Criteria: Command and General Staff leaders are trained and exercised in their assigned emergency roles.

Condition: Some Command and General Staff leaders have incomplete training.

Risk/Impact: Command and General Staff leaders with incomplete training may not efficiently or effectively lead emergency response efforts.

Recommendation

Management should work with Command and General Staff leaders and ensure they complete their required training (FEMA, Coaching Session, Training Scenarios). Management should determine the period of time newly appointed Command and General Staff leaders can complete ICS training.

Management Response

Refer to slide 11 for the Management Response to Finding #3.

Findings

Audit Objective #1, Procedure #2: Review whether individuals with ICS roles were trained over the plan.	Risk Rating
Finding #3 (Continued)	**))Moderate**
Process Owner(s): Don Eckstein, SVP Gas Operations Support **Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities**	**Target Remediation Date:** **12/31/2020**

Management Response

We regularly track who has completed all of the required training, using a weekly automated report from the LMS Training team. The EP&R team sends reminder e-mails to individuals who are past due on the training, and will escalate the reminders to their supervisors as needed. Only five employees with Command & General Staff roles have incomplete LMS training, and a reminder email was sent by the Senior VP of Gas Operations Support to those employees on 02/06/20.

As of 02/07/2020, there are 21 people who currently need to attend their respective Command & General Staff "Coaching Session." Of these 21, a total of 13 missed the earlier sessions, while eight others have been added to the ICS Roster since the beginning of 2020. In all cases, we will schedule make-up sessions for these employees in the coming weeks/months.

As of 02/07/2020, 32 employees currently need to attend the ICS Scenario Training. Twenty four of these employees missed the earlier sessions, while eight others have been added to the ICS Roster since the beginning of 2020. In all cases, we will schedule make-up sessions for these employees in the coming weeks/months.

Findings

Audit Objective #1 , Procedure #2: Review whether individuals with ICS roles were trained over the plan.	**Risk Rating**
Finding #4: ICS training has not yet specifically exercised emergency response using ICS at LNG or Underground Gas Storage facilities. Potential incidents at these facilities would be covered by the EPRP; however, specific training over responding to incidents using ICS has not been exercised.	**Low**

Process Owner(s): Don Eckstein, SVP Gas Operations Support

Observation

Criteria: Employees with ICS roles are trained and exercised on their assigned emergency roles during a gas emergency.

Condition: Training has not yet exercised emergency response using ICS at LNG or Underground Gas Storage facilities.

Risk/Impact: Lack of specific exercises at LNG or Underground Gas Storage could lead to inefficient or ineffective emergency response for gas emergencies occurring at these facilities.

Recommendation

As the EPRP training and exercises plan continues to be executed, management should work to incorporate LNG and Underground Gas Storage facilities into practical emergency response training.

Management Response

We are aware of this situation and plan to incorporate an LNG plant and/or Underground Gas Storage facility into future exercises.

Findings

Audit Objective #1 , Procedure #3: Review the protocols in place for identifying and capturing ICS role changes.	**Risk Rating**
Finding #5: The process for updating, tracking, and maintaining ICS roles has not been formally documented. A process for updating, tracking, and maintaining ICS roles exists and is managed in Excel by one individual.	**Low**

Process Owner(s): Don Eckstein, SVP Gas Operations Support

Observation

Criteria: The process for updating, tracking, and communicating ICS roles is documented.

Condition: The process for updating, tracking, and communicating ICS roles is not documented.

Risk/Impact: The lack of a documented process for updating, tracking, and communicating ICS roles could lead to inconsistent practices or knowledge transfer gaps.

Recommendation

Management should document the process for updating, tracking, and maintaining ICS roles. The process should include the frequency of updates and process for communicating with newly identified individuals with ICS roles.

Management Response

We have a detailed process in place, which will be formally documented by mid-year. Based on feedback from the Incident Management Teams across NiSource, we have made each state's Level 3-5 ICS roster, as well as NiSource's Level 1-2 roster, available on MySource, and these files are updated weekly. Long term, we have developed a business case to support a comprehensive technology solution to manage not only ICS rosters, but additional aspects of incident response.

Findings

Audit Objective #2 Procedure #1: Observe EPRP drills and tabletop exercises and evaluate how lessons learned are incorporated into after action plans. **Audit Objective #2, Procedure #2**: Review the process for capturing and integrating lessons learned after an emergency event.	**Risk Rating**
Finding #6: A process for tracking and prioritizing required After Actions resulting from After Action Reviews has not been established. Nixon & Associates also provided management with suggested actions for enhancements/improvements regarding the overall program that should be addressed by NiSource. In addition, a method for communicating lessons learned to incident/training participants has not been established.	**Moderate**
Process Owner(s): Don Eckstein, SVP Gas Operations Support **Executive Council Member Responsible: Pablo Vegas, EVP & President Gas Utilities**	**Target Remediation Date:** **6/30/2020**

Observation

Criteria: Key actions resulting from After Action Reviews are prioritized and remediated. Lessons learned are communicated to incident/training participants.
Condition: Key actions resulting from After Action Reviews are not clearly prioritized and tracked. A process for communicating lessons learned to incident/training participants has not been established.
Risk/Impact: Key actions resulting from After Action Reviews are integrated into the EPRP, but not consistently communicated to the incident/training participants, resulting in efficient and ineffective emergency response.

Recommendation

Management should establish a process for tracking and prioritizing After Actions resulting from After Action Reviews and establish a method for communicating lessons learned to incident/training participants. Management should also create a plan for addressing Recommended Action Items included in the Nixon & Associates' *Program Analysis Following Dec. 9, 2019 Tabletop Exercise* report.

Management Response

The EP&R team conducts After Action Reviews (AAR) on all Level 1-3 incidents, as well as all Gas Segment ICS exercises. Findings from these AARs are captured and documented in the EP&R SharePoint site. A continuous improvement process is under development to ensure that all findings are evaluated, prioritized, completed and communicated. As appropriate, the EP&R team will incorporate findings (including the Nixon & Associates recommendations) into the EPRP (The Plan). We expect to have the finalized process in place by mid-year 2020.

Report Distribution

CC:

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D. A. Monte
A. W. D'Angelo
Deloitte & Touche

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*</u>
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*</u>
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is NOT required to perform follow-up review procedures on low risk findings.*</u>

Appendix B

The following table represents a portion from **Attachment 1: Incident Level Matrix – Summary** per the Emergency Preparedness and Response Plan (Version Revised 10/25/2019) and is provided for context for Incident Levels referenced in the report.

Level	Incident Characteristics	Customers Affected	Incident Duration*
5	**Routine Incident**	<10	<8 Hours
4	**Elevated Incident**	Between 10 and 49	<24 Hours
3	**Serious Incident**	Between 50 and 499	<48 Hours
2	**Severe Incident**	Between 500 and 999	<72 Hours
1	**Catastrophic Incident**	>1,000	>72 Hours

*From the time that NiSource can safely respond to an event until the time all impacted customers have been visited once for a relight.

Appendix C

In Audit Objective 2, Step 1, Internal Audit observed EPRP Training Scenarios at CKY, CMA, and NIPSCO, as well as the Tabletop Exercise with the EC in Columbus, OH. After Action reviews were performed at the end of each Training Scenario and documented by the EP&R team. Internal Audit interviewed 12 participants within the General and Command Staff who attended the training scenarios and documented a summary of responses below:

#	Question	Summary of Response
1	**Was the Training Scenario realistic?**	Yes (12/12 participants)
2	**Were the responsibilities of your section clear?**	• All interviewees thought the training scenario helped to clarify their specific section's roles/responsibilities. Their individual roles were not as clear prior to participation. • Overarching theme: Desire for repetition and training to help reinforce responsibilities.
3	**Are you clear on how to activate resources within your org?**	• Individuals are clear on when they need to activate, but overall, everyone would like more visibility into the list of individuals (ICS roster). • Overarching theme: Transparency and accessibility of the ICS roster (within state and across the organization).
4	**Did you identify gaps in your area/section that need to be addressed? If so, what are they?**	Responses ranged based on the role, so a summary of high level points are noted below: • Visibility into the ICS role structure, not only within your state, but across the organization. • The practicality of having the Planning Section Chief be remotely located in Columbus. • Terminology differences (critical care vs priority care) and differentiating from an individual customer and a commercial customer in CMA. • Front line leaders need to be trained on the terminology and structure.
5	**How clear was it that process gaps identified in the training scenario are to be solved by your individual group?**	• CKY and NIPSCO – Clear • CMA – Not as clear. Looking for more support from EP&R team to solve gaps.

Appendix C

#	Question	Summary of Response
6	**What "After Action" items are you interested in seeing follow up on?**	Responses ranged based on the role, so a summary of high level points are noted below: • Visibility into ICS roles/structure. • More information on how ICS activation happens in real life (phone call, automated system). • Front Line Leader Exposure (terminology, structure, activation). • Clarity around how our existing Emergency Plans roll into EPRP.
7	**Do you feel better prepared to respond to an incident?**	Yes (12/12 participants)
8	**If you could change anything about the Training Scenario, what would it be?**	Responses ranged based on the role, so a summary of high level points are noted below: • More specific with incident (address/area) where you can pull up the address (similar to Tabletop Drill). • More practice and training. Keep this a regular training. • Eventually practicing in a different setting (outside, eventually using Mobile Command Centers for practice).
9	**Any other comments?**	• Need to review what people are in place and communicate roles and responsibilities in deeper layers (not just Command and General Staff). • More clarity around the transition of shifts - how does the Incident Commander know who's on duty? How do you keep track of who leaves? Not clear. • Operations Section Chief Interviewed – "Most useful" training all year and full day was well worth it.

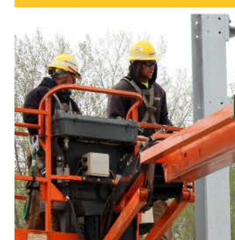
Odorization Monitoring Process / Documentation:

Columbia Gas Distribution Companies

March 3, 2020

To:
P. D. Wilson, VP & General Manager CGV
D. A. Roy, VP & General Manager CKY
L. A. Carmean, VP & General Manager COH
W. F. Davis, VP Construction COH
M. J. Davidson, VP & General Manager CPA/CMD
R. M. Kitchell, VP Construction CPA/CMD
M. G. Poulin, VP & General Manager CMA
D. A. Monte, SVP Gas Technical Services

From:
M. Castillo, Internal Auditor
J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

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Executive Summary

Internal Audit conducted an audit of the controls and processes associated with the Odorization Monitoring Process and Documentation for Columbia Gas Companies*. The purpose of this audit was to assess whether processes followed are in accordance with the Pipeline and Hazardous Materials Safety Administration (PHMSA) requirements, which are aligned with the following Gas Standards:

- **Gas Standard 1670.010** (Odorant and Odorization Equipment Inspection and Maintenance); and
- **Gas Standard 1670.020** (Odor Level Monitoring).

The focus of the audit included the following procedures:

- Determine whether processes and controls support compliance with the inspection for facilities identified as odorizers and the inspection of the downstream odor level tests.

Summary Conclusions:

As a result of our procedures, Internal Audit identified **1 Moderate Risk** finding:

There were several inconsistencies in the processes used to ensure proper odor level reads and odorization inspections were being completed.

- **Recommendation:** Operations Management should establish processes to ensure facilities are accurately reflected in systems of record and that Repetitive Tasks (RTs) are utilized to ensure timely completion and documentation of required facility inspections and the downstream odor level tests.

- **Management Response**: Management agrees to establish a cross functional working group to evaluate the inconsistencies in the processes relating to proper odor level reads and odorization inspections. In addition, a recommended mitigation strategy will be developed prior to the August Audit Committee.

* Internal Audit will consider performing a separate review in the future to assess processes and controls for NIPSCO Gas as it will require the review of separate systems.

Note: Internal Audit attempted to test the Operation Qualification requirements related to the jobs performed under the gas standards above, however testing has been postponed due to technical errors in the switch from the LMS to the OnBoard system.

Background

Columbia Gas Distribution Companies

All Columbia Gas Distribution Companies are subject to Gas Standard (GS) 1670.010: The standard sets forth the following requirements for inspection of odorization equipment and maintenance:

- *"Odorizers shall be inspected on a **monthly basis**, with the exception of individual customer odorizers which shall be inspected **once every three years**. However, odorization facilities should be inspected more frequently if local knowledge of operating conditions indicates that more frequent inspection is necessary."*

All Columbia Gas Distribution Companies are also subject to Gas Standard (GS) 1670.020. The standard sets forth the following requirements for odor levels:

- *"The company shall monitor the gas for proper concentration of odorant using an instrument capable of determining the percentage of gas in air."* For frequency requirements of when gas levels should be monitored, refer to the chart below:

Location	State	Frequency
Systems downstream of odorizers and systems that contain a natural odorant	**CMA, CVA, COH, CPA, CMD**	Monthly
Systems downstream of odorizers and systems that contain a natural odorant	**KY**	95 days - with ten (10) or fewer customers Weekly - With more than ten (10) customers
Systems downstream of individual customer odorizers	**CMA, CVA, COH, CPA, CMD**	Once each calendar year not to exceed 15 months
Systems downstream of individual customer odorizers	**KY**	95 days

Audit Scope and Approach

Internal Audit reviewed the processes and controls in place related to monitoring and documenting the odorization levels and inspection and maintenance of odorization equipment at the Columbia Gas Distribution Companies in accordance with both federal and state regulatory requirements as well as any internal Gas Standards for the audit period as of October 2019.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided to Gas Operations Management.

Objective 1: Review the processes and controls in place to ensure odorization equipment is inspected and to ensure odor levels are monitored in accordance with NiSource Gas Standards.

#	Procedures	Findings Summary (Refer to Appendix A)
1	Obtain the WMS population of all Columbia company odorizer facilities as of 10/4/2019, including RTs related to odorizer job types for those facilities to test for compliance with both federal and state regulatory requirements as well as any internal Gas Standards.	**Refer to Appendix B**
2	Using the population above, select at least 40 facilities to ensure every identified odorizer facility has a corresponding RT set up to ensure timely completion of the required odorization inspection and a corresponding RT for timely completion of downstream odor level tests.	**Finding #1 – See page 5**

.

Findings (Cont'd)

Objective 1, Procedure #2: Using the odorizer Facility population, select at least 40 facilities to ensure every identified odorizer facility has a corresponding RT set up to ensure timely completion of the required odorization inspection and a corresponding RT for timely completion of downstream odor level tests. (See Appendix B for facilities tested)	**Risk Rating**
Finding #1: There were several inconsistencies in the processes used to ensure proper odor level reads and odorization inspections were being completed. (Columbia Companies only) (See Appendix C for facilities tested)	**Moderate**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers; D. T. Williamson, Distribution Operations Management **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities [Operations]	**Target Plan Date:** **Q3 2020**

Observation:

Criteria: Odorizer facilities within WMS are properly classified as an active odorizer facility and have a related RT for odor level reads and odorizer inspections.

Condition:

Internal Audit noted that the following areas of risk in the odorization inspection process out of the **42** facilities tested:

- **12** facilities were listed as active in the WMS system which had been previously retired
  - 6 of the facilities above had RTs initially created but which were later manually voided
- **18** active facilities which did not have an RT created to ensure timely inspection
- **1** active facility which used the same RT for both the facility inspection and the level test, creating a lack of clarity in what work was performed
- **4** facilities which had multiple RTs to complete the same task

Risk/Impact: Inconsistent processes increase the risk of noncompliance of required inspections odorization which can lead to undetected gas leaks.

Recommendation:

Operations Management should establish processes to ensure odorizer facilities are accurately reflected in systems of record and that RTs are utilized to ensure timely completion and documentation of required facility inspections.

Management Response:

Management agrees to establish a cross functional working group to evaluate the inconsistencies in the processes relating to proper odor level reads and odorization inspections. In addition, a recommended mitigation strategy will be developed prior to the August Audit Committee.

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.</u>*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.</u>*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response* *<u>Internal Audit typically does not perform follow-up review procedures on low risk findings.</u>*

Appendix B – Total odorizer facilities by state and selections

State	Total Odorizer Facilities	Total Individual Customer Odorizers	Total Active Odorizer Facilities per WMS	Tested Odorizer Facilities	Tested Individual Customer Odorizers	Total Tested
CKY	12	135	**147**	3	3	**6**
COH	16	316	**332**	6	9	**15**
CMD	1	0	**1**	1	0	**1**
CPA	22	0	**22**	2	0	**2**
CGV	72	280	**352**	8	8	**16**
CMA	23	1	**24**	2	0	**2**
Total	**146**	**732**	**878**	**22**	**20**	**42**

Appendix C – Breakout of findings by state and facility type

State	Finding	Odorizer Facility	Individual Customer Odorizer
Kentucky	More than one RT created for the same job		1
	No RT for odorizer inspection		2
Ohio	Facility is inactive	1	
	No RT for odorizer inspection		9
Virginia	More than one RT created for the same job	3	
	No RT for odorizer inspection		4
	No RT for downstream odor level read	1	
	Facility uses the same RT for both jobs	1	
Massachusetts	No RT for downstream odor level read	1	
	Total	**7**	**16**

Cross Bore Identification & Remediation

NiSource Gas Distribution Companies

March 3, 2020

To: P. D. Wilson, VP & General Manager CGV
D. A. Roy, VP & General Manager CKY
L. A. Carmean, VP & General Manager COH
W. F. Davis, VP Construction COH
S. W. Sylvester, VP & General Manager NIPSCO
M. J. Davidson, VP & General Manager CPA/CMD
R. M. Kitchell, VP Construction, CPA/CMD
M. G. Poulin, VP & General Manager CMA

From: A. Meyers, Senior Internal Auditor
J. Callahan, Manager Internal Auditor
R. Binkley, Director Internal Auditor

NiSource®

Executive Summary

Internal Audit conducted a review of the processes and procedures in place within each of the NiSource Gas Distribution Companies (NGD) to identify and remediate cross bores. Cross bores are defined as “an intersection of an existing underground utility by a second utility resulting in direct contact between the utilities’ assets that compromises the integrity of either utility.” Cross bores of gas lines in sewers have resulted in property damage, injury and death. According to the Cross Bore Safety Association (CBSA), the largest reported court award associated with a cross bore explosion of a residence was $30M. There have been 18 incidents that have occurred between 2002 – 2015, but the CBSA believes that the total is most likely understated as PHMSA does not track cross bore incidents specifically. The use of trenchless technology, or the process of installing pipe without the need to make an open trench excavation, was identified as increasing the risk of creating cross bores.

In 2008, NGD implemented a new common gas standard (GS 1100.050, “Damage Prevention – Using Trenchless Technology”) which outlined recommended processes to be followed to avoid creating cross bores when utilizing trenchless installation methods. In 2016, this standard clarified the requirements for performing pre- and post-construction cameraing and additional training was provided to field personnel. During this same time period, each company established a Cross Bore Program to inspect pipeline infrastructure that was historically subject to damage as a result of these trenchless technology practices. (Refer to chart below for company program start dates.)

Summary Conclusions: Internal Audit identified ***(3) high risk*** audit findings as a result of our testing procedures:

- A total of **21%** of the cross bores identified by the Company Programs were installed subsequent to 2008. Although the gas standard clarified requirements and training was provided in 2016, **2%** of the cross bores identified were installed subsequent to 12/31/16. This indicates a lack of adherence to GS 1100.050, "Damage Prevention - Using Trenchless Technology."

			Breakout of Total					
Company	**Program Start Date**	**Total**	**Prior to 1/1/08**	**% of Total**	**1/1/08 to 12/31/16**	**% of Total**	**After 1/1/17**	**% of Total**
COH	5/1/2015	**632**	457	72%	161	25%	14	2%
CPA	9/1/2013	**274**	217	79%	52	19%	5	2%
CGV	3/1/2014	**227**	216	95%	11	5%	-	0%
CKY	11/1/2017	**34**	33	97%	1	3%	-	0%
CMA	5/3/2018	**20**	20	100%	-	0%	-	0%
CMD	9/1/2016	**10**	9	90%	-	0%	1	10%
NIPSCO	1/1/2018	**46**	32	70%	7	15%	7	15%
NGD Total		**1,243**	**984**	79%	**232**	19%	**27**	**2%**

NOTE: Refer to **Appendix B** for further detail of the chart above.

Executive Summary

Summary Conclusions (Cont'd):

- **Recommendation:**
  - Management should:
    - Establish processes and controls which ensure that the requirements of GS 1100.050, "Damage Prevention – Using Trenchless Technology" are being met (e.g. additional QA/QC procedures over work performed in the field and training over gas standards).
    - Ensure that Company Cross Bore Programs continue to target known risks, including installations that occurred during the period of 1/1/08 – 12/31/2016.
    - Evaluate root cause and trends in cross bores identified. (Refer to **Appendix C** for analysis of cross bores installed by company versus contractor personnel.)

- **Management Response:** Management agrees to establish a cross functional working group to evaluate existing processes and controls related to cross bores in Gas Standard 1100.050, "Damage Prevention –Using Trenchless Technology" by January 31, 2021. Identified opportunities for additional processes and controls will be captured along with an initial timeframe for implementation. This cross functional group will also ensure that cross bore teams are included in the evaluation of causes or trends.

- The population of cross bores identified indicate that steel pipelines are also at risk of cross bores if they were not originally installed with the proper clearance from neighboring utilities. (Refer to **Appendix D** for further detail of cross bores found in steel pipelines.)

  Note: With the exception of the gas standard for CGV, the scope of the requirements outlined in GS 1100.050 does not include the sleeving method (i.e. inserting plastic lines into existing steel lines).

  - **Recommendation:** Management should expand the requirements to perform camera work outlined in GS 1100.050 to include installations utilizing the sleeving method (i.e. inserting plastic lines into existing steel lines) to ensure that no cross bores exist prior to installation.

  - **Management Response:** Management agrees to expand requirements for planned work by completing a pre or post-video on any insertion regardless of material type. By January 31, 2021 a target date will be established when this change will become effective. In addition, State Operating Companies will review and align current state Gas Standard (GS 1100.050) as it relates to insertions. Please note, Pennsylvania's customer-owned service lines may require additional review/exception.

Summary Conclusions (Cont'd):

- The length of time estimated to complete each program ranges from 41 years to 338 years.

Project Estimates	COH	CKY	CGV	CMA	CPA	CMD	NIPSCO
Estimated Total Miles	15,000	1,945	2,272	5,000	2,804	223	17,572
Average Miles/Year	41.76	20.00	55.00		43.90	2.40	52.00
# of Years to Complete	318	100	41	130	64	94	338

NOTE: The numbers above all reflect estimates provided by the Company Program Leads. It is important to note that the estimated total miles for each program is developed from data obtained at a point in time and is subject to change. Internal Audit noted that some of the estimates vary from historical actuals completed per year as some expect the program to increase in funding and/or efficiency. Refer to **Appendix E** and **Appendix F** for further details on actual spend, miles completed per year and additional information related to the project estimates above.

- **Recommendation:** Management should assess the timeline to complete each program in comparison to the assessment this risk and the resulting risk tolerance.
- **Management Response:** Management will establish a team to assess the current estimated number of years to complete each cross bore program by state. This effort will continue to be ranked with other system risks that will impact program completion time frame. Furthermore, state operating companies will continue to explore opportunities to accelerate existing programs, in addition to leveraging Regulatory strategies in future rate case proceedings. Initial findings from this assessment to accelerate existing programs will be developed by January 31, 2021.

Internal Audit identified ***(1) low risk*** audit finding as a result of our testing procedures:

- Potential process improvements were identified specific to the various Company Cross Bore Programs to ensure consistent risk coverage across the NGD companies.
  - **Recommendation:** Each of the Company Cross Bore Programs should consider process improvements related to formalizing program objectives, metrics, and remediation policies, establishing QA/QC processes for camera work performed by contractors, and coordinating with the construction group. (Refer to **Slide 8** for further details.)
  - **Management Response:** Management will establish a team to identify process improvement opportunities for the cross bore programs. A program charter will be developed by January 31, 2021 that will include initial process improvement opportunities along with estimated timeframe(s) to initiate and implement these recommendations.

Background

Refer to the table below for a brief overview of the history of events and regulatory guidance established related to cross bores:

Year	History of Events and Regulatory Guidance Established Related To Cross Bore Prevention
1976	**Wisconsin Cross Bore Incident:** On August 29th, a sewer drain cleaner hit a cross-bored gas line, causing an explosion that resulted in two deaths. The National Transportation Safety Board (NTSB) recommended performing inspections where gas mains and sewer laterals may be in proximity, determining other locations where gas lines were installed near existing facilities and taking corrective action where necessary.
1999	**Advisory Bulletin ADB-99-04:** On August 23rd, a subgroup of the Department of Transportation (DOT) issued a bulletin to advise the industry to review/amend written damage prevention programs to minimize risks associated with directional drilling near buried pipelines. This action followed several pipeline incidents involving trenchless technology operations which resulted in loss of life, injuries and significant property damage.
2006	**Columbia Gas of Ohio Incident:** In August 2006, a gas main was ruptured when the sewer lateral was being cleaned by a power drain snake. Natural gas traveled through the sewer lateral and into a residence causing explosion and injuries. Investigation found that a contractor working for COH in 2001 unknowingly damaged the sewer lateral. As a result, COH made a commitment to the Public Utilities Commission of Ohio (PUCO) that NiSource would implement procedures to address the requirements for construction using trenchless technology.
2008	**Gas Standard 1100.050:** The policy created in response to the 2006 COH incident was implemented in COH in July 2007. This was later superseded by a new common Gas Standard, GS 1100.050, "Damage Prevention – Using Trenchless Technology," effective March 2008 for all companies. The purpose is to avoid creating a cross bore of another underground facility when utilizing trenchless installation methods.
2016	**Revision to GS 1100.050:** Effective September 12, 2016, a revision to the gas standard created the requirement that a post sewer camera or pull back camera video is required when certain service installation methods are utilized. Use of video is intended to verify that cross bores aren't created.***** **Note:** CGV created an additional requirement in their gas standard that requires camera work to be completed on lines installed by the sleeving method.

*Refer to the 2017 audit completed by Internal Audit, Service Line Post Camera Sewer Video (Trenchless Technology), which was completed to evaluate the processes and controls in place to ensure compliance with GS 1100.050.

Background (Cont'd)

Timeline of Program Establishment: The Company Cross Bore Programs are at various stages of maturity across all of the NGD Companies. Refer to the timeline below, which reflects the inception date for each company's program.

CPA 9/1/13 → CGV 3/1/14 → COH 5/1/15 → CMD 9/1/16 → CKY 11/1/17 → NIPSCO 1/1/18 → CMA 5/3/18

Note: The CMA Cross Bore Program began in May 2018, and was subsequently placed on hold due to the Merrimack Valley event that occurred in September 2018.

Risk Model: Each company recently adopted a risk model in order to target future areas of investigation, which considers the following factors:

- High density/hard to evacuate locations (schools, hospitals, nursing homes, etc.)
- Location of known cross bores
- Areas where previous damage occurred (query of WMS database and claims)
- Evaluation of soil/terrain
- Notification by other parties
- Review of job orders for any type of boring activity (directional, mole, etc.) (query of WMS database for bore contract items)
- Water-table – may result in shallow sewers and in the elevation where gas lines are frequently installed
- Rock soil conditions – may result in shallow sewers
- Basements – may result in deeper sewers and often below gas line elevations
- Slab or mobile home construction – may result in shallow sewers
- Deep gas main – allows for deeper gas mains and laterals, which may more likely intersect with sewers
- Material of pipe
- Date of installation
- Population density
- Length of service line (longer length could be higher risk)
- Services that are replaced

Note: Prior to the risk model, companies utilized a list of locations where cross bores had previously been found and then determined if any were close to high risk areas (schools, churches, hospitals, etc.). Additionally, the installation date and material of pipe were considered.

Public Awareness and Education: Each NiSource Company Cross Bore Program Lead noted that a successful program includes raising awareness of the risk of cross bores through public outreach and education, which can prevent the occurrence of cross bore incidents. Project specialists distribute fliers, attend seminars, work with contractors and emergency officials, and send information to plumbers in their operating area. Each company website includes information regarding cross bore safety information, as well.

Audit Scope and Approach

Internal Audit conducted a review of the processes and procedures in place within each of the NiSource Gas Distribution Companies to identify and remediate cross bores. This audit conforms with the International Standards for the Professional Practice of Internal Auditing.

A summary, along with detailed observations, have been provided to NiSource Management.

Objective 1: Assess the processes and controls in place across the NiSource Gas Distribution Companies to address the risk of cross bores.		
#	**Procedures**	**Findings Summary (Refer to Appendix A)**
1	Review the procedures performed by Cross Bore Program Leads for each NGD Company to identify and remediate existing cross bores.	**Finding #1 – See page 8**
2	For each NGD Company, analyze the Company Cross Bore Program metrics and results to identify trends, patterns, or other areas of risk.	**Finding #2 – See page 9**
		Finding #3 – See page 11
		Finding #4 – See page 12

Findings (Cont'd)

Objective #1, Procedure #1: Review the procedures performed by Cross Bore Program Leads for each NGD Company to identify and remediate existing cross bores.	**Risk Rating**
Finding #1: Potential process improvements were identified specific to the various Cross Bore Programs to ensure consistent risk coverage across the NGD companies.	**Low**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q1 2021**

Observation

Criteria: Documented and thorough processes and controls (including QA/QC processes) are established to ensure that a program is effective.

Condition: Potential process improvement opportunities were identified specific to the various Cross Bore Programs to ensure consistent risk coverage across the NGD companies.

Risk/Impact: Lack of systematic approach in Cross Bore Programs may lead to inefficiencies and low quality results.

Recommendation

Each of the Company Cross Bore Programs should consider the following process improvements:

- Development of a Program Charter outlining objectives and key stakeholders;
- Definition of key metrics for tracking and reporting of Program progress;
    - Note: Currently, metrics are created and reported at a company level. Consideration should be given to creating consistency in metrics and reporting across all companies to provide a NiSource-wide lens of progress.
- Creation of remediation policies outlining timeframes and requirements for remediation;
- Development of QA/QC processes to review camera work performed by contractors engaged by the Program Leads to ensure that contractors are properly identifying cross bores when they are noted within videos; and
- Coordination with the construction group to eliminate duplication of camera work in certain areas.
    - Note: New construction utilizing trenchless technology is required to perform camera work which could benefit the Company Cross Bore Programs.

Management Response

Management will establish a team to identify process improvement opportunities for the cross bore programs. A program charter will be developed by January 31, 2021 that will include initial process improvement opportunities along with estimated timeframe(s) to initiate and implement these recommendations.

Findings (Cont'd)

Objective #1, Procedure #2: For each NGD Company, analyze the Company Cross Bore Program metrics and results to identify trends, patterns, or other areas of risk.	**Risk Rating**
Finding #2: A total of **21%** of the cross bores identified by the Company Programs were installed subsequent to 2008. Although the gas standard clarified requirements and training was provided in 2016, **2%** of the cross bores identified were installed subsequent to 12/31/16. This indicates a lack of adherence to GS 1100.050, "Damage Prevention - Using Trenchless Technology."	**High**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q1 2021**

Observation

Criteria: The company shall adhere to GS 1100.050 in order to prevent creating cross bores from the use of trenchless technology.

Condition: A total of **21%** of the cross bores identified by the Company Programs were installed subsequent to 2008. Although the gas standard clarified requirements and training was provided in 2016, **2%** of the cross bores identified were installed subsequent to 12/31/16. This indicates a lack of adherence to GS 1100.050, "Damage Prevention - Using Trenchless Technology."

			Breakout of Total					
Company	**Program Start Date**	**Total**	**Prior to 1/1/08**	**% of Total**	**1/1/08 to 12/31/16**	**% of Total**	**After 1/1/17**	**% of Total**
COH	5/1/2015	**632**	457	72%	161	25%	14	2%
CPA	9/1/2013	**274**	217	79%	52	19%	5	2%
CGV	3/1/2014	**227**	216	95%	11	5%	-	0%
CKY	11/1/2017	**34**	33	97%	1	3%	-	0%
CMA	5/3/2018	**20**	20	100%	-	0%	-	0%
CMD	9/1/2016	**10**	9	90%	-	0%	1	10%
NIPSCO	1/1/2018	**46**	32	70%	7	15%	7	15%
NGD Total		**1,243**	**984**	**79%**	**232**	**19%**	**27**	**2%**

Risk/Impact: Lack of adherence to GS 1100.050 creates the risk that cross bores may be created, which could potentially cause loss of life, injury, or damages if not remediated.

Findings (Cont'd)

Objective #1, Procedure #2: For each NGD Company, analyze the Company Cross Bore Program metrics and results to identify trends, patterns, or other areas of risk.	**Risk Rating**
Finding #2: A total of **21%** of the cross bores identified by the Company Programs were installed subsequent to 2008. Although the gas standard clarified requirements and training was provided in 2016, **2%** of the cross bores identified were installed subsequent to 12/31/16. This indicates a lack of adherence to GS 1100.050, "Damage Prevention - Using Trenchless Technology."	**High**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q1 2021**

Recommendation

Management should perform the following:

- Establish processes and controls which ensure that the requirements of GS 1100.050, "Damage Prevention – Using Trenchless Technology" are being met (e.g. additional QA/QC procedures over work performed in the field and training over gas standards).
- Ensure that Company Cross Bore Programs continue to target known risks, including installations that occurred during the period of 1/1/08 – 12/31/2016.
- Evaluate root causes and trends in cross bores identified. (Refer to **Appendix C** for analysis of cross bores installed by company versus contractor personnel.)

Management Response

Management agrees to establish a cross functional working group to evaluate existing processes and controls related to cross bores in Gas Standard 1100.050, "Damage Prevention –Using Trenchless Technology" by January 31, 2021. Identified opportunities for additional processes and controls will be captured along with an initial timeframe for implementation. This cross functional group will also ensure that cross bore teams are included in the evaluation of causes or trends.

Findings (Cont'd)

Objective #1, Procedure #2: For each NGD Company, analyze the Company Cross Bore Program metrics and results to identify trends, patterns, or other areas of risk.	**Risk Rating**
Finding #3: The population of cross bores identified indicate that steel pipelines are also at risk of cross bores if they were not originally installed with the proper clearance from neighboring utilities. (Refer to Appendix D for further detail of cross bores found in steel pipelines.)	**High**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q1 2021**

Observation

Criteria: NiSource has policies and practices in place that mitigate the risk of future cross bores being created.

Condition: Internal Audit noted that 22% of cross bores identified were steel. Steel cross bores are created when the utility is either dug/pushed/jacked through or built on top of another facility. It is common for the bottom of a gas main to settle and crack in the top of a storm main. This is caused when proper clearance from neighboring utilities is not assured or if written permission from facility owner is obtained. The current practice allows for plastic to be inserted through steel lines without having to camera.

Risk/Impact: Unknown cross bores are created, which could potentially cause loss of life, injury, or damages if not remediated.

Recommendation

Management should expand the requirements to perform camera work outlined in GS 1100.050 to include installations utilizing the sleeving method (i.e. inserting plastic lines into existing steel lines) to ensure that no cross bores exist prior to installation.

Note: CGV has already created an additional requirement in their gas standard that requires camera work to be completed on lines installed by the sleeving method.

Management Response

Management agrees to expand requirements for planned work by completing a pre or post-video on any insertion regardless of material type. By January 31, 2021 a target date will be established when this change will become effective. In addition, State Operating Companies will review and align current state Gas Standard (GS 1100.050) as it relates to insertions. Please note, Pennsylvania's customer-owned service lines may require additional review/exception.

Findings (Cont'd)

Objective #1, Procedure #2: For each NGD Company, analyze the Company Cross Bore Program metrics and results to identify trends, patterns, or other areas of risk.	**Risk Rating**
Finding #4: The length of time estimated to complete each program ranges from 41 years to 338 years.	**High**
Process Owner(s): All NiSource Gas Distribution Presidents and General Managers **Executive Council Members Responsible:** Pablo Vegas, EVP & President Gas Utilities	**Target Remediation Date:** **Q1 2021**

Observation

Criteria: NiSource management is actively working to remediate known risks to pipeline integrity.

Condition: The length of time estimated to complete each program ranges from 41 years to 338 years.

Project Estimates	COH	CKY	CGV	CMA	CPA	CMD	NIPSCO
Estimated Total Miles	15,000	1,945	2,272	5,000	2,804	223	17,572
Average Miles/Year	41.76	20.00	55.00		43.90	2.40	52.00
# of Years to Complete	318	100	41	130	64	94	338

Risk/Impact: An abnormal operating condition that remains unremediated could potentially lead to loss of life, injury, or damages.

Recommendation

Management should assess the timeline to complete each program in comparison to the assessment of this risk and the resulting risk tolerance.

Management Response

Management will establish a team to assess the current estimated number of years to complete each cross bore program by state. This effort will continue to be ranked with other system risks that will impact program completion time frame. Furthermore, state operating companies will continue to explore opportunities to accelerate existing programs, in addition to leveraging Regulatory strategies in future rate case proceedings. Initial findings from this assessment to accelerate existing programs will be developed by January 31, 2021.

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response* *Internal Audit typically does not perform follow-up review procedures on low risk findings.*

Appendix B –Cross Bores Identified and Remediated

Internal Audit obtained the cross bore log from each Company Cross Bore Program leader. The inputs in the chart below include all cross bores found in each company by year since program inception date. Additionally, Internal Audit also obtained information from each Program leader on the remediation status of all identified cross bores, noting that management is actively working to remediate the 29 outstanding.

Note: The amounts reflected for 2019 are through September 2019.

Cross Bores Found per Year by Company							
Year	COH	CKY	CGV	CMA	CPA	CMD	NIPSCO
2013					28		
2014			31		46		
2015	101		33		44		
2016	150		35		40	2	
2017	152	4	40		44	3	
2018	127	18	52	20	49	1	25
2019	102	12	36	-	23	4	21
Total	632	34	227	20	274	10	46

Program	Total	Remediated	Outstanding
COH	632	632	-
CKY	34	26	8
CGV	227	225	2
CMA	20	19	1
CPA	274	269	5
CMD	10	9	1
NIPSCO	46	34	12
TOTAL	1,243	1,214	29

Appendix C –Cross Bores Installed by Company vs. Contractor

Internal Audit obtained the cross bore log for each Company Cross Bore Program from the project lead in each company. The inputs in the chart below include all cross bores found, including those found by non-program resources (external parties).

Note: The amounts reflected for 2019 are through September 2019. The chart identifies cross bores installed by the Company vs. Contractors. Some records did not contain adequate information in order to determine who installed the cross bore.

Note: The program totals reconcile to Appendix B – Cross Bores Found per Year. Refer to the chart below:

Program	Prior to 1/1/2008				Between 1/1/2008 to 12/31/2016				After 1/1/2017				Program Total
	CO.	CONT.	Unknown	ALL	CO.	CONT.	Unknown	ALL	CO.	CONT.	Unknown	ALL	
COH	282	175	-	457	30	131	-	161	2	12	-	14	**632**
CKY	3	12	18	33	-	1	-	1	-	-	-	-	**34**
CGV	13	203	-	216	-	11	-	11	-	-	-	-	**227**
CMA	-	-	20	20	-	-	-	-	-	-	-	-	**20**
CPA	187	30	-	217	11	41	-	52	-	5	-	5	**274**
CMD	8	1	-	9	-	-	-	-	-	1	-	1	**10**
NIPSCO	4	19	9	32	-	5	2	7	2	3	2	7	**46**
Total	**497**	**440**	**47**	**984**	**41**	**189**	**2**	**232**	**4**	**21**	**2**	**27**	**1,243**
Total (%)	**51%**	**45%**	**5%**	**100%**	**18%**	**81%**	**1%**	**100%**	**15%**	**78%**	**7%**	**100%**	

Appendix D – Cross Bores Found by Type & Material

Internal Audit obtained the cross bore log for each Company Cross Bore Program from the project lead in each company. The inputs in the charts below include cross bores that are found by external parties broken out by type and material.

Note: The amounts reflected for 2019 are through September 2019. The charts identify the type of pipe where the cross bore was found (main versus service) and the material type (plastics versus steel). Some records did not contain adequate information in order to determine the material or type of cross bore.

Note: The program totals reconcile to Appendix B – Cross Bores Found per Year. Refer to the tables below:

Type - Main vs. Service							
Program	**Main**	**%**	**Service**	**%**	**Unknown**	**%**	**Total**
COH	289	46%	343	54%	-	-	632
CKY	24	71%	10	29%	-	-	34
CGV	144	63%	83	37%	-	-	227
CMA	14	70%	4	20%	2	10%	20
CPA	107	39%	167	61%	-	-	274
CMD	7	70%	3	30%	-	-	10
NIPSCO	28	61%	13	28%	5	11%	46
Total	**613**	**49%**	**623**	**50%**	**7**	**1%**	**1,243**

Material - Plastic vs. Steel							
Program	**Plastic**	**%**	**Steel**	**%**	**Unknown**	**%**	**Total**
COH	455	72%	177	28%	-	-	632
CKY	22	65%	12	35%	-	-	34
CGV	216	95%	11	5%	-	-	227
CMA	9	45%	1	5%	10	50%	20
CPA	213	78%	61	22%	-	-	274
CMD	8	80%	2	20%	-	-	10
NIPSCO	32	70%	4	9%	10	22%	46
Total	**955**	**77%**	**268**	**22%**	**20**	**2%**	**1,243**

Appendix E – Actual Spend and Miles Reviewed

Internal Audit obtained the actual spend and miles reviewed for each program since inception date from each Program Lead in each company.

Program Actual Spend and Miles Reviewed by Year*														
Year	COH		CGV		CPA***		NIPSCO		CKY		CMD		CMA****	
	$$	Miles	$$	Miles	$$	Miles	$$	Miles	$$	Miles	$$	Miles	$$	Miles
2013					$650,000	10								
2014			$787,426	14	$1,300,000	39								
2015	$934,773	17	$1,408,991	13	$1,574,103	46								
2016	$2,123,511	63	$895,478	8	$1,547,500	42					$123,505	3		
2017	$2,048,728	46	$1,159,781	16	$1,381,373	44			$132,484	5	$122,756	3		
2018	$1,938,629	46	$1,602,942	25	$1,505,092	49	$844,868	64	$386,147	12	$74,098	2	$-	9
2019**	$1,405,383	37	$2,473,028	52	$1,198,194	30	$378,306	36	$112,606	10	$9,614	1	$-	3
ALL	$8,451,024	209	$8,327,646	128	$9,156,262	260	$1,223,174	100	$631,237	27	$329,973	9	$-	12
Est. Total Miles	15,000		2,272		2,804		17,572		1,945		223		5,000	

* Information included herein was provided by the Program Lead for each Company and was not verified against source data by Internal Audit.

** Actuals for 2019 represent spend through September 2019.

*** CPA did not manually track spend until 2015, as such, an estimate was utilized.

**** Minimal spend was incurred during the two three-month periods the program was in place.

Appendix F – Program Details

Internal Audit obtained this information from the project lead for each company program. The ET did not verify this information with source data. Refer to the Project Estimates table in the Executive Summary and Appendix E – Actual Spend and Miles Reviewed in conjunction with the additional information below:

Program	Additional Details:
COH	***Cost:*** The cross bore program budget includes costs for inspection, investigation, remediation, public awareness and education, risk model advancements, data analysis, salaries, equipment and travel expenses. The budget is allocated as part of the PSP program, which is determined by the COH Regulatory Group. All costs are recoverable through deferral. COH utilizes WMS in order to track spend, in addition to code patterns for expenses and employee salaries/overhead. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. The amount of miles inspected does not reflect storm and sanitary laterals, and are tracked within the annual totals by operating center log. The laterals are tracked within the same log by the amount of laterals inspected that had a cross bore. The estimated total miles for the entire program are based off of sanitary main footage in records. The estimated years to complete does not include the amount of pipe that could be eliminated in rural areas and replacement.
CKY	***Cost:*** The program budget includes costs for inspection, remediation, salaries, expenses, outside services and plant department cost. The budget is determined by executive Kentucky leadership. The recoverable costs include any cross bore identified outside of the legacy program and any capital work. Costs are tracked manually. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. The information is tracked in an invoice log maintained by a Project Specialist. There is an estimated 1,931 miles of main and 14 miles of service for a total of 1,945 miles that should be included in the program. The estimate was obtained by selecting all mains and services within the municipality boundaries for CKY, which was obtained by a GIS Tech. According to the DOT report, at the end of 2017, CKY has a total of 2,586.5 miles of main and 135,767 service lines. Note, the average miles per year was not calculated using miles inspected per year, as the program is expected to gain efficiency.
CGV	***Cost:*** The budget includes costs for investigation, remediation and any restoration. Salaries are included in the O&M budget. Money for the program is allocated from the commission in rates as part of the DIMP budget. The only O&M is the Project Specialist's salary and expenses. For tracking spend, Virginia has a code of DP07 in WMS, and the budget is included in the GM budget – not the general O&M budget. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. The amount of miles inspected each year was obtained from a spreadsheet maintaining financial information, which is how miles are being tracked. The estimated total miles for the entire project is from a report requested from engineering that includes all plastic pipe from 1983 – 2008, which came back as 12M feet, which calculates to 2,272 miles. It is estimated that the budget increase (as of this year) will bring the program completion time to ~40 years, as they project to hit 50 miles of inspection for 2019.
CMA	***Cost:*** The budget includes costs for camera investigation, field investigations, travel and office expenses and salaries. The budget was created in April 2018 for a two person team. Remediation is taken care of by the Operations Group. There are no recoverable costs (rate case in 2018, but did not get the opportunity). Spend is tracked through WMS – Reverse Billing. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. Note, CMA has only been able to operate the Legacy Cross Bore Program a few months each year due to the Merrimack Valley incident taking precedence. As such, the amount of miles inspected has been limited; however, during the few months of operation, they were able to inspect 11 miles, but this is not enough information to provide a sufficient average of miles inspected per year in order to calculate the number of years to complete the program. The miles inspected are tracked within the Dash Board and Mapping, which is located in GIS. The total number of miles for the program was obtained from a PHMSA report inspected by IA. The number of years to complete the program is an estimate.

Appendix F – Program Details (Cont'd)

Program	Additional Details:
CPA	***Cost:*** The budget includes costs for salaries and expenses of two full-time employees, expenses for one fleet vehicle and sewer investigation by contractors. It also includes costs for remediation, excluding large jobs that will be considered a capital project. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. The miles inspected per year are tracked within the Daily Progress Report completed by the contractors, which is provided to the Project Specialist. The Project Specialist inputs these footages into the manual tracking spreadsheets (Job Orders and Units Reported). The total number of miles completed are miles of sanitary sewer inspected (storm sewers, sanitary laterals and storm laterals are also inspected). There were 25,629 sewer laterals inspected for CPA and 111.9 miles of storm sewer mains have been inspected in CPA since the program started. The estimated total miles of the entire program is 7,500, but the estimated miles remaining for the program is 2,804. These footages are based on a Crossbore Risk Report generated through CIS in August 2018, which deducted capital work areas and areas where sewers had been inspected at that time from the total length of gas main. As such, IA utilized the estimated miles remaining within the table in Appendix E. The average miles per year only averaged the 2014 through 2018, as 2013 and 2019 do not include all 12 months (due to program start date and the date audit work concluded).
CMD	***Cost:*** There is no formal legacy cross bore program, but funds have been made available for some legacy sewer inspections since September 2016. For 2017, the initial amount provided was $100K; however, additional funds were made available in November 2017. ***Miles:*** The information provided in the chart in Appendix F is through October 2019. The miles inspected per year are tracked within the Daily Progress Report completed by the contractors, which is provided to the Project Specialist. The Project Specialist inputs these footages into the manual tracking spreadsheets (Job Orders and Units Reported). The total number of miles completed are miles of sanitary sewer inspected (storm sewers, sanitary laterals and storm laterals are also inspected). There were 1,232 sewer laterals inspected for CPA and 2.4 miles of storm sewer mains have been inspected in CPA since the program started. The estimated total miles of the entire program is 650, but the estimated miles remaining for the program is 223. These footages are based on a Crossbore Risk Report generated through CIS in August 2018, which deducted capital work areas and areas where sewers had been inspected at that time from the total length of gas main. As such, IA utilized the estimated miles remaining within the table in Appendix E. The average miles per excludes 2019, as 2019 does not include all 12 months (due to the date audit work concluded).
NIPSCO	***Cost:*** The budget includes costs for investigation, remediation, salaries, expenses and contractors. The budget will stay flat from January 2018 to 2021, as it is funded through a rate case. Costs are split between O&M and capital. In order to track spend, a monthly report is run in Cognos. ***Miles:*** The information provided in the chart in Appendix F is through September 2019. The miles inspected each year are tracked manually the Project Specialist, through spreadsheets, invoices and videos received. The average utilized in the table should increase as the program continues, as it is only in its second year, and have yet to complete an entire 12 months of the program annually. The estimated total miles for the entire project is based on what is reported to PHMSA annually.

TO: Tami Ely – Lead IT Analyst, Service Governance
Amy Weiss-Neal - Manager, Service Governance
JoAnn Cummans – Director, Service Management
Kevin Johannsen – VP, IT Services

FROM: Goranka Kasic - Project Manager - Infor. Systems Audit
Greg Wancheck - Director - Infor. Systems Audit

DATE: March 5, 2020
SUBJECT: Software Asset Management Design – Advisory Memo

NiSource IT Audit performed an independent advisory assessment over Software Asset Management (SAM) processes, including how assets are accounted for, optimized, and maintained for value realization. The objective of IT Audit's advisory assessment was to provide management with an overall opinion on the design of processes and procedures used to govern, safeguard, and manage software assets throughout the asset lifecycle.

Key Observations/Review Results:

<u>Policies and Procedures:</u>
IT Audit's advisory assessment of currently available NiSource policies and procedures related to Software Asset Management found that an enterprise Software Asset Management procedure is not currently utilized.* While various components of software asset management were found to be embedded within NiSource's existing IT policy portfolio, core processes such as the Software Asset Management Lifecycle, Software Asset Compliance (for external and internal licensing audits), and Software Maintenance were found to be managed, but are not formally defined. In addition, while an Operating Level Manual (OLM) for Software Asset Management exists for NiSource's primary IT Service Providers, this document has not been kept up-to-date. As a result, an opportunity exists for refresh of the legacy Software Asset OLM based on both current IT Service Provider contractual agreements and how the software asset lifecycle currently operates.

IT Audit was made aware of an ongoing effort by NiSource IT Risk Management to refresh the IT enterprise policy and procedure stack. Based on interviews with NiSource's IT Services management team, IT Audit additionally noted that Software Asset Management will be embedded into a new ITIL-based roadmap for process enhancement. As such, IT Audit sees an alignment opportunity between IT Services and IT Risk Management in establishing an enterprise Software Asset Management procedure and/or supporting policies that incorporate risk and are based on ITIL best practices.

**At the time of IT Audit's Advisory Memo creation, and post Advisory fieldwork closure, IT Audit was made aware of a Software Asset Management Process Handbook that was developed by NiSource as part of the 2017 IT Service Provider Transition. While this Software Asset Management Process Handbook is not currently in use for recent software asset management procedural activities, NiSource IT Service Governance is currently evaluating this document and intends to share it with broader NiSource IT management post completion of this advisory assessment.*

<u>Roles and Responsibilities:</u>
IT Audit noted that NiSource Software Asset Management does not have a defined process owner, with the legacy process traditionally managed based on acquired knowledge and experience. As a result, IT Audit sees an opportunity to both define and formalize the roles and responsibilities for all stakeholders within the Software Asset Management process for providing heightened enterprise accountability and awareness.

<u>ITIL Adoption:</u>
While it appears ITIL based training has been completed by a majority of NiSource IT members, the roadmap for adoption and execution of ITIL based practices related to Software Asset Management has yet to be defined. Core Software Asset Management processes such as License Audit Framework and Accountability, Software Asset Maintenance, and Software Asset Lifecycle (from license procurement to retirement) have been managed ad-hoc and based on experience. As such, IT Audit sees an opportunity to leverage ITIL in formalizing the Software Asset Management process and in helping define roles, responsibilities, deliverables, and the related communications strategy.

Summary Comments:

IT Audit noted there is an opportunity to re-evaluate the Software Asset Management process to clearly communicate process ownership and leverage ITIL based Software Asset Management design work that was originally created by NiSource for the 2017 IT Service Provider Transition program. Additionally, configuration and adoption of an ITIL approach would enable the definition and alignment of key roles and responsibilities for the full Software Asset Management value chain.

NiSource IT Audit would like to thank NiSource IT Service Management/Governance and other relevant business stakeholders for their cooperation and time in supporting this effort.

cc: D. Brown
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K. Morris

SMS Mitigation Proposal Plan Audit

July 2, 2020

To: William Mojica, VP Safety Management & Engineering

From: Chris Marlatt, Audit Project Manager
Ryan Binkley, Director Internal Audit

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Executive Summary

Internal Audit performed an audit over the governance and controls of implementing the SMS Mitigation Proposal Plans.

The focus of the audit included the following procedures:

- Determine if SMS Mitigation Proposal Plans are implemented throughout NiSource; and
- Understand the processes and controls in place to govern the implementation of the SMS Mitigation Proposal Plans.

Summary Conclusions:

As a result of our procedures, Internal Audit noted governance processes and controls are in place to properly implement proposal plans throughout NiSource and effectively govern the implementation of the SMS Mitigation Proposal Plan.

The following programs were completed meeting all stated objectives: ***Casing Removal***, ***Gasket Strainer Inspections***, ***Electric Systems Maintenance Work Stoppage***, and ***ASV Installation – Massachusetts***.

Internal Audit noted that during the audit some of the mitigation plans experienced delays and were not fully executed. The major cause related to the COVID-19 outbreak starting in March which prevented mitigation teams to conduct field visits, training, etc. The following were still in progress as of testing, however Internal Audit noted that SMS leadership has been aligned with process owners over the status of each project.

LP Uprates: Plan delayed due to COVID-19. As of date of testing, the LP Uprate team did execute ON 19-10, suspended LP Uprates involving the incremental method, and applied a buffer zone that requires an investigation to determine if address/structures may or may not be in a LP uprate zone. Remaining effort is to finalize the Gas Standard based upon feedback from Operation SMR's with a planned release date of September 1, 2020. This plan impacts multiple states and departments, and as such, Internal Audit will consider auditing this process in future audit periods.

Secondary Damage Investigation: Plan delayed due to COVID-19 which had an effect on the training department being able to instruct the new ON. Revisions to Gas Standards completed to expand the definition of damages, added additional requirements for inside inspection or service shut-off, and enhanced gas leak testing. This plan impacts multiple states and departments, and as such, Internal Audit will consider auditing this process in future audit periods.

UGS Blowout Contingency Plan: Delays in getting the third party Wild Well to sign and agree to a service agreement postponed implementation of this plan. Once Wild Well and NiSource came to agreeable terms, COVID-19 also delayed Wild Well's field visits which is required to gather data and develop site specific plan, train, and perform table top exercises.

Confined Space Entry: This plan is still aligned with original deadline and has completed the following: implemented and updated procedures for safe entry work practices (permit and non-permit) for confined spaces at Supplemental Gas facilities, created an ON Mitigation Plan, and training and inspections complete for vaporizers at LNG plants.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. Internal Audit would like to thank SMS staff and management for their cooperation and time in support of this audit.

Background

During the third quarter of 2019, NiSource performed a 30-Day SMS Deep Dive that focused on producing safety mitigation plans across the five SMS asset classes with the goal of reducing operation risk across NiSource. A total of 8 proposals were approved, the following is a brief description of each plan.

Casing Removal: Transmission asset class plan focused on updating standards and contingency planning around transmission casing removal.

Recommendations for LP Uprates: M&R asset class plan which will modify procedures and standards related to work on incremental uprate projects.

Gasket Strainer Inspections: M&R asset class plan focused on creating a formal process to document and perform gasket strainer inspections to ensure gas flow will not be limited if strainers have become partially or completely clogged.

UGS Blowout Contingency Plan: Supplemental Gas asset class plan related to creating an underground gas storage blowout contingency plan that meets the standards recommended by the American Petroleum Institute.

Secondary Damage Investigation: Main or Services & Meter asset class plan that will enhance and standardize requirements for secondary damage investigations following a reported dig-in when a main or service gas line is damaged, weakened or unexpectedly uncovered during excavation.

Confined Space Entry: Supplemental Gas asset class plan focused on implementing specific procedures for safe entry work practices for confined spaces at LNG facilities.

Electric System Maintenance Stop Work: Supplemental Gas asset plan which will ensure future electrical work is performed by trained electricians.

Automatic Shutoff Valves (ASV) Installation – Massachusetts: M&R asset class plan which resumes work of ASV installation in Massachusetts which was on pause as of August 8, 2019.

Audit Scope and Approach

Internal Audit performed an audit over the governance and controls of implementing the SMS Mitigation Proposal Plans in accordance with company policies and standards. The review performed aligned with the following objectives:

Objective 1: Determine if SMS Mitigation Proposal Plans are implemented throughout NiSource.		
#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Perform walkthroughs with overall management and process plan owners to understand how proposal plans are being adopted throughout NiSource and ensure that implementation activities are aligned with established plans/proposals.	**No Findings Noted**

Objective 2: Understand the processes and controls in place to govern the implementation of the SMS Mitigation Proposal Plans.		
#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Perform walkthroughs with overall management and process plan owners to understand the processes and controls implemented and where applicable perform testing procedures (i.e. test to ensure gasket strainers were inspected or test to see if blowout contingency plan is in compliance with API RP 1171).	**No Findings Noted**

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

TO: Catherine Larson – Lead Architect – EA Infrastructure
Katy Perez – Manager, IT Infrastructure
Viji Jagabandhu – Director, Solution Arch & Information Systems
Walter Wojcik – Director, IT Applications
Greg Skinner - VP, IT Infrastructure

FROM: Brett Welsch - Project Manager - Infor. Systems Audit
Greg Wancheck - Director - Infor. Systems Audit

DATE: April 17, 2020
SUBJECT: **Planning IT Migration – Advisory Memo**

NiSource IT Audit performed an independent advisory assessment of the NiSource Information Technology (IT) PlanningIT Migration project to migrate Software AG's PlanningIT tool into ServiceNow's (SNOW) Application Program Management (APM) module. This migration was performed by KPMG LLP, with NiSource IT providing support and guidance. The objectives of this migration were to establish confidence in how to ensure data quality of NiSource's application portfolio, enable proactive decision making, drive operational excellence, and establish further capabilities within the ServiceNow platform.

Key Observations/Review Results:

<u>PlanningIT Migration to ServiceNow APM:</u>
IT Audit's advisory assessment found the project utilized a systematic approach to validate, update and migrate data from the legacy PlanningIT tool into ServiceNow APM. The project team held workshops to identify the key application fields necessary for migration, divided NiSource's applications into functional groups (corporate, customer, infrastructure, etc.), and validated PlanningIT information with both relevant IT and Business owners prior to migration. Additionally, reports and tasks were setup within SNOW to provide the periodic data review cadence required to drive continued accuracy.

<u>Statement of Work Deliverables:</u>
IT Audit noted that within the associated Statement of Work (SOW) between KPMG and NiSource IT, nine (9) deliverables were found to be related to APM module development. These deliverables included items such as policy and process guides, technical designs, and "As-Built" documentation outlining configuration changes for the APM module. IT Audit verified these SOW deliverables were created and documented within the construct of project deliverables and in their handoff discussions with WIPRO to assist with understanding and

preparation for APM support (as WIPRO is responsible for ongoing steady state support of the SNOW APM module).

Future State Management Controls:
Lastly, IT Audit verified the project team created future state management controls to be utilized by NiSource IT management in assisting with ongoing accuracy and completeness of the SNOW APM module and associated data during steady state operation. These controls consist of reports and tasks, both on-demand and scheduled, which will assist NiSource IT management in maintaining accuracy and completeness of the APM module. IT Audit also met with NiSource IT Risk Management in preparation for inclusion of these management controls in future state IT compliance efforts to ensure they are performed and maintain currency.

Summary Comments:

IT Audit found the project team's migration of the defined business application repository from the PlanningIT tool into ServiceNow APM, coupled with subsequent data validation, allowed for the creation of a new application with initially accurate data and processes designed to maintain data accuracy. Additionally, the detailed handover between NiSource IT Service Integration and WIPRO should assist with the support of the new system. However, the continued accuracy of data and information within the tool can only be maintained provided solid processes and procedures are followed and the management controls developed during the project are performed on a routine basis. IT Audit encourages the related SNOW APM IT management controls provided by KPMG be absorbed into any future state NiSource IT Risk Management framework(s) so as to require their continued use in maintaining the accuracy of the system.

NiSource IT Audit would like to thank NiSource IT Architecture, Infrastructure and Application teams and other relevant business stakeholders for their cooperation and time in supporting this effort.

cc:	D. Brown	P. Disser
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	J. Cummans	R. Gribben

2020 Tie-In Audit

May 15, 2020

To: William Mojica, VP Safety Management & Engineering

From: Chris Marlatt, Audit Project Manager
Ryan Binkley, Director Internal Audit

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Executive Summary

Internal Audit performed an audit over the governance, controls, and management of change to properly execute tie-in work in accordance with company policies and standards for COH, CKY, CGV, CPA, and CMD.

The focus of the audit included the following procedures:

- Determine if tie-in work completed was performed in accordance with company policies and standards; and
- Understand the processes and controls in place to govern the tie-in work flow from design to close-out.

Summary Conclusions:

As a result of our procedures, Internal Audit noted governance processes and controls are in place to properly execute tie-in work in accordance with company policies and standards. Internal Audit noted no findings, however we have made observations regarding Operator Qualifications ("OQ") and SMS activity/CAP tool.

OQ Observations:

With the assistance of the PS&C department Internal Audit noted that none of the selections showed OQ noncompliance; however Internal Audit did note the following:

- Inconsistency in retaining (i.e. uploading to WMS Docs) OQ documentation;
- Instances where the construction coordinator had past due OQ covered tasks; since they are not physically doing the work this observation is more of a of best practice consideration that coordinators are "current" for all OQ Covered tasks; and
- Tie-in work is typically group based. As such, we noted examples of work where Internal Audit was unable to conclude whether there was full compliance as each task designated as part of a job is not fully documented/reported for each person, etc.

SMS Task Force

The SMS department created a task force to address the growing number of CAP tool items related to Tie-ins and the Tie-in Plan. Starting in February 2020 a cross departmental approach was created to provide SME knowledge to identify which areas of the Tie-in Plan and Tie-in process to focus on. Internal Audit noted that these teams had representation from each state and from all critical departments (i.e. Engineering, Construction, Operations, Standards, Training, and SMS). In March 2020 there was an all hands meeting where specific issues and subteams were identified, see ***following slide*** for list.

Executive Summary (Con't)

As of time of testing the following are the different sub teams that are addressing Tie-in risks:

- Contingency Plans – Team created to overhaul the contingency plan section of the Tie-in Plan
- Emergency Tie-In Process – Team created to streamline the process for emergency Tie-in Plans
- Engineering Checklist & Signature Process – Plan to make edits to the engineering section of the Tie-in Plan and clarifying what goes into the signature/approval process within the Advanced Briefing Section
- Tie-in Preparation – Construction/Field Operations and Pre-Construction Review – Team working on edits to each checklist section
- Miscellaneous Items – Team looking into the use of specific equipment (i.e. Air Movers, Electric Gauges, and Tablets)
- Tie-in Specific Template and Drawing Updates - Will review Tie-in specific process steps and standard Tie-in drawings

Internal Audit Conclusion

Internal Audit will plan to perform follow up work at a later date to determine if the various states adopted the changes from the above SMS Tie-in teams. In addition Internal Audit will comment on SMS leadership's communication of the changes, training provided, and highlight how SMS Management is assessing the effectiveness of the changes as part of the SMS methodology of plan, do, check, act.

Background

During 2019 there were changes to Gas Standard 1680.010 “Tie-Ins and Tapping Pressurized Pipelines” and a new Gas Standard 2810.050 “Stakeholder Reviews of Design Capital Projects” that impacted the processes and controls related to tie-in work. One of the changes was the expansion of the Tie-in Plan. The Gas Standard provided a Tie-in Plan template that included an Engineering Checklist, Contingency Plan, Advance Briefing, Construction/Field Operations Checklist, Pre-Construction Review, and Project-Specific Tie-in Steps.

Audit Scope and Approach

Internal Audit performed an audit over the governance, controls, and management of change to properly execute tie-in work in accordance with company policies and standards. The review performed aligned with the following objectives:

Objective 1: **Determine if tie-in work completed was performed in accordance with company policies and standards.**

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Sampled completed Job Orders (both internal and external) and make sure that the Tie-in Plan is filled out in accordance with Gas Standards.	**No Findings Noted**
2	Verify if Tie-in work performed was completed by individuals with proper OQ.	**No Findings Noted**
3	Determine if work had proper approval based on GS guidance (i.e. peer or PE).	**No Findings Noted**

Objective 2: **Understand the processes and controls in place to govern the tie-in work flow from design to close-out.**

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Perform walkthroughs with Gas Control, Engineering, Construction to understand how Gas Control is notified of work performed.	**No Findings Noted**
2	Perform walkthroughs with supporting departments (i.e. Construction Scheduling, Close-out, PS&C, SMS) to understanding additional layers of governance over the Tie-in process.	**No Findings Noted**

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings do not require an auditee Management Response nor a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

NiSource Officer Expense Audit

July 28, 2020

To: J. Hamrock, Chief Executive Officer

From: A. Meyers, Senior Internal Auditor

J. Callahan, Manager Internal Audit

R. Binkley, Director Internal Audit

Note: Officers as defined in this review were referred to as the Executive Council as of December 31, 2019. In June 2020, the name was changed to the Executive Leadership Team and members of that team were also changed. Those changes will be reflected in the audit conducted over 2020 expenses.

NiSource®

Executive Summary

Internal Audit conducted an audit of spend incurred by Officers**(1)** via NiSource corporate credit cards as well as any cash reimbursements processed through the MySpend expense reporting system to identify trends in spending and instances of non-compliance during the period of January 1, 2019 to December 31, 2019**(2)** .

As part of the testing procedures, Internal Audit identified the population of expenses incurred by Officers related to the Columbia Gas of Massachusetts' Greater Lawrence Incident (GLI) that occurred on September 13, 2018. Restoration efforts and related expenses were incurred in both 2018 and 2019; however, the related Officer expenses decreased significantly in 2019. Officer GLI spend for 2019 was **$8.7K,** which accounted for **~3%** of the total **$345K** Officer Spend and **~0.2%** of the total 2019 GLI spend of **$4.4M.(3)**

The focus of the audit included the following procedures:

- Review Accounts Payable and Supply Chain procedures to monitor spend and/or periodically audit Officer expenses; and
- Review Officer expense reimbursements to identify any potential unusual items and/or trends.

Summary Conclusions:

Internal Audit identified ***two (2) low risk*** audit findings related to MySpend audit rules and minor deviations from policy.

Low Risk Finding #1: MySpend Pre-Payment Audit Rule

As an added level of review**(4)**, Accounts Payable programmed MySpend to require all expense reports submitted by Officers and their Administrative Assistants to be subject to a pre-payment audit performed by Accounts Payable personnel. Upon review of this process in Q1 2020, Internal Audit noted that one (1) Officer and their supporting Administrative Assistant (both new to the role in 2019) were excluded from the programming language. As of the date of this report, Accounts Payable has updated the MySpend programming to ensure that all current Officers and their Administrative Assistants are included.

- **Recommendation:** Accounts Payable should establish a process to periodically update the MySpend pre-payment audit programming for any changes to Officer and Executive Administrative Assistant roles.

(1) For the purposes of this audit, Officers are defined as any direct report to the CEO as of December 31, 2019.
(2) Expense population determined by utilizing the GL Extraction Date, the date the expense is posted to the General Ledger.
(3) While no additional testing procedures were deemed necessary, the Officer GLI expense population was subject to review through both analytic procedures and sample testing.
(4) This additional level of review performed by Accounts Payable is not identified as a 404 control but is considered a best practice .

Executive Summary (Cont'd)

Summary Conclusions (cont'd):

- **Management Response:** Going forward, a monthly check will be completed using the HR employee list to ensure all employees reporting directly to the CEO and their administrative assistants will be included in the audit group. This group will have all expense reports submitted to the audit queue for review and approval.

Low Risk Finding #2 –Supporting Documentation:

Internal Audit reviewed **57** Officer expense selections for compliance with corporate policy and treatment for tax purposes. (Refer to **Appendix B** for testing criteria and risk factors utilized in selection process). As a result, it was noted that one (**1**) Officer expense selection did not provide the level of detail required by policy in the documentation uploaded to MySpend.

- **Recommendation:** Officers and their Administrative Assistants should ensure that supporting documentation submitted meets the requirements outlined in NiSource policy.

- **Management Response:** In the future, hotel receipts for meeting deposits and conference room rentals will be returned if not itemized.

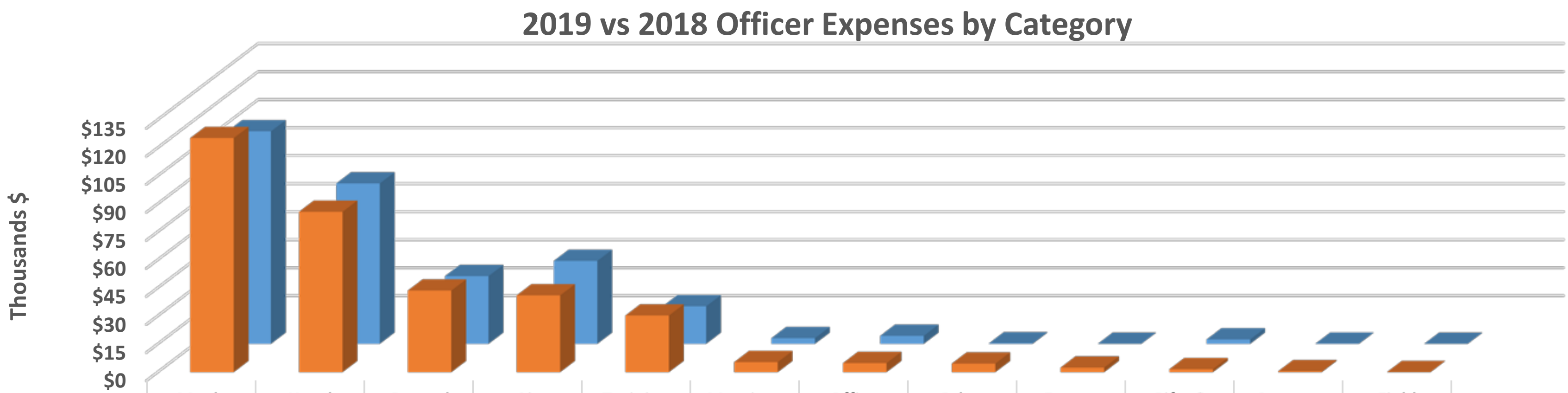
Analytic Highlights

- Officer expenses for 2019 increased **$35K** (**11%**) over 2018. The main drivers of this increase were within the following expenses categories: Meals (**$11K**), Training (**$10K**), and Ground Transportation (**$7K**). (Refer to **Appendix C** – Analysis by Officer and **Appendix E** – Analysis by Category).

- Spend submitted by the Administrative Assistants who support Officers increased 100% during 2019. Internal Audit analyzed the total spend by each Administrative Assistant to identify any unusual items or trends. (Refer to and **Appendix D** – Analysis by Administrative Assistant).
    - Note: As Administrative Assistants may incur expenses that benefit Officers due to the nature of their supportive roles and responsibilities, Internal Audit reviewed supplemental selections (as noted in **Appendix B**) in order to ensure that any expenses made by the Administrative Assistants for an Officer's benefit had the appropriate level of review.

Employee Level	2019	2018	Change ($)	Change (%)
Officer	345,024	310,098	34,926	11.3%
Administrative Assistant	124,008	61,900	62,108	100.3%

Executive Summary (Cont'd)



	Meals	Hotel Services	Ground Transport	Air Transport	Training & Dues	Meetings	Office	Other	Entmt.	Gifts & Awards	Comms.	Field
2019 Transaction Total	$125,203	$85,747	$43,574	$40,986	$30,227	$5,359	$4,837	$4,579	$2,432	$1,574	$472	$34
2018 Transaction Total	$113,725	$85,813	$36,191	$44,340	$20,028	$3,040	$4,280	$264	$0	$2,350	$65	$2
YoY Change Total (%)	10%	-	20%	-8%	51%	76%	13%	-	-	-	-	-

Refer to **Appendix E** for further analysis on Officer spend by category.

Background

The following NiSource policies apply to the use of corporate credit cards and reimbursement of business expenses:

Policy Name	Owner
Business Expense Rules and Guidelines (includes Guidelines reference document)	Finance & Accounting
Requisition and Disbursement Approval Levels	Finance & Accounting
Vehicle Policy	Supply Chain
Travel Policy	Supply Chain
Mobile Devices and Cellular Services Policy	Information Technology
Fraud Prevention Policy	Corporate
Gifts, Meals and Entertainment	Corporate
Use of Aircraft Policy	Corporate

In 2018, NiSource transitioned from an American Express Employee Expense card to a JPMorgan Chase (“One Card”) Visa. American Express was effective as the provider for corporate cards from January 1, 2018 through August 30, 2018 and the One Card was effective July 19, 2018 through the date of this review.

In 2019, Officers held only One Cards to pay for business expenses. One Card charges are auto-fed into the NiSource expense reporting system, MySpend, and then processed by the individual Officers. Officers who incur out of pocket business expenses may include them within their MySpend expense reports for review and approval by their supervisor. Once expense reports are processed and approved within MySpend, payments are remitted to the card administrator.

Accounts Payable designed the following rules within the MySpend system:

- “Hard Stops” are generated if a transaction does not meet programmed criteria and an automatic web response is sent to the MySpend user notifying them that the expense report won’t be processed until all required criteria have been entered.
- Expense reports meeting programmed criteria within MySpend are sent to pre-payment reviews performed by Accounts Payable. As part of the programmed criteria, Accounts Payable reviews:
    - A system generated sample of 10% of all expense reports submitted; and
    - Expense reports from Officers and their Administrative Assistants are automatically sent to the audit queue. The list is periodically updated. (Refer to **Slide 7** for a finding related to this process.)

Audit Scope and Approach

Objective 1: Analyze Officer expenses to identify unusual items and/or trends.		
#	Procedures	Findings Summary (Refer to Appendix A)
1	Analyze a two-year period of Officer to detect significant variations over time.	**No Findings Noted – Refer to Appendix C**
2	Analyze the current audit period's Officer expenses and determine whether the expenses were submitted timely for review, approval, and payment.	**No Findings Noted**
3	Analyze the current audit period's Officer expenses to identify outliers, anomalies, or potential fraud indicators.	**Refer to Objective 2 & Appendix E**

Objective 2: Determine whether corporate credit card expenses are submitted timely and processed in accordance with the Business Expense Policy and Internal Revenue Service guidelines.		
#	Procedures	Findings Summary (Refer to Appendix A)
1	Review the procedures performed by Accounts Payable and Supply Chain to monitor spend and/or periodically audit transactions incurred by Officers.	**Finding #1 – See Page 7**
2	Using a risk-based approach, review selected expense transactions incurred by Officers (and their administrative assistants) identified as part of our analytic procedures in Step 3 of Objective 1 and evaluate their compliance with Corporate Policies.	**Finding #2 – See Page 8**
3	Review procedures followed to identify expenses incurred on behalf of the Officer's spouse and ensure proper treatment for tax purposes.	**No Findings Noted**
4	Verify that taxable travel (including the use of the Company-leased aircraft or instances of unique commuting arrangements) has been identified and properly included in income as required by IRS reporting requirements for Officers.	**No Findings Noted**
5	Assess the accuracy and completeness of perquisite information disclosed in the most recent NiSource, Inc. Proxy (Schedule 14A) for the applicable Officers.	**No Findings Noted**

Findings (Cont'd)

Objective #2, Procedure #1: Review the procedures performed by Accounts Payable and Supply Chain to monitor spend and/or periodically audit transactions incurred by Officers.	**Risk Rating**
Finding #1: One (1) Officer and their supporting Administrative Assistant (both new to the role in 2019) were excluded from MySpend programming language which sends expense reports to Accounts Payable to perform pre-payment audits.	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible: Donald Brown (Chief Financial Officer)**	**Target Remediation Date:** **Q3 2020**

Observation

Criteria: As an added level of review, MySpend is programmed to require all expense reports submitted by Officers and their Administrative Assistants to be subject to a pre-payment audit performed by Accounts Payable personnel.

Condition: Upon review of this process in Q1 2020, Internal Audit noted that one (**1**) Officer and their supporting Administrative Assistant (both new to the role in 2019) were excluded from the programming language. As of the date of this report, Accounts Payable has updated the MySpend programming to ensure that all current Officers and their Administrative Assistants are included.

Risk/Impact: Instances of non-compliance with policy and / or unusual transactions may not be identified by management.

Recommendation

Accounts Payable should establish a process to periodically update the MySpend pre-payment audit programming for any changes to Officer and Executive Administrative Assistant roles.

Management Response

Going forward, a monthly check will be completed using the HR employee list to ensure all employees reporting directly to the CEO and their administrative assistants will be included in the audit group. This group will have all expense reports submitted to the audit queue for review and approval.

Findings (Cont'd)

Objective #2, Procedure #2: Review selected corporate card expense transactions identified as outliers, anomalies, or potential fraud indicators and evaluate their compliance with corporate policies.	**Risk Rating**
Finding #2: One (1) Officer expense selection did not provide the level of detail required by policy in the supporting documentation uploaded to MySpend.	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible: Donald Brown (Chief Financial Officer)**	**Target Remediation Date:** **Q3 2020**

Observation

Criteria: Officer expenses are for valid business purposes, are adequately supported and reviewed, and are in compliance with corporate policy.

Condition: Internal Audit reviewed **57** expense selections for compliance with corporate policy and treatment for tax purposes. (Refer to **Appendix B** for testing criteria and risk factors utilized in selection process). Internal Audit identified one **(1)** Officer expense selection did not provide the level of detail required by policy in the supporting documentation uploaded to MySpend.

The selection identified related to a deposit for the June NiSource Leadership Meeting for ~**$8,317** that was labeled as a "Hotel" expense in MySpend. Based on the nature of this transaction, the expense type for "Conference Room Rentals" may be more appropriate*; however, the Business Expense Rules and Guidelines note that both expense types require the following supporting documentation:

- Hotel: Itemized hotel receipts must be provided in order for room expenses to be distinguished from all other expenses; and
- Conference Room Rentals: Offsite Conference Room Rental or deposit should be itemized by day and by conference room. Itemizations are required.

A receipt was uploaded to MySpend for this expense, which had one line item for "group charges." Internal Audit noted that this selection was audited by Accounts Payable as part of the MySpend pre-payment audit rule but was not sent back to the Officer to provide the proper level of detail.

**As the accuracy of the expense type classification impacts the business' ability to analyze expenses (e.g. identify average cost per person, transaction, and / or day) and make policy decisions, we encourage Officers and their Executive Administrative Assistants to fully consider the nature of the transaction when classifying expenses.*

Findings (Cont'd)

Objective #2, Procedure #2: Review selected corporate card expense transactions identified as outliers, anomalies, or potential fraud indicators and evaluate their compliance with corporate policies.	**Risk Rating**
Finding #2: One (1) Officer expense selection did not provide the level of detail required by policy in the supporting documentation uploaded to MySpend.	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible: Donald Brown (Chief Financial Officer)**	**Target Remediation Date:** **Q3 2020**

Observation (cont'd)

Risk/Impact: Instances of non-compliance with policy and / or unusual transactions may not be identified by management.

Recommendation

Officers and their Administrative Assistants should ensure that supporting documentation submitted in MySpend meets the requirements outlined in NiSource policy.

Management Response

In the future, hotel receipts for meeting deposits and conference room rentals will be returned if not itemized.

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Appendix A

Ratings Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.</u>*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *<u>Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.</u>*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response.* *<u>Internal Audit typically does not perform follow-up review procedures on low risk findings.</u>*

Appendix B – Selection Analysis

Using a risk-based approach, Internal Audit selected a total of **57** selections for compliance with corporate policy and treatment for tax purposes based on the following criteria and methodologies:

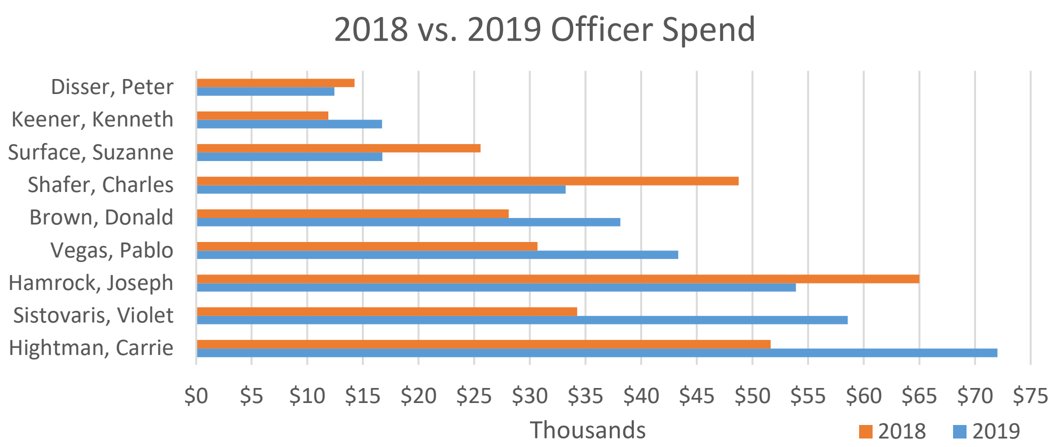
Criteria:	Definition:
High Risk Expense Types	Expense types with past audit issues, higher potential for fraud, misclassification, or tax impacts such as Gifts, Entertainment, & Other
Amount	High dollar spend, or high spend per nights stay, rental days, or attendees; spend just under receipt requirements or other thresholds
Payment Type	Cash reimbursements in unexpected expense types
Vendor	Unusual vendors
Business Purpose	Transactions without sufficient detail in the business purpose (e.g. March Expenses) or transactions which indicate a purpose related to NIPAC
Fraud Risk Factors	Transactions incurred on weekends or holidays, round dollar amounts, spend just below policy limits, etc
Risk of Inadequate Review	Internal Audit made selections of expenses submitted by Officers' Administrative Assistants to address the risk of an Administrative Assistant charging expenses for the benefit of the Officer without adhering to the appropriate approval process in those cases. Additionally, Internal Audit noted that total expenses submitted by Officers' Administrative Assistant expenses increased $62.1K from 2018 to 2019, which is a 100.3% increase. As such, IA selected nine (9) selections from the 2019 Executive Administrative Assistant Expenses obtained from MySpend, as this was deemed to be a risk factor in the current year.

Selection Summary				
Employee Level	Selections		Population	
	#	$	#	$
Officers	48	59,474	2,586	345,024
Admin Assistants	9	24,706	686	124,008
Total	57	84,180	3,272	469,032

Appendix C – Analysis by Officer

The table and chart below display the 2019 vs. 2018 MySpend expenses for Officers. Total Officer spend increased 11% from 2018 to 2019. See below for further analysis:

Spend by Officer	2019	2018	Change ($)	Change (%)
Brown, Donald	38,130	28,098	10,032	36%
Disser, Peter	12,437	14,240	(1,803)	-13%
Hamrock, Joseph	53,899	64,993	(11,094)	-17%
Hightman, Carrie	72,001	51,636	20,365	39%
Keener, Kenneth	16,719	11,883	4,836	41%
Shafer, Charles	33,201	48,763	(15,562)	-32%
Sistovaris, Violet	58,566	34,236	24,330	71%
Surface, Suzanne	16,754	25,575	(8,821)	-34%
Vegas, Pablo	43,317	30,674	12,643	41%
Grand Total	**345,024**	**310,098**	**34,926**	**11%**



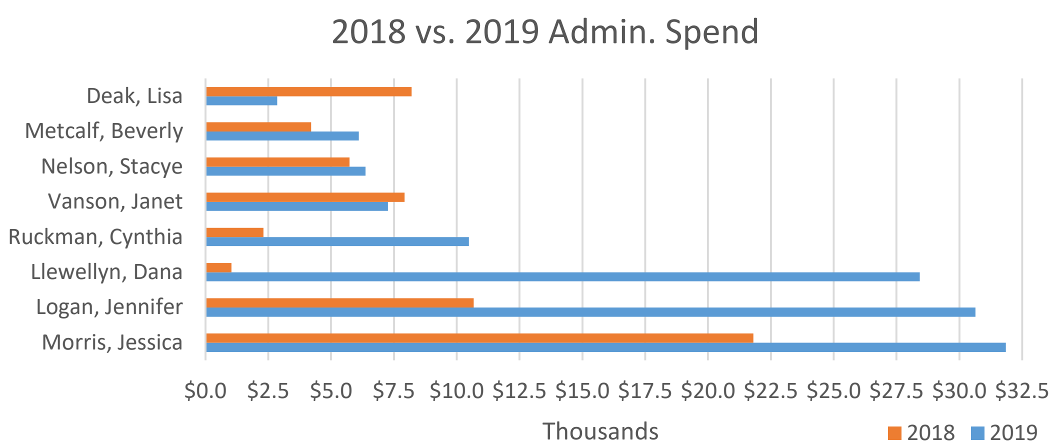
In addition to the selection testing performed, Internal Audit noted that these increases were evaluated as part of our analysis of the top 5 expense categories (Refer to **Appendix F** through **Appendix I)**:

Internal Audit concluded that the increases listed above were reasonable. Refer to **Appendix E** – Analysis by Category for an overview of Officer spend by category.

Appendix D – Analysis by Administrative Assistant

The table and chart below display the 2019 vs. 2018 spend for Administrative Assistants that directly reported to Officers as of 12/31/2019. Overall spend submitted by Administrative Assistants Spend doubled in total from 2018 to 2019. See below:

Spend by Admin.	2019	2018	Change ($)	Change (%)	
Morris, Jessica	31,857	21,809	10,048	46%	1
Logan, Jennifer	30,646	10,673	19,973	187%	2
Llewellyn, Dana	28,429	1,036	27,393	2644%	3
Ruckman, Cynthia	10,488	2,316	8,172	353%	4
Vanson, Janet	7,257	7,922	(665)	-8%	
Nelson, Stacye	6,378	5,731	647	11%	
Metcalf, Beverly	6,099	4,210	1,889	45%	
Deak, Lisa	2,854	8,203	(5,349)	-65%	
Grand Total	**124,008**	**61,900**	**62,108**	**100%**	



1 – Morris' **$10K** increase related to catering for SMS project meetings, which did not occur in 2018.
2 – Logan's **$20K** increase was for an Officer's OSU Fisher College of Business COE Board Membership that commenced in 2019.
3 – Llewellyn had a **$26K** increase due to travel related to monthly SMS Quality Review Board meetings that commenced in April 2019.
4 – Ruckman had a **$6K** increase related to dues to a professional organization for two annual periods - both 2018 and 2019 dues were posted to the GL in 2019 .

Conclusion: Per review of the table above, Internal Audit noted the following 2019 expense increases related to projects, events and membership dues that were not incurred in 2018. Internal Audit concluded that the increases listed above were reasonable. As such, no further analysis has been provided for Administrative Assistant spend.

Note, Internal Audit identified three (**3**) policy deviations within the population of expenses submitted by Administrative Assistants:

- One (**1**) selection that was a taxable expense not properly included in income; and
- Two (**2**) selections that were misclassified in the Expense Type field available within MySpend.

These deviations are not included as a separate finding in this report, as these deviations did not directly relate to an Officer and the nature of the exceptions are covered by existing findings within the **Employee Expense Review**.

Appendix E – Analysis by Category

Internal Audit reviewed Officer spend by expense category, noting the top 5 categories with highest spend made up **94%** of the total Officer spend. Additionally, Internal Audit compared the average spend by category incurred by Officers to the average spend of the same category incurred by non-Officers, noting the following:

Officer Spend by Category					2019 Average Spend per Transaction			
Category	2019 ($)	2018 ($)	Variance ($)	Variance (%)	Officer Average ($)	Non-Officer Average ($)	Variance ($)	Reference:
Meals	125,203	113,725	11,478	10%	169	50	119	**Appendix E**
Hotel Services	85,747	85,813	(66)	0%	135	103	32	**Appendix F**
Ground Transportation	43,574	36,191	7,383	20%	57	45	12	**Appendix G**
Air Transportation	40,986	44,340	(3,354)	-8%	197	263	(66)	**Appendix H**
Training, Dues & Memberships	30,227	20,028	10,199	51%	916	477	439	**Appendix I**
Meetings	5,359	3,040	2,319	76%	335	445	(110)	**N/A**
Office	4,837	4,280	557	13%	72	131	(59)	**N/A**
Other	4,579	264	4,315	1634%	82	418	(336)	*
Entertainment	2,432	-	2,432	100%	304	414	(110)	**N/A**
Gifts & Awards	1,574	2,350	(776)	-33%	143	157	(14)	**N/A**
Communications	472	65	407	626%	10	88	(78)	**N/A**
Field	34	2	32	1600%	34	234	(200)	**N/A**
Grand Total	**345,024**	**310,098**	**34,926**	**11%**	**N/A**	**N/A**	**N/A**	

*Due to the variable nature of the "Other" category, IA deemed it necessary to provide further information on the year-over-year fluctuation, as this category may contain expenses for: advertising, charitable contributions / donations, credit card fees and miscellaneous costs. For this category in table above, the year-over-year variance is related to a **$2.2K** donation for the GCSC Community Cup and **$2.4K** for CMA Emergency Response.

NOTE: In **Appendix F** through **Appendix J**, Internal Audit reviewed any Officer's spend within the respective category with a variance over $5K from the prior year to identify drivers. All averages in this report are based on transaction count. Additionally, Internal Audit identified outliers within category spend to review for compliance with policy as part of our selections testing methodology on Slide 11. IA also identified the top 5 vendors of the top 5 categories noted in the table above (see **Appendix K**).

Appendix F – Meals Analysis

Officers' largest expense category related to Meal expenses totaling **~$125K** in 2019. Refer to the tables below for further analysis:

Officer	2019 $	2018 $	Change ($)	Change (%)	
Sistovaris, Violet	35,487	11,660	23,827	204%	1
Hamrock, Joseph	20,657	22,486	(1,829)	-8%	
Vegas, Pablo	19,790	12,420	7,370	59%	2
Hightman, Carrie	13,015	20,911	(7,896)	-38%	1
Shafer, Charles	12,712	14,896	(2,184)	-15%	
Keener, Kenneth	7,690	5,563	2,127	38%	
Surface, Suzanne	7,367	15,752	(8,385)	-53%	3
Brown, Donald	6,161	5,964	197	3%	
Disser, Peter	2,324	4,073	(1,749)	-43%	
Grand Total	**125,203**	**113,725**	**11,478**	**10%**	

1 – The main driver of the Sistovaris' increase related to expenses totaling **$16.4K** for the 2019 Energetic Women's Conference. Expenses related to this event totaling **$17.6K** were submitted by Hightman in 2018.
2 – The increase for Vegas can mainly be attributed to **$8.6K** related to multiple SMS Quality Review Board dinners in 2019, which was implemented in 2019.
3 – The significant decrease for Surface is mainly attributed to **$10.8K** related to CVT Weekly Working Sessions that occurred in 2018, but not 2019.

Meals – Expense Type	2019 $	2019 Count	2019 Average ($)	2018 $	2018 Count	2018 Average ($)	Change ($)	Change (%)
With Attendees *	113,892	419	272	104,459	500	209	9,433	9%
Work Late/Snacks/Celebrations	5,976	27	221	6,351	10	635	(375)	-6%
Self Only - Travel Status	5,283	293	18	2,900	159	18	2,383	82%
Self Only - Not On Travel Stat (Taxable)	52	4	13	15	2	8	37	247%
Grand Total	**125,203**	**743**	**169**	**113,725**	**671**	**169**	**11,478**	**10%**

*For the Meals with Attendees Expense Type, the average cost per attendee for expenses submitted by Officers was **$40** per attendee. Internal Audit noted that the average cost per attendee for expenses submitted by Non-Officers in 2019 was **$19**. Of the **419** Meals with Attendees submitted by Officers, **48** of them were over **$100** per attendee. The maximum meal per attendee submitted by an Officer was **$482** per person.

Appendix G – Hotel Services Analysis

Officers' second largest expense category related to Hotel Services expenses totaling **~$85.7K** in 2019. Refer to the tables below for further analysis:

Officer	2019 $	2018 $	Change ($)	Change (%)	
Hightman, Carrie	24,747	6,438	18,309	284%	1
Hamrock, Joseph	17,943	26,647	(8,704)	-33%	2
Brown, Donald	13,069	9,316	3,753	40%	
Sistovaris, Violet	9,120	7,638	1,482	19%	
Vegas, Pablo	6,801	10,890	(4,089)	-38%	
Shafer, Charles	5,661	12,757	(7,096)	-56%	3
Disser, Peter	4,548	5,430	(882)	-16%	
Keener, Kenneth	2,086	2,513	(427)	-17%	
Surface, Suzanne	1,772	4,184	(2,412)	-58%	
Grand Total	**85,747**	**85,813**	**(66)**	**-0.1%**	

1 – The significant flux from prior year for Hightman related to **~$13K** expenses incurred in 2019 for travel for CMA legal meetings, prep and hearings for the GLI.
2 – The decrease in Hamrock's hotel spend in 2019 can be attributed to **$3K** expensed in 2018 for an extension of the Executive Council Meeting that did not occur in 2019. Additionally, he traveled less in 2019 for GLI work than he did in 2018.
3 – The significant decrease for Shafer's hotel services relates to a **$5K** decrease in travel for GLI work in 2019.

Hotel Services – Expense Type	2019 $	2019 Count	2019 Average ($)	2018 $	2018 Count	2018 Average ($)	Change ($)	Change (%)
Non-Room Expense	138	132	1	1,325	49	27	(1,187)	-90%
Hotel	76,058	260	293	79,803	315	253	(3,745)	-5%
Hotel Tax	8,190	175	47	3,273	136	24	4,917	150%
Hotel/Lodging – Self (retired)	683	2	341	864	6	144	(181)	-21%
Travel Fees (Egencia)	678	66	10	548	40	14	130	24%
Grand Total	**85,747**	**635**	**135**	**85,813**	**546**	**157**	**(66)**	**-0.1%**

*For the Hotel Expense Type, the average cost for expenses submitted by Officers was **$293**. Internal Audit noted that the average cost for expenses submitted by Non-Officers in 2019 was **$144**.

The maximum transaction submitted by an Officer was **$8.3K**. This transaction was referenced in more detail in **Finding #2** (page 8). See slide for further review.

Appendix H – Ground Transportation Analysis

Officers' third largest expense category related to Ground Transportation expenses totaling **~$43.6K** in 2019. Refer to the tables below for further analysis:

Officer	2019 $	2018 $	Change ($)	Change (%)	
Hightman, Carrie	9,907	4,789	5,118	107%	1
Hamrock, Joseph	9,395	7,770	1,625	21%	
Sistovaris, Violet	6,411	6,315	96	2%	
Vegas, Pablo	6,015	2,795	3,220	115%	
Brown, Donald	5,321	3,153	2,168	69%	
Disser, Peter	2,190	1,960	230	12%	
Shafer, Charles	1,786	7,055	(5,269)	-75%	2
Keener, Kenneth	1,690	841	849	101%	
Surface, Suzanne	859	1,513	(654)	-43%	
Grand Total	**43,574**	**36,191**	**7,383**	**20%**	

1 – The significant flux in Hightman's ground transportation expenses from prior year related to **~$3K** expenses incurred in 2019 for travel for CMA legal meetings, prep and hearings for the GLI.

2 – The significant decrease in Shafer's ground transportation expenses relates to a **~$3K** decrease in travel for GLI work in 2019.

Ground Transportation – Expense Type	2019 $	2019 Count	2019 Average ($)	2018 $	2018 Count	2018 Average ($)	Change ($)	Change (%)
Car Rental	3,341	29	115	7,863	33	238	(4,522)	-58%
Rental Car Fuel	104	9	12	489	14	35	(385)	-79%
Ground Transportation (Bus/Car/Rail/Taxi)*	29,662	481	62	18,091	303	60	11,571	64%
Tolls / Road Charges / Parking	5,190	167	31	4,738	131	36	452	10%
Personal Car Mileage	5,277	73	72	5,010	94	53	267	5%
Grand Total	**43,574**	**759**	**57**	**36,191**	**575**	**63**	**7,383**	**20%**

*Ground Transportation (Bus/Car/Rail/Taxi) spend increased due to increases in travel of **$3K** for Investor Meetings, **$1.3K** for National Transportation Safety Board Meetings and **$2.1K** for Ratings Agency Meetings in the current year.

For the Ground Transportation (Bus/Car/Rail/Taxi) Expense Type, the average cost for expenses submitted by Officers was **$62**. Internal Audit noted that the average cost for expenses submitted by Non-Officers in 2019 was **$27**. The maximum transaction submitted by an Officer was **$1,577**.

Appendix I – Air Transportation Analysis

Officers' fourth largest expense category related to Air Transportation expenses totaling **~$41K** in 2019. Refer to the tables below for further analysis:

Officer	2019 $	2018 $	Change ($)	Change (%)
Hightman, Carrie	14,373	8,649	5,724	66% 1
Shafer, Charles	5,842	9,664	(3,822)	-40%
Keener, Kenneth	4,742	2,455	2,287	93%
Brown, Donald	4,402	7,331	(2,929)	-40%
Surface, Suzanne	3,814	4,088	(274)	-7%
Hamrock, Joseph	2,251	5,675	(3,424)	-60%
Disser, Peter	1,922	2,451	(529)	-22%
Vegas, Pablo	1,918	943	975	103%
Sistovaris, Violet	1,722	3,084	(1,362)	-44%
Grand Total	**40,986**	**44,340**	**(3,354)**	**-8%**

1 – The significant flux for Hightman from prior year related to **$5K** expenses incurred in 2019 for travel for CMA legal meetings, prep and hearings for the GLI.

Air Transportation – Expense Type	2019 $	2019 Count	2019 Average ($)	2018 $	2018 Count	2018 Average ($)	Change ($)	Change (%)
Airfare*	40,340	142	284	42,922	166	259	(2,582)	-6%
Airline Fees	646	66	10	1,418	111	13	(772)	-54%
Airfare / Airline Fees	**40,986**	**208**	**197**	**44,340**	**277**	**160**	**(3,354)**	**-8%**

*For Airfare, the average cost for expenses submitted by Officers was **$284**. Internal Audit noted that the average cost for expenses submitted by Non-Officers in 2019 was **$350**. The maximum airfare / airline fee submitted by an Officer was **$1,609**.

Note: The corporate jet was in use during 2019 and the use of the jet could impact Officer spend for Air Transportation.

Appendix J – Training, Dues & Memberships Analysis

Officers' fifth largest expense category related to Training expenses totaling **~$30K** in 2019. Refer to the tables below for further analysis:

Officer	2019 $	2018 $	Change ($)*	Change (%)
Vegas, Pablo	7,230	2,295	4,935	215%
Hightman, Carrie	6,539	7,406	(867)	-12%
Shafer, Charles	5,475	2,595	2,880	111%
Sistovaris, Violet	3,609	2,399	1,210	50%
Hamrock, Joseph	3,480	2,295	1,185	52%
Brown, Donald	2,385	2,295	90	4%
Disser, Peter	1,300	325	975	300%
Keener, Kenneth	209	418	(209)	-50%
Grand Total	**30,227**	**20,028**	**10,199**	**51%**

*Internal Audit noted no significant fluctuations from prior year.

Training, Dues & Memberships – Expense Type	2019			2018			Change	
	$	Count	Average ($)	$	Count	Average ($)	($)	(%)
Civic and Professional Associations*	9,933	12	828	4,703	9	523	5,230	111%
Seminars / Conferences / Training	20,294	21	966	15,325	15	1,022	4,969	32%
Grand Total	**30,227**	**33**	**916**	**20,028**	**24**	**835**	**10,199**	**51%**

*Significant fluctuation for Civic and Professional Associations was attributed to a membership to YPO INTL **for $3.75K** in the current year.

For the Seminars / Conferences / Training Expense Type, the average cost for expenses submitted by Officers was **$966**. Internal Audit noted that the average cost for expenses submitted by Non-Officers in 2019 was **$557**. The maximum transaction submitted by an Officer was **$1,900**.

Appendix K – Top Vendors for Officer Spend

The two charts below display the top 10 vendors for Officers for 2019 and 2018 for overall spend:

2019 Top 10 Vendors	Count	Spend ($)	Average ($)	Max ($)
Marriott	81	32,186	397	16,440
American Airlines	169	21,303	126	1,609
Guckenheimer NiSource	115	18,769	163	1,147
Hilton	135	17,817	132	8,318
Hyatt	128	16,755	131	1,053
Southwest Airlines	64	15,693	245	1,106
Uber	390	11,355	29	267
American Gas Association	11	8,050	732	1,095
Ritz Carlton	51	7,621	149	965
Edison Electric Inst.	5	7,500	1,500	1,900

2018 Top 10 Vendors	Count	Spend ($)	Average ($)	Max ($)
Guckenheimer NiSource	129	31,693	246	2,441
Hilton	152	23,167	152	3,000
Hyatt	56	20,965	374	9,015
Southwest Airlines	100	18,641	186	1,186
Waldorf Astoria	4	17,604	4,401	13,073
American Airlines	72	16,301	226	1,489
DoubleTree	199	13,660	69	347
United Airlines	24	6,217	259	1,354
Edison Electric Inst.	4	5,600	1,400	1,400
Uber	237	5,496	23	169

Conclusion: No unusual vendors noted in the tables above and no significant changes in spend. The max transactions in 2019 and 2018 listed above are for a recurring annual conference. No further analysis required.

The charts below display the top five vendors for the top five categories analyzed in Appendix F through Appendix J:

Meals - 2019 Top Vendors	Count	Spend ($)	Average ($)	Max ($)
Marriott	23	20,539	893	16,440
Guckenheimer NiSource	105	15,038	143	736
Black Point	9	6,696	744	1,991
Gamba	12	5,854	488	2,111
McCormick & Schmick's	1	4,506	4,506	4,506

Hotel - 2019 Top Vendors	Count	Spend ($)	Average ($)	Max ($)
Hilton	93	16,634	179	8,318
Hyatt	110	16,427	149	1,053
Marriott	57	11,597	203	801
Ritz Carlton	23	4,378	190	695
Egencia Fee	76	3,635	48	677

Ground Trans- 2019 Top Vendors	Count	Spend ($)	Average ($)	Max ($)
Uber	378	11,022	29	267
Unique Limo	10	5,168	517	1,577
US Sedan Service	20	4,035	202	474
Enterprise	31	2,943	95	644
Valet	15	1,944	130	244

Air - 2019 Top Vendors	Count	Spend ($)	Average ($)	Max ($)
American Airlines	107	19,860	186	1,609
Southwest Airlines	64	15,693	245	1,106
United Airlines	27	3,283	122	783
Delta Airlines	8	2,056	257	480
TSA Pre-check	1	85	85	85

Training - 2019 Top Vendors	Count	Spend ($)	Average ($)	Max ($)
American Gas Association	11	8,050	732	1,095
Edison Electric Inst.	5	7,500	1,500	1,900
YPO INTL	2	3,750	1,875	3,750
AABE	3	3,250	1,083	1,300
Southern Gas Association	1	1,805	1,805	1,805

Employee Expense Audit & Analytics (2019 Annual Period)

July 28, 2020

To: A . Acevedo, Director Shared Services Center

From: M. Castillo, Internal Auditor
J. Callahan, Manager Internal Audit
R. Binkley, Director Internal Audit

NiSource®

Executive Summary

Internal Audit conducted an audit of expense transactions incurred by employees on behalf of NiSource to analyze trends in employee spending and aid in identifying instances of non-compliance during the period of January 1, 2019 to December 31, 2019(1). Refer to the chart below for a breakdown of spend by the various corporate card types in use during 2019.

Card Type	Administrator	Total 2019 Spend (MM)	Total 2018 Spend (MM)	Variance (MM)	% of Change	Reference
Employee Expense Cards (2)	JPMorgan Chase "One Card" Visa	$ 44.65	$ 50.41	$ (5.76)	-11%	Appendix E-I
Purchasing Cards	Citibank	$ 0.40	$ 27.70	$ (27.30)	-99%	(3)
Fuel Cards	ARI/WEX	$ 16.13	$ 17.50	$ (1.37)	-8%	Appendix J
Fleet Cards	ARI	$ 0.04	$ 0.05	$ (0.01)	-26%	Appendix J
Total Corporate Credit Card Spend		$ 61.22	$ 95.66	$ (34.44)	-36%	

The focus of the audit included the following procedures:

- Determine whether corporate card access is properly removed from terminated/former employees;
- Analyze corporate card and other reimbursable expenses to identify any unusual items and/or trends;
- Determine whether a sample of corporate card and other reimbursable expenses are processed in accordance with the Business Expense policy and Internal Revenue Service (IRS) guidelines.

(1) Expense population determined by utilizing the GL Extraction Date, the date the expense posted to the General Ledger.

(2) Employees who are not issued corporate credit cards or who incur out of pocket expenses may still incur legitimate reimbursable business expenses. These expenses are submitted within the MySpend expense reporting system and are included in the Employee Expense Cards total referenced above.

(3) Supply Chain noted that all Purchasing Cards, with the exception of two (2), were closed as of November 22, 2018. The remaining two (2) cards were utilized solely for the Columbia Gas Massachusetts' Greater Lawrence Incident (GLI) expenses. The cards were managed by Supply Chain personnel and were closed as of February 22, 2019.

Executive Summary

Summary Conclusions:

As a result of the analytic procedures performed and a review of **54** expense selections (refer to **Appendix B** for testing criteria and risk factors utilized in selection process), Internal Audit identified the following ***four (4) moderate*** and ***one (1) low*** risk audit findings:

Finding #1 - Departed Employees With One Card Access (Moderate Risk)

Internal Audit reviewed a listing of all active One Cards as of April 1, 2020, noting that card access was not removed timely upon the departure of six **(6)** employees and extended leave (i.e. greater than 6 months) of five **(5)** employees. Additionally, one **(1)** former employee made purchases totaling **$656** on their corporate card several months after their departure from the company and these expenses were paid by NiSource.

- **Recommendation:** Supervisors should ensure employees no longer have access to their corporate card and should reconcile any remaining balances (i.e. unprocessed credit card transactions in MySpend and/or unpaid submitted personal expenses) upon the employee's departure. In addition to the supervisor's responsibilities, Accounts Payable Management and Human Resources should collaborate to periodically verify that active corporate cards are assigned to active employees only and any outstanding balances have been resolved.

- **Management Response:** When this was researched, the employees with continued access were not included in the termination report sent by HR and received every Monday into the MySpend@nisource.com inbox. HR and Accounts Payable are working together to streamline its communication process and ensure that weekly emails will include all terminations and extended leaves. These changes will be in place by **August 1, 2020**.

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Executive Summary

Summary Conclusions (Cont'd):

Finding #2 – Method of Submission Varies (Low Risk)

Internal Audit identified transactions which appear to meet the classification of employee expenses submitted through methods other than MySpend (e.g. Catalyst). Refer to **Slide 15** for further detail on the transactions identified.

The Business Expense Policy states the following:

> "The One Card is required for all approved business expenses wherever the card is accepted. If a merchant does not accept the One Card, or in the event of an emergency where the employee does not have access to the One Card, a personal credit card may be used after receiving approval from the employee's supervisor." Additionally, the policy notes that business expenses must be submitted for reimbursement "in the expense reporting tool, MySpend."

However, the expense policy also indicates that "the One Card can not be used for invoices provided by a supplier."

As the policy language may conflict in certain cases, none of the transactions identified by Internal Audit are direct violations of policy. However, Internal Audit noted that employee expenses submitted through other methods may not provide the detail necessary to ensure proper tax treatment (e.g. names of attendees/recipients) and current processes do not review transactions submitted in this manner for tax purposes. Additionally, employee expense transactions that are not submitted through MySpend are not classified by expense categories and impact the company's ability to effectively analyze expenses and make policy decisions.

- **Recommendation**: Accounts Payable should work to clarify requirements for method of submission within the policy and work with Communications and Training to educate employees and their supervisors on the proper methods to submit business expenses.

- **Management Response:** Accounts Payable is currently proposing changes to the policy to add verbiage to use the OneCard for payment specifically for Season Tickets, Civic & Professional Associations, and Social and Athletic Club Memberships. Accounts Payable will reach out to the employees who completed the payments through Catalyst which were identified by Internal Audit to provide education once the policy has been finalized. Additionally, as referenced in the response to Finding #5, Accounts Payable is also working to establish a training for employees over the Business Expense policy and use of MySpend. These changes are expected to be completed by **December 31, 2020**.

Executive Summary

Summary Conclusions Cont'd:

Finding #3 - Taxable Expenses not Properly Included in Income (Moderate Risk)

Internal Audit noted two **(2)** expense types, "Taxable to the Employee" and "Meals – Self Only – Not On Travel Status (Taxable to the Employee)", which were created upon the transition to One Card, are not currently assessed for tax requirements. As a result, the total of **$5,671** expenses incurred in these categories were not properly taxed in 2019.

In addition to the process gap identified above, Internal Audit noted one **(1)** gift selection totaling **$332** was not appropriately included in the recipient's taxable income as the employee who submitted the expense did not include the recipient's name within MySpend and did not submit the required manual forms to Payroll.

- **Recommendation:** Accounts Payable, Tax, and Payroll should establish processes to ensure any expenses with tax implications are properly included in employee income.

- **Management Response:** Accounts Payable, Tax, and HR/Payroll have created a MySpend report that can be used to identify all transactions taxable to employees. This will be reviewed by Tax in the 4th quarter of every year (beginning in **Q4 2020**) and applied to income by Payroll. Gift cards/gift merchandise transactions will be applied to employee income monthly when Payroll pulls the MySpend report. Taxable Travel and Meals-Self Non Travel-Taxable to Employee expense types have been removed from MySpend as of July 8, 2020. (Total spend in these categories to date has been $1,959, which will be included in income for 2020 if applicable). Going forward employees will be directed to identify those transactions as "personal" within MySpend.

Executive Summary

Summary Conclusions Cont'd:

Finding #4 – Improper categorization/coding of NiSource Political Action Committee (NIPAC) expenses (Moderate Risk)

Two **(2)** selections reviewed by Internal Audit related to expenses incurred for the benefit of NIPAC. Internal Audit noted that both selections were not appropriately classified using the NIPAC expense type. Additionally, one **(1)** selection was charged to the incorrect accounting code.

To determine the prevalence of these errors within the complete expense population, Internal Audit analyzed all expenses which referenced PAC in the Transaction Business Purpose within MySpend to determine whether they utilized the proper expense type accounting code, noting the following:

- **360** transactions totaling **~$46K** referenced PAC.
  - **26** transactions (from the population above) totaling **~$5K** were classified using the PAC expense type.
  - **17** transactions (from the population above) totaling **~$3K** were properly charged to the correct accounting code.

- **Recommendation:** As NIPAC expenses have different tax implications than other expenses, a process should be put in place to ensure any transactions that relate to PAC expenses are properly identified and charged to the correct expense type/accounting code. There should be more guidance in the policy as to which PAC expenses need to be charged to the PAC code.

- **Management Response:** Tax has confirmed that PAC transactions should be classified in specific categories. Accounts Payable will work with PAC team to send a targeted email to employees submitting PAC expenses to provide additional training for correct MySpend Expense Types. Accounts Payable has also added 'Travel' to the PAC/Lobbying-Meals and Entertainment. These efforts will be completed by **December 31, 2020**.

Executive Summary

Summary Conclusions Cont'd:

Finding #5 - Deviations from Policy (Moderate Risk)

As a result of the testing performed, Internal Audit identified the following:

- One **(1)** transaction related to an employee who made a personal purchase with their One Card and did not mark it as a personal expense within the MySpend reporting system, resulting in the amount of the expense **($164)** being improperly paid by the company.
- Two **(2)** transactions totaling **($1,898)** were charged to the incorrect accounting code based on the nature of the expenses.
    - Both expenses were charged to the accounting code 92100000 for Office Supplies and Expenses even though the expenses were classified as Special Event/Season Tickets/Golf and General Entertainment, respectively.

Additional Items to Note:

- **14** transactions did not provide the level of detail required by policy in the supporting documentation uploaded to MySpend. See **Appendix C** for further detail.
- **16** transactions were misclassified in the Expense Types field available within MySpend. In some cases, these misclassifications would impact our ability to comply with IRS regulations. See **Appendix D.**

- **Recommendation:** Based on the policy deviations identified, Internal Audit supports the implementation of the policy enhancements proposed by Accounts Payable on **Slide 10** as these improvements would help clarify responsibilities, establish a culture of accountability, and alleviate risk to the company.

- **Management Response:** Accounts Payable is working on several items to help guide employee selections, including the following: Policy recommendations to better direct employees, required yearly training, and MySpend audit rules to require specific accounts be used. These efforts will be completed by **December 31, 2020**.

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Background

The following NiSource policies apply to the use of corporate credit cards and reimbursement of business expenses:

Policy Name	Owner
Business Expense Rules and Guidelines (includes Guidelines reference document)	Finance & Accounting
Requisition and Disbursement Approval Levels	Finance & Accounting
Vehicle Policy	Supply Chain
Travel Policy	Supply Chain
Mobile Devices and Cellular Services Policy	Information Technology
Fraud Prevention Policy	Corporate
Gifts, Meals and Entertainment	Corporate
Use of Aircraft Policy	Corporate

Employee Expense Cards:

In 2018, NiSource transitioned from an American Express Employee Expense card to a JPMorgan Chase ("One Card") Visa. American Express was effective as the provider for corporate cards from January 1, 2018 through August 30, 2018 and the Visa ("One Card") was effective July 19, 2018 through the date of this review.

In 2019, employees used JPMorgan Chase Visa "One Cards" to pay for appropriate company related expenses. One Card charges are auto-fed into the NiSource expense reporting system, Concur Expense Solutions (referred to herein as "MySpend"), and then processed by individual employees. Employees who incur out of pocket business expenses may include them within the MySpend employee expense statement for review and approval by their supervisor. Once expense reports are processed and approved within MySpend, payments are remitted to the card administrator.

- Accounts Payable performs pre-payment audits on expense reports meeting programmed criteria within MySpend. Additionally, MySpend allows for "Hard Stops" which will generate an automatic web response if a transaction does not meet specific required criteria and will not allow the expense report to be processed until all required criteria have been entered. Once expense reports are processed within the reporting system, payments are remitted.

- Additionally, Accounts Payable has identified specific employees (based on employee level or employees with previous instances of non-compliance with policy) who are automatically sent to the audit queue. The list is periodically updated.

Background (Cont'd)

Purchase Cards

Prior to the transition to "One Card", Purchase Cards were used as a payment method for purchases of materials, supplies, and certain field services. The process of approval for expenses incurred on Purchase Cards was manually intensive, lacked automated controls and quality assurance/quality control processes. As a result, NiSource made the decision to stop using these cards in 2018. Supply Chain noted that all Purchasing Cards, with the exception of two **(2)**, were closed as of November 22, 2018. The remaining cards were utilized solely for GLI expenses and were closed as of February 22, 2019.

Fuel Cards

Fuel cards are used to purchase fuel or very limited vehicle-related expenses (e.g. a car wash, quart of oil, or diesel additive). Fuel cards are restricted using the Merchant Category Code (MCC) to limit the types of purchases that can be made using the card. Cards are assigned to a vehicle within a NiSource company and must remain with the vehicle at all times. Each card is assigned a cost accounting code and changes to the code require management approval. In order to use a Fuel card, an employee must sign the NiSource Automotive Resource International (ARI) Wright Express Card User Agreement and submit the form with manager approval to the NiSource Credit Card Program Administrator. Employees are then assigned a unique PIN number which allows purchases to be traced to the individual employee using a vehicle card. ARI monitors spend for compliance with NiSource policy and potential fraud and will communicate with the Fleet Administration team when transactions need further review. In addition to the controls outlined above, exception reporting is also available to supervisors of employees using Fuel cards. Each supervisor may determine what criteria they would like to monitor related to fuel spend and the Fleet Administration team will communicate the results of the daily exceptions to the supervisors. Examples of exception reports are (but not limited to): cardholders with more than 3 transactions per day, transactions greater than $150, cardholders who made a purchase in gallons which exceeded the vehicle's tank capacity, and a purchase of premium fuel when vehicle calls for regular.

Fleet Cards

Fleet cards are not credit cards but they do contain ARI billing information which allow users to make purchases at automotive parts stores via a purchase order process managed for NiSource by ARI. Purchases under $50 don't require approval, however, any purchase over $50 is required to go through an ARI approval process. Cardholders are instructed to only use the incidental card for small items (i.e. lights bulbs, oil, windshield wipers) as a way to be cost effective and not use a garage for replacement.

Note: Cardholders who incur Fuel and Fleet (incidental) spend are not required to submit receipts or "process" expenses. ARI (Wright Express) maintains the detail of all spend transactions and monitors spend on a daily basis. See **Appendix J** for Fleet and Fuel Card Analysis

Background (Cont'd)

Accounts Payable Initiative

Accounts Payable has established an initiative focused on continuous improvement in the expense submission, approval, and reporting processes as well as the following proposed enhancements to associated company policies:

- Returning guidelines to the policy, rather than suggestions, to provide more regulation and clarity to employees. Examples include:
  - Requiring itemized receipts for all purchases over $25

    Internal Audit Comment: This would improve transparency, provide support for the stated business purpose and decrease the risk of fraud, especially for vendors like Amazon, Paypal, Sam's Club, etc where various types of items can be purchased.

  - Clarifying when to rent a car versus when to submit for personal mileage and requiring employees to utilize the Google maps functionality to provide detail on trip information for personal mileage

    Internal Audit Comment: Current policy language is vague, resulting in inconsistent interpretation by employees.

  - Establishing requirements for how to process the purchase of Entertainment expenses and season tickets, including defining the One Card as the acceptable purchase method, requiring a process to track attendees, and clarifying which level of employee must purchase and approve

    Internal Audit Comment: Entertainment expenses reviewed by Internal Audit often lack details regarding attendees (and the related tax implications) as well as and business purposes. Clarifying the policy to require more information would be provide more transparency related to this expense type.

- Establishment of yearly refresher training to include policy reminders and updates on any changes to the policy, with a focus on training for those supervisors approving reports

  Internal Audit Comment: As with any change, communication and education for employees will aid in their ability to comply with policy.

Based on the findings of this review, Internal Audit agrees that these recommendations would help establish a culture of accountability, alleviate risk to the company and increase compliance with tax laws and IRS regulations.

Audit Scope and Approach

Internal Audit reviewed the processes and controls in place related to employee expensed for the audit period of 2019.

Objective 1: Determine whether corporate card access is properly removed from terminated/former employees.		
#	**Procedures**	**Findings Summary (Refer to Appendix A)**
1	Review the processes and procedures in place to remove corporate card access from terminated/former employees.	**No Findings Noted**
2	Independently verify that card access has been removed for all non-active employees and ensure no transactions were incurred subsequent to employee departure.	**Finding #1 – Page 13-14**

Objective 2: Analyze employee expenses to identify unusual items and/or trends.		
#	**Procedures**	**Findings Summary (Refer to Appendix A)**
1	Analyze a two-year period of employee expenses and examine historical spending patterns to detect significant variations over time.	**No Findings Noted – Refer to Appendix E-J**
2	Analyze the current audit period's employee expenses and determine whether the expenses were submitted timely for review, approval, and payment.	**No Findings Noted**
3	Analyze the current audit period's employee expenses to identify outliers, anomalies, or potential fraud indicators.	**See Objective 3**

Audit Scope and Approach

Objective 3: Determine whether corporate credit card expenses are submitted timely and processed in accordance with the Business Expense Policy and Internal Revenue Service guidelines.			
#	Procedures	Findings Summary (Refer to Appendix A)	
1	Review the procedures performed by Accounts Payable and Supply Chain to monitor spend and/or periodically audit transactions incurred by employees.	**No Findings Noted**	
2	Review expense transactions submitted through other Accounts Payable processes (e.g Catalyst) to identify potential employee expenses that should have been incurred through the One Card or processed through MySpend.	**Finding #2 – Page 15-16**	
3	Using a risk-based approach, make a selection of no less than 40 transactions from the MySpend audit population. Review selected transactions and evaluate their compliance with Corporate Policies. *NOTE: Upon reviewing the controls and processes in place to monitor Fuel and Fleet spend and performing an independent analysis of the Fuel and Fleet transactions to identify potential fraud indicators and/or significant outliers, Internal Audit noted that additional sample testing was not necessary to assess the risk related to Fuel and Fleet transactions. As such, the sample testing performed herein focused on MySpend transactions.*	**Finding #4 – Pages 18**	**Finding #5 – Pages 19-20**
4	Verify that taxable expenses have been identified and properly included in income as required by IRS reporting requirements for employees.	**Finding #3 – Page 17**	

Objective 1, Procedure #2: Independently verify that card access has been removed for all non-active employees and ensure no transactions were incurred subsequent to employee departure.	**Risk Rating**
Finding #1: Card access was not removed timely upon the departure/extended leave of several employees. Additionally, an expense was incurred on an employee's card subsequent to their departure.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center), Tonja Langhurst (Director HR Operations Delivery **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q3 2020**

Observation:

Criteria: Per the Business Expense Rules and Guidelines, when an employee leaves the company, access to One Card should be removed and their account should be deactivated. "The Cardholder agrees to surrender and cease use of his/her One Card upon termination of employment. The Cardholder is responsible for processing any outstanding expenses."

If employees are out for an extended period, he/she should surrender their card to their supervisor/manager. If the employee is expected to be out for less than 6 months the card should be suspended. If the employee expected to be out for more than 6 months, the card should be closed.

Condition: Internal Audit noted the following :

- Six **(6)** employees who had departed NiSource still had active corporate cards as of April 1, 2020. Accounts Payable has since removed access to the former employees.
  - One **(1)** employee made purchases totaling **$656** on their corporate card several months after they were no longer employed at the company. The expenses were processed through a force submittal process and were paid by the company.

    Note: Force submittals occur when an expense is over 75 days old and has not been processed. Accounts Payable notified the supervisor of the person who incurred the expense about the force submittal through email.
- Five **(5)** employees on extended leave (greater than 6 months) still had an active corporate card as of April 1, 2020.

Risk/Impact: Individuals who are no longer employees at NiSource with access to their corporate cards increases the risk of unauthorized or fraudulent purchases.

Findings (Cont'd)

Objective 1, Procedure #2: Independently verify that card access has been removed for all non-active employees and ensure no transactions were incurred subsequent to employee departure.	Risk Rating
Finding #1: Card access was not removed timely upon the departure/ extended leave of several employees. Additionally, an expense was incurred on an employee's card subsequent to their departure.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center), Tonja Langhurst (Director HR Operations Delivery) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q3 2020**

Recommendation: Supervisors should ensure employees no longer have access to their corporate card and should reconcile any remaining balances (i.e. unprocessed credi t card transactions in MySpend and/or unpaid submitted personal expenses) upon the employee's departure. In addition to the supervisor's responsibilities, Accounts Payable Management and Human Resources should collaborate to periodically verify that active corporate cards are assigned to active employees only and any outstanding balances have been resolved.

Management Response: When this was researched, the employees with continued access were not included in the termination report sent by HR and received every Monday into the MySpend@nisource.com inbox. HR and Accounts Payable are working together to streamline its communication process and ensure that weekly emails will include all terminations and extended leaves. These changes will be in place by **August 1, 2020**.

Findings (Cont'd)

Objective #3, Procedure #2: Review expense transactions submitted through other Accounts Payable processes (e.g. Catalyst) to identify potential employee expenses that should have been incurred through the One Card or processed through MySpend.	**Risk Rating**
Finding #2: Various transactions which appear to meet the classification of employee expenses were submitted through methods other than MySpend (e.g. Catalyst).	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center)	**Target Plan Date:**
Executive Council Members Responsible: Donald Brown (Chief Financial Officer)	**Q4 2020**

Observation:

Criteria: The Cardholder or delegate must submit Business Expenses for reimbursement in the expense reporting tool "MySpend."

Condition: Internal Audit identified various expenses that appear to fall under the types of expenses covered by the Business Expense Rule and Guidelines policy which were submitted through Catalyst instead of MySpend. Internal Audit noted several of these expenses related to entertainment. Refer below for examples of the types of expenses submitted within Catalyst.

Vendor	2019 AP Spend	Notes
Rocky Gap Casino Resort	$ 3,379	Appears to have hosted some sort of event here - could be classified as Non-Room Expense
Sam's Club Direct	$ 5,744	Could flow through MySpend as General Office Supplies or Meals - Work Late/Snacks/Celebrations
The Columbus Club	$ 17,922	Could flow through MySpend as Social / Athletic Club Dues for better visiblity and transparency
OSU Football Season Tickets	$ 16,379	Could flow through MySpend as Special Event / Season Tickets / Golf Fees for better visibility and transparency
Columbus Blue Jackets (and other events at Nationwide Arena)	$ 50,845	
Toledo Mudhens Baseball	$ 34,850	
Cleveland Indians Baseball	$ 2,700	
Pittsburgh Pirates	$ 28,821	
Holiday Inn	$ 4,897	Various transactions simply represented individual hotel stays or conference room rentals
Zane's Hotels (Springhill Suites)	$ 13,813	
Hilton Hotels (Various)	$ 21,154	

Note: This is not an all inclusive list of expenses that were improperly submitted. Internal Audit provided a list of employees who submitted these expenses to Accounts Payable so they can reach out to the employees and educate them on the proper expense tool to use; however, future review may be necessary.

Findings (Cont'd)

Objective #3, Procedure #2: Review expense transactions submitted through other Accounts Payable processes (e.g. Catalyst) to identify potential employee expenses that should have been incurred through the One Card or processed through MySpend.	**Risk Rating**
Finding #2: Several employee expenses that should have been submitted through MySpend were submitted through Catalyst.	**Low**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q4 2020**

Observation (cont'd):

The Business Expense Policy states the following:

> "The One Card is required for all approved business expenses wherever the card is accepted. If a merchant does not accept the One Card, or in the event of an emergency where the employee does not have access to the One Card, a personal credit card may be used after receiving approval from the employee's supervisor." Additionally, the policy notes that business expenses must be submitted for reimbursement "in the expense reporting tool, MySpend."

However, the expense policy also indicates that "the OneCard cannot be used for invoices provided by a supplier."

As the policy language may conflict in certain cases, none of the transactions identified by Internal Audit are direct violations of policy.

Risk/Impact: Employee expenses submitted through other methods may not provide the detail necessary to ensure proper tax treatment (e.g. names of attendees/recipients) and current processes do not review transactions submitted in this manner for tax purposes. Additionally, employee expense transactions that are not submitted through MySpend are not classified by expense categories and impact the company's ability to effectively analyze expenses and make policy decisions.

Recommendation: Accounts Payable should work to clarify requirements for method of submission within the policy and work with Communications and Training to educate employees and their supervisors on the proper methods to submit business expenses.

Management Response: Accounts Payable is currently proposing changes to the policy to add verbiage to use the OneCard for payment specifically for Season Tickets, Civic & Professional Associations, and Social and Athletic Club Memberships. Accounts Payable will reach out to the employees who completed the payments through Catalyst which were identified by Internal Audit to provide education once the policy has been finalized. Additionally, as referenced in the response to Finding #5, Accounts Payable is also working to establish a training for employees over the Business Expense policy and use of MySpend. These changes are expected to be completed by **December 31, 2020**.

Findings (Cont'd)

Objective 3, Procedure #4: Verify that taxable expenses have been identified and properly included in income as required by IRS reporting requirements for employees.	**Risk Rating**
Finding #3: Internal Audit noted the expense type "Taxable to the Employee" is not reviewed by Accounts Payable or the Tax Department thus any expenses incurred in this category may not be properly taxed.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center), Jennifer Harding (Director Income Tax Operations), Tonja Langhurst (Director HR Operations Delivery) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q4 2020**

Observation:

Criteria: Expenses that are taxable to the employee are properly tracked and included in the employee's income.

Condition: Internal Audit noted two **(2)** expense types, "Taxable to the Employee" and "Meals – Self Only – Not On Travel Status (Taxable to the Employee)", which were created upon the transition to One Card and are not currently assessed for tax requirements. As a result, the total of **$5,671** expenses incurred in these categories were not properly taxed in 2019.

- "Taxable to the Employee" - **$602**
- "Meals – Self Only – Non Travel - Taxable to the Employee" - **$5,069**

In addition to the process gap identified above, Internal Audit noted one **(1)** gift selection totaling **$332** was not appropriately included in the recipient's taxable income as the employee who submitted the expense did not include the recipient's name within MySpend and did not submit the required manual forms to Payroll.

Risk/Impact: Improper review of taxable expenses leaves the risk that taxable expenses are not properly included in income as required by IRS reporting requirements

Recommendation: Accounts Payable, Tax, and Payroll should establish processes to ensure any expenses with tax implications are properly included in employee income.

Management Response: Accounts Payable, Tax, and HR/Payroll have created a MySpend report that can be used to identify all transactions taxable to employees. This will be reviewed by Tax in the 4th quarter of every year (beginning in **Q4 2020**) and applied to income by Payroll. Gift cards/gift merchandise transactions will be applied to employee income monthly when Payroll pulls the MySpend report. Taxable Travel and Meals-Self Non Travel-Taxable to Employee expense types have been removed from MySpend as of July 8, 2020. (Total spend in these categories to date has been $1,959, which will be included in income for 2020 if applicable). Going forward employees will be directed to identify those transactions as "personal" within MySpend.

Findings (Cont'd)

Objective 3, Procedure #3:. Using a risk-based approach, make a selection of no less than 40 transactions from the MySpend audit population. Review selected transactions and evaluate their compliance with Corporate Policies.	**Risk Rating**
Finding #4: PAC expenses incurred deviated from established policy requirements.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center), Jennifer Harding (Director Income Tax Operations) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q4 2020**

Observation:

Criteria: Any expense related to NiSource's Political Action Committee (PAC) must use the "PAC / Lobbying" expense type. Expenses can include but are not limited to dues, memberships, meeting expenses, supplies, meals, entertainment, etc. Additionally, any PAC expense should be charged to the code 42640000 - Other Income & Expense Political Contributions.

Condition: Two **(2)** selections reviewed by Internal Audit related to expenses incurred for the benefit of NIPAC. Internal Audit noted that both selections were not appropriately classified using the NIPAC expense type. Additionally, one **(1)** selection was charged to the incorrect accounting code.
To determine the prevalence of these errors within the complete expense population, Internal Audit analyzed all expenses which referenced PAC in the Transaction Business Purpose within MySpend to determine whether they were utilizing the proper expense type and were charged to the correct accounting code, noting the following inconsistencies:

- **360** transactions totaling **~$46K** referenced PAC.
    - **26** transactions (from the population above) totaling **~$5K** were classified the PAC expense type.
    - **17** transactions (from the population above) totaling **~$3K** were properly charged to the correct accounting code.

Risk/Impact: PAC expenses are non-deductible for tax purposes. PAC related expenses not properly charged to the correct account codes may be included as deductible business expenses.

Recommendation: As NIPAC expenses have different tax implications than other expenses, a process should be put in place to ensure any transactions that relate to PAC expenses are properly identified and charged to the correct expense type/accounting code. There should be more guidance in the policy as to which PAC expenses need to be charged to the PAC code.

Management Response: Tax has confirmed that PAC transactions should be classified in specific categories. Accounts Payable will work with PAC team to send a targeted email to employees submitting PAC expenses to provide additional training for correct MySpend Expense Types. We have also added 'Travel' to the PAC/Lobbying-Meals and Entertainment. These efforts will be completed by **December 31, 2020**.

Findings (Cont'd)

Objective 3, Procedure #3: Using a risk-based approach, make a selection of no less than 40 transactions from the MySpend audit population. Review selected transactions and evaluate their compliance with Corporate Policies.	**Risk Rating**
Finding #5: Expenses incurred deviated from established policy requirements.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q4 2020**

Observation:

Criteria: Each business expense must have a valid business purpose, correct expense type, correct accounting, attendees listed (when required), and any other necessary information as required per the policy to ensure that reviewers, approvers, and auditors (internal or external) understand the circumstances under which a purchase is made and why it was necessary.

If excess and/or inappropriate expenses are submitted and reimbursed, the employee must repay NiSource by writing a check or money order payable to the company by which he/she is employed.

Condition: As a result of reviewing **54** selections (Refer to **Appendix B** for further detail on the selection process), Internal Audit identified the following deviations from the established policy requirements:

- **1** transaction related to an employee who made a personal purchase with their One Card and did not mark it as a personal expense within the MySpend reporting system, resulting in the amount of the expense (**$164**) being improperly paid by the company.

- **2** transactions totaling **($1,897)** were charged to the incorrect accounting code based on the nature of the expenses.
    - Both expenses were charged to the accounting code 92100000 for Office Supplies and Expenses even though the expenses were classified as Special Event/Season Tickets/Golf and General Entertainment, respectively.

Additional Items to Note:
- **14** transactions did not provide the level of detail required by policy in the supporting documentation uploaded to MySpend. See **Appendix C** for further detail.
- **16** transactions were misclassified in the Expense Types field available within MySpend. In some cases, these misclassifications would impact our ability to comply with IRS regulations. See **Appendix D**.

Risk/Impact: The accuracy of the expense type classification and coding impact the business' ability to analyze expenses (e.g. identify average cost per person, transaction, and/or day) and make policy decisions. Inaccurate expense types and coding also lead to inaccurate representation of expenses on financial statements. Additionally, business expenses that lack required documentation make it difficult for reviewers, approvers, and auditors to ensure expenses were necessary and in compliance with tax requirements.

Findings (Cont'd)

Objective 3, Procedure #3: Using a risk-based approach, make a selection of no less than 40 transactions from the MySpend audit population. Review selected transactions and evaluate their compliance with Corporate Policies.	**Risk Rating**
Finding #5: Expenses incurred deviated from established policy requirements.	**Moderate**
Process Owner(s): Adolfo Acevedo (Director Shared Services Center) **Executive Council Members Responsible:** Donald Brown (Chief Financial Officer)	**Target Plan Date:** **Q4 2020**

Recommendation: Based on the policy deviations identified, Internal Audit notes that the policy enhancements proposed by Accounts Payable on **Slide 10** would help establish a culture of accountability, alleviate risk to the company and increase compliance with tax laws and IRS regulations.

Management Response:

Accounts Payable is working on several items to help guide employee selections, including the following: Policy recommendations to better direct employees, required yearly training, and MySpend audit rules to require specific accounts be used. These efforts will be completed by **December 31, 2020**.

Report Distribution

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Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response* *Internal Audit typically does not perform follow-up review procedures on low risk findings.*

Using a risk-based approach, Internal Audit selected a total of **54** selections, representing **~$124K** of the total **$44.6M**, for compliance with corporate policy and treatment for tax purposes. The following criteria risk factors were considered when making selections:

Criteria:	Definition:	# of Selections
High Risk Expense Types	Expense types with past audit issues, higher potential for fraud, misclassification, or tax impacts such as Gifts, Entertainment, & Other	24
Amount	High dollar spend, or high spend per nights stay, rental days, or attendees; spend just under receipt requirements or other thresholds	6
Payment Type	Cash reimbursements in unexpected expense types	2
Vendor	Unusual vendors	6
Business Purpose	Transactions without sufficient detail in the business purpose (e.g. March Expenses) or transactions which indicate a purpose related to NIPAC	12
Fraud Risk Factors	Transactions incurred on weekends or holidays, round dollar amounts, spend just below policy limits, etc.	4
	TOTAL SELECTIONS	**54**

Note: Internal Audit reviewed the expenses incurred by employees as a result of the Columbia Gas Massachusetts' GLI, noting total related spend of **$4.4M** (**~10%** of the total **$44.6M** employee spend) in 2019 vs. **$27M** (**~54%** of the total $**50.4M** employee spend) in 2018. (Refer **to Appendix F**). As GLI related expenses decreased significantly in 2019, Internal Audit did identify GLI related transactions as a risk factor and did not sample from that population specifically. However, all GLI related expenses were subject to selection through the process noted above.

Appendix C – Selections Exceptions: Lack of Required Detail

The following are the expense types of our selections that did not provide the level of detail required by policy:

Expense Types	Policy Deviation	Issues	# of selections
Entertainment Meals	**Attendees not provided**	Unable to determine cost per person Analytics are skewed when assessing trends in spend	**5**
Employee Merchandise	**Recipients not provided**	Unable to determine tax implications.	**1**
Entertainment Gifts Meals Service Repairs/ Other	**Unclear business purpose**	Unable to determine why expense was necessary	**7**
Meals – Non-travel	**Unclear business purpose**	Unable to determine correct expense category	**1**

Total **14**

Appendix D – Selection Exceptions: Category Deviations

Recorded Expense Type	Recommended Expense Type	Reasoning	Instances
Employee - Gift Card	*Employee Gift - Merchandise*	Employee Gift Cards have different tax implications than employee merchandise	**2**
Employee - Gift Card	*No - Should be under Employee – Retirement Gift Card / Certificate*	Retirement Gift Cards have different tax implications than Employee Gift Cards	**1**
Employee – Merchandise	*Non-Employee Merchandise*	Employee merchandise has different tax implications than non-employee merchandise	**1**
Employee / Non-Employee (General Entertainment)	*Employee – NiSource Sponsored Raffle*	Raffles are considered a gift and can be taxable depending on the circumstance	**1**
Employee / Non-Employee (General Entertainment)	*Special Event / Season Tickets / Golf*	General entertainment is to be used only if another expense type is not applicable. A comment is required as to why this was used. In this case, the purchase was for tickets which has it's own category	**1**
Employee / Non-Employee (General Entertainment)	*Entertainment Suite Expenses*	General entertainment is to be used only if another expense type is not applicable. A comment is required as to why this was used. In this case, purchase was for a suite rental which has it's own category	**1**
Entertaining - Other	*Gift (Flowers or Merchandise)*	Flowers for employees are considered a gift and can be taxable depending on the circumstance	**1**
Meals - Self Only - Not On Travel Status (Taxable To Employee)	*Unclear*	Not enough information to conclude, however expense was not taxed to employee	**1**
Meals - Work Late/Snacks/Celebrations, etc.	*Entertainment Suite Expenses*	Expense was for CBJ Suites & Playoffs. A different level of detail is required for Entertainment Suite Expenses - expenses are to be infrequent in nature and should be submitted by the most senior person of the hosting department	**1**
Miscellaneous	*Catering*	Miscellaneous should only be used when there is no other option, this was for a catering which has it's own category	**1**
Mobile Device / Accessories (Cell Phone, Tablet, etc.)	*Should not have used MySpend*	Expense was for IT Hardware, all IT Hardware/Software expenses should be purchased using ServiceNow / TechDesk	**1**
Mobile Device / Accessories (Cell Phone, Tablet, etc.)	*Company Vehicle*	Expense was for a GPS for a company truck which better fits under the category Company Vehicle	**1**
Non Employees – Merchandise	*Charitable Contributions / Donations*	Purchase was for donations to a Non-Profit which could have tax implications	**1**
Hotel/Non-Room Expense	*Conference Room Rentals*	Offsite Conference Room Rental or deposit should be itemized by day and by conference room. Itemizations are required	**2**
		Total	**16**

Appendix E – 2019 MySpend Categories

2019 Total MySpend Expenses			
Expense Categories	**Non - GLI ($)**	**GLI**	**Total Spend**
Hotel Services	6,317,778	2,513,787	**8,831,565**
Field	6,373,619	267,888	**6,641,508**
Meals	5,858,727	314,043	**6,172,770**
Ground Transportation	4,505,436	213,449	**4,718,886**
Office	3,412,749	39,910	**3,452,659**
Safety/Clothing	3,319,963	15,882	**3,335,845**
Company Vehicles	3,268,991	458	**3,269,449**
Air Transportation	2,664,743	126,182	**2,790,925**
Training, Dues & Memberships	1,850,602	583	**1,851,185**
Meetings	1,359,786	166,948	**1,526,734**
Other	472,641	825,519	**1,298,160**
Entertainment	310,054	111	**310,167**
Gifts & Awards	297,689	2,018	**299,707**
Communications	144,191	519	**144,710**
PAC	4,935	433	**5,368**
Total	**40,161,907**	**4,487,731**	**44,649,637** *

* Refer to **Slide 2** for how the total spend processed through MySpend compares to spend incurred through other corporate cards.

Appendix F – 2019 vs 2018 MySpend Comparisons

The charts below display total expenses processed through MySpend for both 2018 and 2019, with GLI spend broken out.

NOTE: A large volume of 2018 spend (~$27.7M) was incurred on Purchase Cards which did not provide the ability to classify expenses by type/category and would not be included in the 2018 totals below. As such, the fluxes in the year over year change in MySpend expenses by category may not represent valid increases or decreases – those would have to be analyzed in total as displayed on **Slide 2.** However, Internal Audit noted that the categories with large MySpend fluxes from 2018 (e.g. Field, Office, Safety/Clothing, and Company Vehicles) aligned with our expectations of the types of spend that would have most likely been incurred on Purchase Cards during 2018.

GLI Spend			
Expense Categories	**GLI 2018**	**GLI 2019**	**Change**
Hotel Services	17,734,866	2,513,787	(15,221,079)
Field	740,118	267,888	(472,230)
Meals	3,043,959	314,043	(2,729,916)
Ground Transportation	951,057	213,449	(737,608)
Office	320,446	39,910	(280,536)
Safety/Clothing	29,946	15,882	(14,064)
Company Vehicles	2,937	458	(2,479)
Air Transportation	943,549	126,182	(817,377)
Training, Dues & Mem	6,162	583	(5,579)
Meetings	27,479	166,948	139,469
Other	3,257,740	825,519	(2,432,221)
Entertainment	219	111	(108)
Gifts & Awards	7,061	2,018	(5,043)
Communications	13,469	519	(12,950)
PAC	-	433	433
Total	**27,079,018**	**4,487,731**	**(22,591,287)**

Non-GLI Spend			
Expense Categories	**2018**	**2019**	**Change**
Hotel Services	5,236,230	6,317,778	1,081,548
Field	1,186,886	6,373,619	5,186,733
Meals	5,337,096	5,858,727	521,631
Ground Transportation	3,518,366	4,505,436	987,070
Office	1,072,542	3,412,749	2,340,197
Safety/Clothing	362,491	3,319,963	2,957,472
Company Vehicles	876,393	3,268,991	2,392,598
Air Transportation	2,368,988	2,665,345	296,357
Training, Dues & Mem	1,545,232	1,850,602	305,370
Meetings	325,584	1,359,786	1,034,202
Other	903,658	472,039	(431,619)
Entertainment	316,569	310,054	(6,514)
Gifts & Awards	232,356	297,689	65,333
Communications	46,162	144,191	98,029
PAC	4,091	4,935	844
Total	**23,334,672**	**40,163,926**	**16,829,253**

Appendix G – Spend Analysis by Employee Level

The chart below displays average and total spend by Expense Types processed through MySpend with break outs by the employee manager level (pulled from PeopleSoft HR tables). All averages are calculated using transaction count.

Note: Meal and Entertainment expenses are shown as average **per attendee** and Hotel Spend is shown as average **per night**. Additionally, expense types are breakouts of the total expense categories displayed in the MySpend charts in Appendix E and F and will not tie in total.

	Car Rental		Hotel Spend Per Night		Meals Self Only		Meals w/Attendee		Meals - Snacks/Celebrations		Air Fare		Entertainment	
Overall Category Average	$ 187		$ 188		$ 17		$ 23		$ 244		$ 239		$ 105	
Employee Manager Level	Avg	Total	Avg	Total	Avg	Total	Avg	Total	Avg	Total	Avg	Total	Avg	Total
CEO & Senior Officer	195	5,265	273	93,363	24	7,603	38	109,607	212	5,507	220	50,535	59	1,755
President COO CFO	130	3,118	412	46,142	14	3,062	27	42,308	1,134	7,938	277	17,458	386	10,910
Senior Vice-President	99	3,870	213	37,002	22	5,349	36	50,794	628	5,654	307	59,298	55	2,113
Vice President	227	75,361	189	279,546	20	48,547	31	149,570	298	20,885	287	310,135	70	13,275
Director	167	117,049	175	508,972	17	87,071	27	334,980	209	56,399	287	528,258	88	33,283
Director - Special	141	141	140	1,823	6	12	13	5,470	32	64	98	98	34	409
Mgr Level	229	296,727	152	945,132	17	175,000	21	710,224	77	74,322	271	680,964	45	63,674
Supv - Supervisor	182	72,735	148	336,729	15	59,125	17	205,219	76	26,352	239	194,940	62	4,322
Supv - Front Line Leader	388	116,319	133	529,444	18	77,712	15	846,607	58	153,071	234	107,418	29	23,643
Non-Manager Engineer	144	54,587	141	319,126	16	68,557	16	127,887	23	6,920	276	114,456	82	2,701
Non-Manager	200	425,814	133	2,709,237	18	583,205	19	1,308,610	173	807,966	242	726,964	243	154,081
Non-Manager Intern	144	288	147	3,226	14	1,040	10	78	5	51	134	401	-	-
Total		$ 1,171,274		$ 5,809,742		$ 1,116,285		$ 3,891,355		$ 1,165,130		$ 2,790,925		$ 310,167

Appendix H – 2019 Top 30 MySpend Vendors

#	Vendor	Total	Category
1	TYNDALE COMPANY INC	1,823,718	Safety Equipment/Attire
2	HOLIDAY INN	1,672,471	Hotel Services
3	SOUTHWEST AIRLINES	1,562,676	Air Transportation
4	HILTON HOTELS	1,507,422	Hotel Services
5	STAPLES	1,241,021	Office Supplies
6	DOUBLE TREE	1,186,310	Hotel Services
7	ENTERPRISE RENT-A-CAR	1,047,495	Ground Transportation
8	MARRIOTT HOTELS	817,483	Hotel Services
9	HAMPTON INNS	768,164	Hotel Services
10	AMAZON *	703,911	Other/Miscellaneous
11	ORR SAFETY	619,935	Safety Equipment/Attire
12	HOMEWOOD SUITES	505,684	Hotel Services
13	RESIDENCE INNS	497,809	Hotel Services
14	DUPLI ENVELOPE & GRAPH	491,432	Office Supplies
15	DELTA AIR LINES	475,867	Air Transportation
16	HYATT HOTELS	471,508	Hotel Services
17	LOWES	465,261	Construction Equipment/Materials
18	AMERICAN AIR	452,682	Air Transportation
19	THE HOME DEPOT	433,845	Construction Equipment/Materials
20	EGENCIA	398,700	Travel
21	MENARDS	340,531	Construction Equipment/Materials
22	PREFERRED CORP. HOUSING	337,789	Construction Equipment/Materials
23	EMBASSY SUITES	322,768	Hotel Services
24	SPRINGHILL SUITES	308,251	Hotel Services
25	NISOURCE	303,930	Meals
26	United Airlines	289,195	Air Transportation
27	PANERA BREAD	236,239	Meals
28	PAYPAL *	230,751	Other/Miscellaneous
29	NAPA	219,456	Car Parts
30	TEREX SERVICES	217,388	Construction Equipment/Materials

Sum of top 30 Vendors	$	19,949,692
Total 2019 MySpend	$	44,649,637
Percent of Spend		45%

* **Amazon** and **Paypal** were part of the top 30 vendors. Internal Audit noted there have been confirmed cases of employee fraud through expense submissions with these vendors and there is an increased risk in these vendors since receipts may not be required and there is a wide range of items that can be purchased through these vendors.

Appendix I – Mileage Analysis

2018 vs 2019 MySpend Mileage Submissions

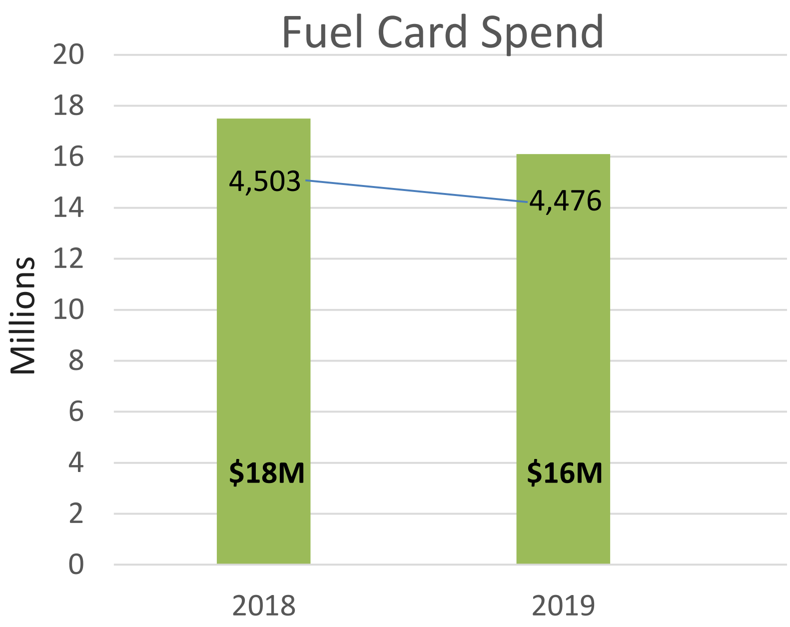
Miles Submitted for Reimbursement	2018	2019		
	# of Employees	# of Employees	% of Chg	Change
1 - 100	126	152	21%	26
101 - 500	530	525	-1%	-5
501 - 1,000	308	336	9%	28
1,001 - 5,000	719	777	8%	58
5,001 - 14,000	184	206	12%	22
> 14,000 *	9	15	67%	6
Total number of Employees Submitting Mileage	**1,876**	**2,011**	7%	135

* The Vehicle Policy states "An employee **may be eligible** to be assigned a Company vehicle if such employee's job function requires a vehicle to perform the job function and the employee will travel at least **14,000** business miles on an annual basis." Internal Audit provided a list of fifteen **(15)** employees noted above who submitted more than 14,000 miles to Fleet Management to determine eligibility for a fleet vehicle. Five **(5)** out of the 15 employees also travelled more than 14,000 miles in 2018.

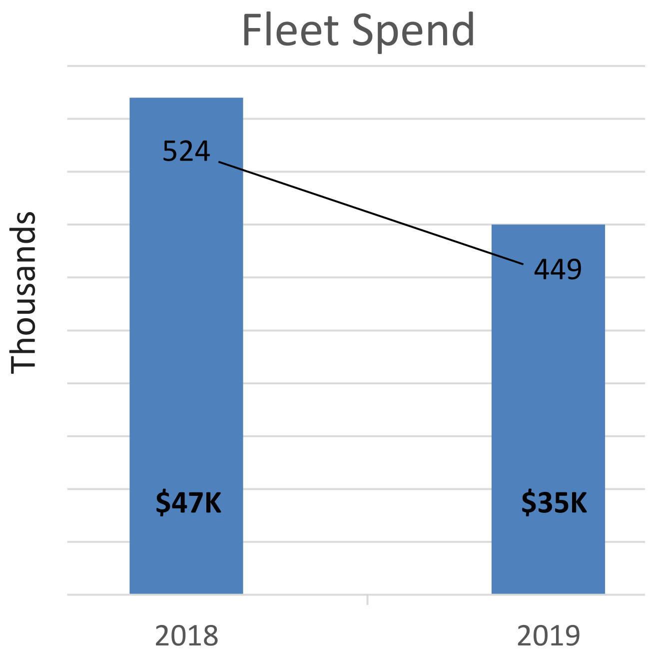
- **Note:** Internal Audit noted that employee travel has decreased significantly due to impacts of the COVID-19 pandemic; thus use of fleet vehicles for these employees may not be necessary at this time.

Appendix J – Fuel and Fleet Card Analysis

NiSource Fuel Card and Fleet Card Expenses 2018-2019



Overall total Fuel Card Expense spending decreased ~8% from 2018 to 2019. The total number of employees submitting expenses decreased by ~ 1% during 2019 (4,503 – 4,476).



Overall total Fleet (incidental) spending decreased ~26% from 2018 to 2019. The total number of employees submitting expenses decreased by ~ 4% during 2019 (524 - 447).

IT Modernization – Human Capital Management SDLC (Design and Build Phases)

To: Steve Brown, Manager – IT Portfolio (Corporate)
Walt Wojcik, Director – IT Portfolio (Corporate)

From: John Manfreda, Project Manager - Infor. Systems Audit
Greg Wancheck, Director - Infor. Systems Audit

July 28, 2020

NiSource®

NiSource IT Audit is conducting an ongoing System Development Lifecycle (SDLC) design and build assessment over NiSource's Human Capital Management (HCM) Workday program between January 2020 and December 2020 to provide an independent perspective around program governance, delivery service activities and inclusion of relevant solution control considerations. This opening SDLC review is centered around the program's initial Design & Build phases and will be directly followed by a Test & Deployment phase assessment that will provide a perspective on the program's testing execution, deployment activities and post-implementation closure actions.

IT Audit's HCM Workday Design & Build phase assessment resulted in zero (0) findings and noted the following:

- **Project delivery processes (and applicable controls) regarding scope, cost, schedule, quality, and communications are designed and in place.**
- **Project user acceptance practices, supportive approval structures, and third-party provider management activities are designed and in place.**
- **Business process (SOX) controls, both automated and manual, are being included in the HCM program's development, testing and deployment processes.**
- **IT General Computing Controls (GCC) are being included in the HCM program's development, testing and deployment processes.**
- **Interface, data conversion and reporting controls (where applicable) are being considered and included in solution deployment processes.**
- **Program Team conduct and governance appears adequate to help achieve program objectives.**

This audit conforms with the International Standards for the Professional Practice of Internal Auditing, whereby a summary of HIGH and/or MODERATE findings will be provided to the NiSource Audit Committee. NiSource IT Audit would like to thank both HCM Program Management and the NiSource IT PMO for their cooperation and time in supporting this effort

As part of NiSource enterprise IT Modernization activities that were commenced in 2019, NiSource's IT and Human Capital Management teams co-developed and approved a business case supported initiative to replace the current, legacy HCM systems stack with a more modern, scalable Software-as-a-Service (Saas) solution in Workday. Post approval, NiSource engaged leading HCM software implementers in a managed RFP process to select a System Implementer (SI) for the Workday release effort. After choosing KPMG as the primary SI entity in January 2020, NiSource commenced an internal program to focus on the deployment of the following Workday enabled processes and solution components for use by January 2021:

- Human Capital Management (HCM) Core – Worker Data
- Core Compensation – Compensation Plans & Grades
- Advanced Compensation – Annual Compensation Processes
- Position Management
- Absence Management
- U.S.A. Payroll
- Recruiting – Job Requisitions & Prospect Data
- Self-Service – Employee and Manager
- Contingent Worker
- Onboarding/Offboarding
- SOX Controls (Design and Enablement)
- Standard Reporting
- PRISM Analytics (Data Analytics)
- Mobile Application activation

NiSource's Human Capital Management initiative has the following goals over the program lifecycle:

- Simplify Existing Technologies and Process
- Accelerate Value and Effectiveness
- Empower Continuous Improvement

As part of the implementation effort, the NiSource HCM program is relying on KPMG's proven Workday System Implementation methodology and has collaborated with the NiSource IT Project Management Office (PMO) and relevant IT management personnel to gain both the proper waivers and alignment with the current NiSource IT Project Management Methodology (PMM) for the duration of the project.

Audit Scope and Approach

IT Audit aligned with the HCM Program Team, the NiSource IT Project Management Office (PMO), and other HCM program stakeholders to review evidence on the setup of processes, procedures, and controls used to manage HCM program execution. The methods used by NiSource IT Audit may include (but are not limited to) interviews of key process owners, documentation review, observation and independent testing of appropriate, standards, metrics, and system configurations.

IT Audit review procedures included the following objective(s) and associated action steps listed below:

Objective 1: Review program delivery-based control design and execution to provide a perspective on organizational risk inherent in HCM solution delivery.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Assess the HCM Program governance model over project delivery activities. Assess whether planned/defined project scope, cost and schedule practices are in place and compliant with either NiSource's IT Project Management Methodology (PMM) or a secondary System Integrator methodology that has been aligned with NiSource's IT PMM.	**No Findings Noted**
2	Assess project/program risk and issue management processes for accountability and inclusion of appropriate parties.	**No Findings Noted**
3	Assess whether quality controls over solution conformance to requirements are in place and are operating as designed.	**No Findings Noted**
4	Assess whether controls over communications and stakeholder alignment are in place and operating as designed.	**No Findings Noted**
5	Review whether (and/or how) legacy IT Audit findings being tracked as IT risks by NiSource IT Governance Risk and Compliance (GRC) are being addressed by the Human Capital Management (HCM) program.	**No Findings Noted**

Audit Scope and Approach (cont'd)

Objective 2: Review program solution-based control design and execution to provide a perspective on any nonconformance risks associated with corporate control requirements.

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Assess whether business process controls (automated and manual) were included in the solution development, testing and deployment processes.	**No Findings Noted**
2	Assess whether interface, required report generation, and data conversion controls were considered and included in solution development, test and deployment processes.	**No Findings Noted**
3	Assess whether IT general computing controls (ITGCC) were considered and included in the solution planning, development, test and deployment processes for the Human Capital Management (HCM) program.	**No Findings Noted**
4	Assess whether User Control Considerations residing within the service entity's System and Organization Controls (SOC) report have been formally dispositioned between NiSource HCM and IT management and assigned steady-state operational responsibility.	**No Findings Noted**

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* *Internal Audit does not perform follow-up review procedures on low risk findings.*

Report Distribution

NiSource
Internal Audit
Professionalism ▪ Integrity ▪ Objectivity

July 29, 2020

To: Jillian Hansen, Director Benefits

From: Tammy Frazier, Lead Internal Auditor
Lin Koh, Director of Internal Audit

Dear Jillian,

Internal Audit performed a follow-up review over the finding identified in the Pension Trust and Benefits Audit issued in 2019. The review included an assessment of the progress made over the remediation plan as provided in management's response to address the finding. The following moderate risk finding was reviewed during this follow-up:

Moderate Risk Finding: (Target Remediation: March 31, 2020 – Closed)

A small portion of one participant's benefit payment, out of a sample of 24, was incorrectly paid out from the qualified rather than the non-qualified account.

There was an error in Alight Solutions' qualified vs. nonqualified account balance calculation. This resulted in approximately $1500 of the participant's benefit ($1.3M total) being incorrectly paid out of the qualified rather than non-qualified account. The error was a result of the February 2011 deferred performance based pay not being recorded in Alight's system for this participant. A reconciliation between PeopleSoft and Alight for all other participants with deferred performance based pay for February 2011 was performed and no additional discrepancies were noted.

Management Response:

The error made in the qualified vs. non-qualified balance of the participant in question was made back in 2011, prior to the implementation of an annual audit process of the non-qualified pension benefit which commenced around the 2015 time frame. The audit on the non-qualified pension benefit occurs annually and ensures the participant's deferred compensation for said year is accurately reflected in Alight's system. Additionally as a result of this issue, a further review of the deferred compensation was recently added to the monthly Retirement/Earnings review to ensure all deferred compensation is accurately reflected at commencement. A comprehensive review of all participants with an outstanding non-qualified benefit (approximately 100 participants) will be completed by March 31, 2020.

Resolution:

Management has added a review of deferred compensation to the monthly Retirement/Earnings review process. Additionally management completed a comprehensive review of all participants with an outstanding non-qualified benefit in February 2020. All variances between deferred compensation recorded in PeopleSoft through December 31, 2019 and deferred compensation reported by Alight Solutions were identified and resolved.

Based on the follow up, Internal Audit determined that management has addressed the finding and completed the management response. The finding will be closed.

CC: P. Disser, K. Keener

2019 Pension Trust and Benefits

July 30, 2020

To: Jillian Hansen, Director of Benefits

From: Tammy Frazier, Internal Audit Lead
Lin Koh, Director Internal Audit

Executive Summary

Internal Audit performed an audit to assess the accuracy and completeness of pension plan information and payments for the period from January 1, 2019 through December 31, 2019.

Based on procedures performed, Internal Audit noted one low risk finding:

- For two NiSource participants, there were errors in Alight Solutions' manual documentation of Final Average Pay (FAP) protected benefit calculations. These errors were not systemic errors and did not impact payments made to the participants.

Separation of Columbia Gas of Massachusetts Pension Data

On February 26, 2020, NiSource announced an agreement in which Eversource Energy will acquire Columbia Gas of Massachusetts (CMA). Eversource and NiSource has submitted a filing with the Massachusetts Department of Public Utilities (DPU) seeking approval of the transaction along with a joint settlement with the Massachusetts Attorney General, the Department of Energy Resources, and the Low-Income Weatherization and Fuel Assistance Program Network that addresses all key aspects of the filing. NiSource is currently asking the DPU to approve the transaction by September 30, 2020, and is currently on track to close the transaction soon after approval. Information related to the sale of CMA is as of the date of this report; however, is subject to change as the terms of the agreement are finalized. As part of the sale, Eversource will take over plan sponsorship and administration of the Bay State Union Pension Plan and the Bay State Gas Company Pension Plan effective October 1, 2020. As is the case with NiSource, Alight Solutions will be the third party administrator of the plans for Eversource. In accordance with the proposed transition service agreement, currently still in negotiations, NiSource will maintain time and labor and payroll records for CMA for the last three months of 2020, and will be responsible for providing all applicable data elements necessary to administer the plans in accordance with terms to Alight. Eversource will have access to all historical participant and plan data, dating back to 2003, maintained by Alight Solutions.

This audit conforms with the International Standards for the Professional Practice of Internal Auditing. A summary, along with detailed observations, have been provided. IA would like to thank NiSource staff and management for their cooperation and time in support of this audit.

Background

On an annual basis, Internal Audit performs a review of the Pension Trust Fund. During this year's review, our work was designed to assess the accuracy of plan benefit payments as well as demographic data for the period under review.

Pension benefits are maintained by Alight Solutions, an outside provider. There were no significant changes in how pension benefits are managed and maintained for NiSource during 2019.

For NiSource participants that are currently participating in an Account Balance (AB) plan but previously participated in a Final Average Pay (FAP) plan, the plan may also consider a "Protected Benefit" in calculating retirement benefits. The Protected Benefit provision guarantees that a participant's benefit under the Account Balance Plan is not less than the lump sum actuarial equivalent of their accrued benefit under the FAP Benefit at their conversion date (Protected Benefit) plus applicable pay and interest credits from their conversion date through termination of employment. Both an AB and FAP benefit calculation must be performed for these participants to determine the winning benefit (greatest benefit for participant).

Internal Audit testing was based on the following samples selected by Deloitte & Touche:

Sample Selection	Total Participants
Lump sum benefit calculations	8
Annuity benefit calculations	8
Demographic data testing – Bay State only	6

Audit Scope and Approach

The purpose of this audit was to assess the accuracy of the plan benefit payments for the period from January 1, 2019 through December 31, 2019.

Business Objective 1: Assess the accuracy of the benefit payments for the period under review.		
#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Perform a benefit payment recalculation on a sample selected by Deloitte & Touche.	**Finding #1 – See Page 6**
2	Review the accuracy of prior year annuity payments.	**No Findings Noted**

Audit Scope and Approach

The purpose of this audit was to assess the accuracy of the plan benefit payments for the period from January 1, 2019 through December 31, 2019.

Business Objective 2: Validation of Information through Demographic Testing

#	Procedures	Findings Summary (Refer to Appendix A for rating scale)
1	Validate participant's demographic information by comparing information provided by Hewitt to PeopleSoft.	**No Findings Noted**

Audit Scope and Approach

The purpose of this audit was to assess the accuracy of the plan benefit payments for the period from January 1, 2019 through December 31, 2019.

Business Objective 3: Gain an understanding of CMA work streams for transition activities related to pension benefits.		
#	**Procedures**	**Findings Summary** (Refer to Appendix A for rating scale)
1	Inquire of Human Resources and Benefits Departments regarding procedures associated with the sale of Colombia Gas of Massachusetts to Eversource Energy.	**No Findings Noted**

Findings

Objective 1: Perform a benefit payment recalculation on a sample selected by Deloitte & Touche.	**Risk Rating**
Finding #1: Alight used incorrect factors in audit work-papers when documenting two participant's FAP total protected benefit calculations: • 1 calculation used the incorrect lump sum factor table. The participant's benefit commencement date was 12/1/18 therefore the 2018, not the 2019 factor table should have been used. • 1 annuity calculation used an incorrect early retirement factor. The participant's benefit should not have been reduced. In both instances, the FAP total protected benefit was not the winning benefit for the participants. However, incorrect calculations could result in under/over payments to participants in the event of winning benefits.	**Low**

Process Owner(s): Jillian Hansen, Director of Benefits

Observation

Criteria: Pension benefits are calculated with complete and accurate information and are paid accordingly.

Condition: Incorrect lump sum and retirement factors were used by Alight in audit work-papers when documenting the FAP benefit calculations for two participants. However, the correct lump sum and retirement factors were used in Alight's automated system, TBA.

Risk/Impact: Incorrect or incomplete benefit calculations could result in under/over payment of benefits to participants.

Recommendation

Management should communicate to Alight the importance of ensuring all benefit calculations, including those that do not result in the winning benefit, are complete and accurate.

Management Response

The Benefits department understands the importance of accurate documentation to support audit requests and has scheduled a meeting with Alight to discuss the necessity to document all benefit calculations completely and accurately, for both the winning and non-winning benefit. While the calculations are manually documented for this audit, the documentation needs to reflect data in Alight's TBA system accurately.

Report Distribution

CC: J. Hamrock
D.E. Brown
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E. T. Belle
Deloitte & Touche (Tricia Pemberton)

Appendix A

Rating Scale for Audit Findings	
High	Requires corrective action due to high risk of one or more of the following: safety risk; material financial statement impact or fraud; significant violation of established policies and procedures; process/control environment breakdown for critical business processes; high likelihood of legal/regulatory fines or penalties for non-compliance; or significant brand/reputational exposure. *High risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform independent effectiveness validation testing of a Management remediated, high risk finding prior to official closure.*</u>
Moderate	Requires corrective action due to moderate risk of one or more of the following: safety risk; potential for significant financial statement impact or fraud; process/control design deficiency; process/control not operating effectively; moderate likelihood of legal/regulatory fines or penalties; or potential for negative publicity/brand impact. *Moderate risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is required to perform an independent process design review of a Management remediated, moderate risk finding prior to official closure.*</u>
Low	Requires minimal attention: no material financial or operational impact; low probability of residual risk; process/controls operating below optimal levels. *Low risk findings require an auditee Management Response coupled with a Target Implementation Date for remediation.* <u>*Internal Audit is NOT required to perform follow-up review procedures on low risk findings.*</u>

VULNERABILITY MANAGEMENT

Advisory Review

November 2020

Distribution

<u>Respondents</u>
Carla Donev
Jeremy Plante
Keith Williams

<u>Beneficiaries</u>
Mike Rozsa

<u>Other Key Personnel</u>
Greg Skinner
Ishreth Sameem
Kimberly Jones
Kevin Morris
Austin Mitchell

<u>For Information (Full Report)</u>
Joe Hamrock
Donald Brown
Anne-Marie D'Angelo
Shawn Anderson

<u>For Information (Executive Summary)</u>
Deloitte & Touche
Audit Committee

SCHNEIDER DOWNS
Big Thinking. Personal Focus.

Table of Contents

Executive Summary

The services of Schneider Downs & Co, Inc. were retained by NiSource, Inc. to perform an advisory review of key cybersecurity initiatives and provide a secondary opinion on the current-state design, and where applicable, operating effectiveness of NiSource's Vulnerability Management Program. NiSource Inc. (NiSource) Internal Audit selected the NiSource Vulnerability Management Program for analysis based on the criticality of the area related to the company's cybersecurity posture, coupled with the program's maturity status within the broader NiSource cybersecurity roadmap. Schneider Downs' assessment occurred during August and September 2020.

For the purpose of this review, *vulnerability management* refers to:

- Identification of flaws, weaknesses, or misconfigurations of information systems that may be exploited by a bad actor
- Preventative maintenance in the form of the regular application of manufacturer software and firmware patches
- Change management processes as they relate to the remediation of system vulnerabilities
- Metrics, alerting, and reporting used to communicate identified vulnerabilities to stakeholder groups within the organization
- Analysis, acceptance, and tracking of organizational risk exposure due to vulnerable information systems
- The automated tools and manual processes implemented to support these activities

In order to assess the maturity of the NiSource Vulnerability Management Program against industry best practices, Schneider Downs utilized the SANS Vulnerability Management Maturity Model (VMMM), which is comprised of five *domains* and twelve *subdomains*, each with five maturity levels. A complete description of the activities expected at each of the maturity levels is provided in Appendix A: SANS Vulnerability Management Maturity Model.

Background

Vulnerability Management functions at NiSource, including the administration of the vulnerability management platform (Qualys), workflows, configuration and execution of scans, vulnerability reports, and compliance, were previously outsourced to Verizon Communications Inc. (Verizon) from Q4 2017 until Q2 2020. In the months prior to this review, NiSource Information Technology (IT) hired internal staff and developed internal processes for the steady-state operation of vulnerability management. Currently, NiSource IT Security Operations is responsible for most vulnerability management duties, including vulnerability monitoring/scanning/reporting, vulnerability risk assessment, and coordination among stakeholders. However, NiSource third party service providers Wipro Limited (Wipro) and Verizon are responsible for patching and vulnerability remediation.

The observations in this report were compiled based on inquiry with NiSource IT staff members who perform various roles within the Vulnerability Management Program, as well as through selected tests of the operating effectiveness of implemented processes. A full listing of individuals interviewed as part of this review may be found in Appendix C: Vulnerability Management Program Organization Chart.

Observed Strengths

In consideration of how recently the NiSource IT Security Operations team assumed responsibility for vulnerability management activities, Schneider Downs assesses that the company's Vulnerability Management Program is at or above the expected level of maturity. An increase in dedicated NiSource IT security team resources has enabled more focus on vulnerability management tasks and priorities and contributed to the upward maturity trend.

Key Recommendations

1. **Vulnerability Management Roadmap**
   While the organization has made significant progress implementing the Vulnerability Management Program, plans have not been formally developed to address a number of identified issues (e.g., incomplete or inaccurate asset inventories, technical issues with authenticated scanning, conflicting priorities between IT service provider SLAs and vulnerability remediation timeframes, etc.).

   Schneider Downs recommends the NiSource IT Security Operations team adopt a specific Vulnerability Management roadmap to further enable increased program maturity within a defined timeframe. This roadmap should conform to an industry standard(s) such as SANS VMMM, NIST Cyber Security Framework (CSF), or Cybersecurity Capability Maturity Model for the Oil and Natural Gas Subsector (ONG-C2M2). This will guide development of time-bound future state milestones selected based on the organization's risk threshold and the alignment of required resources to perform activities on the Vulnerability Management roadmap.

2. **Asset Management & Discovery**
   While asset management is not a function of the Vulnerability Management Program, the program's effectiveness is reliant on accurate asset information. Attributes critical to vulnerability management include:
      a. Asset ownership
      b. Data type(s) stored or processed
      c. Operating system
      d. Service(s) supported

   Schneider Downs noted NiSource IT is using multiple technology tools, including ServiceNow and Qualys, to discover and store IT asset information. Although the use of multiple tools for asset discovery and information storage is common, NiSource IT does not reconcile the information obtained by and stored within each of the individual tools being leveraged. Schneider Downs recommends that NiSource IT develop a process to review and reconcile data being produced between the tools in order to reduce or eliminate inconsistent or duplicate information as inconsistent/duplicate information may impair effective vulnerability management.

   Schneider Downs further recommends the use of authenticated vulnerability scanning for all assets, when possible, to ensure all asset attributes are collected. Authenticated scans were observed to be configured, but the scans were failing due to technical issues. Data collected from authenticated scanning can effectively assist in aligning technology inventory databases through available integrations between Qualys and ServiceNow or via custom/manual processes.

3. **Risk Tracking**
Schneider Downs found a number of vulnerabilities that had exceeded acceptable remediation timeframes per NiSource's policy. Schneider Downs recommends NiSource risk management team members, whether IT Risk Management and/or Enterprise Risk Management, be integrated into the vulnerability resolution process or systematically notified when an identified vulnerability has not been resolved within the established timeframe. Where possible, specific alerts or reports should be developed to ensure the following are monitored:
    - **a.** New and high risk vulnerabilities
    - **b.** Vulnerabilities that are not resolved within established remediation timeframes
    - **c.** Vulnerabilities excluded/exempted from scan reports

4. **Vulnerability Remediation Execution**
Schneider Downs observed a number of lower criticality vulnerabilities that were prioritized for remediation ahead of higher-risk vulnerabilities and recommends NiSource IT Infrastructure re-evaluate and, if needed, update the established criteria for prioritizing vulnerability remediation to ensure the prioritization methodology drives towards the desired risk profile. Proper alignment of service level agreements and remediation timeframes within risk thresholds ensures that resources are directed first at mitigating the vulnerabilities posing the highest risk to the organization before addressing those with a lesser potential impact. This should include:
    - **a.** Increasing focus on key factors such as access vector, access complexity, and contextual criteria about the assets impacted
    - **b.** Remediation timeframes for lower criticality vulnerabilities be extended to allow focus on higher risk items
    - **c.** Incorporation of threat intelligence data into the identification and prioritization of vulnerabilities, especially zero-day vulnerabilities that are not yet noted in Qualys

5. **External Vulnerability Reporting**
NiSource does not currently utilize a single process for the intake and management of vulnerabilities identified by external sources, such as unsolicited vendor scan reports. Schneider Downs recommends that IT Security Operations establish a single intake process to ensure appropriate routing of these reports. This process should include:
    - **a.** A standardized approach for external vulnerability scanning, including the regular use of a third-party scanning provider and/or increased levels of scanning
    - **b.** A publicly available means to report vulnerabilities, such as an email address or contact form
    - **c.** A published Vulnerability Disclosure Policy (VDP) addressing how external parties should communicate with NiSource regarding vulnerabilities
    - **d.** An internal procedure for incorporating externally identified vulnerabilities into the existing vulnerability management processes

Management Response to Recommendations

NiSource IT agrees with the recommendations in the Advisory Memo and will incorporate the recommended items into our 2021 initiatives. This is especially timely given the recent insourcing of this function and the need to further define and build out processes as we continue to mature the program. We specifically will further define our vulnerability management roadmap, document and reconcile tools used in vulnerability management, determine the appropriate risk tracking processes, and ensure timeframes and remediation efforts are appropriately focused on risk. We will track issues in our Risk Register assigning ownership and remediation timeframes until items are brought to closure.

***** End of Executive Summary *****

Detailed Report

SANS Vulnerability Management Maturity Model Assessment

To perform the assessment, Schneider Downs utilized the SANS Vulnerability Management Model (VMMM), a tool which helps evaluate the maturity of a Vulnerability Management Program by benchmarking against five Domains and 12 Subdomains. The Domains and Subdomains appear in the table below.

Domain	Subdomains		
Prepare	Policy & Standards	Context	
Identify	Automated	Manual	External
Analyze	Prioritization	Root Cause Analysis	
Communicate	Metrics & Reporting	Alerting	
Treat	Change Management	Patch Management	Configuration Management

Current State

Schneider Downs assessed the current state of the NiSource Vulnerability Management Program by evaluating the percentage of activities being performed at each of the prescribed maturity levels. The heat map below shows the areas of the Program that are established, as well as those that are currently undefined or underperformed. The following sections describe in detail the maturity assessment for each of the subdomains of the SANS VMMM, and include specific recommendations and risk metrics.

Activities Performed
100%
75%
50%
25%
None

Domain	Subdomain	Level 1	Level 2	Level 3	Level 4	Level 5
Prepare	Policy & Standards			◊	◊	
	Context	◊	◊	◊	◊	
Identify	Automated	◊	◊	◊	◊	◊
	Manual			◊		
	External	◊	◊			
Analyze	Prioritization	◊	◊	◊	◊	
	Root Cause Analysis	◊	◊	◊	◊	
Communicate	Metrics & Reporting		◊	◊		◊
	Alerting	◊	◊			
Treat	Change Management				◊	
	Patch Management		◊	◊	◊	
	Configuration Management			◊	◊	

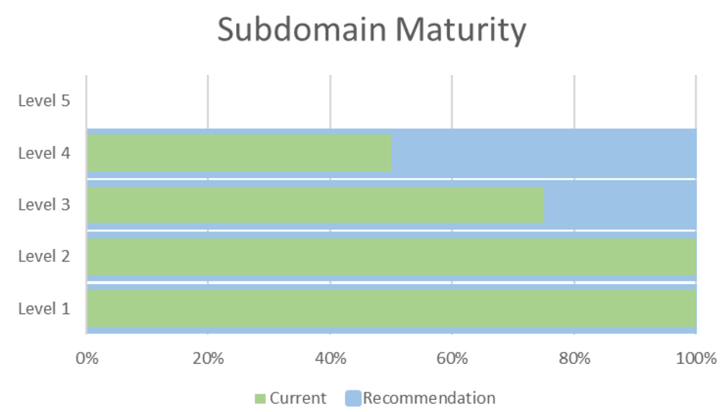
◊ denotes areas addressed by recommendations in this report

Prepare

Policy & Standards

Description

The Policy & Standards subdomain encompasses the written governance for vulnerability management. Key areas considered in this subdomain include the establishment, measurement, and maintenance of the vulnerability management program.



Maturity Level & Recommendations

Schneider Downs recommends NiSource continue its annual review of IT policies and procedures while developing a process to incorporate stakeholder feedback into the review. Additionally, stakeholder groups should receive training on policies specific to their roles and metrics for compliance to policies be developed. These recommendations address Levels three and four of the subdomain.

Level	Description	Conformity
1	Policy and standards are undocumented or in a state of change.	Generally Conforms
2	Policy and standards are defined in specific areas as a result of a negative impact to the program rather than based on a deliberate selection of best practices or standards from recognized frameworks.	Generally Conforms
3	Policy and standards have been carefully selected based on best practices and recognized security frameworks and are updated as needed to fulfill the program's mission. Employees are made aware of standards and training on requirements is available.	Partially Conforms
4	Adherence to defined policy and standards is tracked and deviations are highlighted. Training of personnel on requirements is required at least annually.	Partially Conforms
5	Automated, proactive controls enforce policy and standards and provide input to regular updates and training requirements.	Does Not Conform

Observations

There are four NiSource IT policy documents that are based on the NIST Cybersecurity Framework with standards covering portions of the NiSource Vulnerability Management Program:

- IT Vulnerability Management Policy
- IT Vulnerability Management Scanning Standard
- IT Endpoint Security and Patching Standards
- IT Protection from Malicious Software Standard

These IT policies were published in February/March 2020, are reviewed annually, and were recently updated to align with new Vulnerability Management program documentation. However, NiSource IT management does not track and monitor employees', contractors' and service providers' adherence to the policies, and training regarding policy adherence and consequences of non-compliance is not currently provided.

<u>Key Risk Indicators</u>

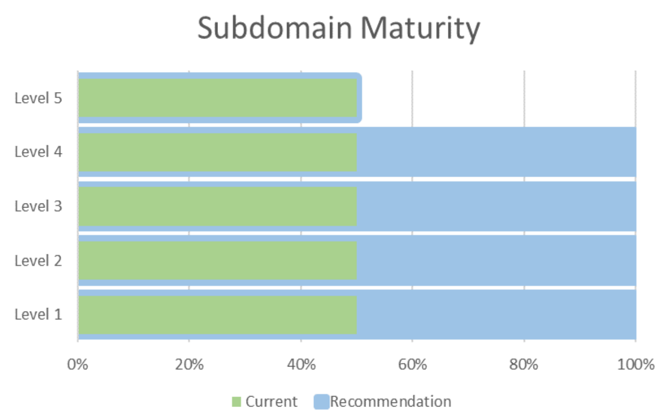
The following metrics may indicate the failure of controls or processes in this subdomain:

- IT policies and procedures are not reviewed on an annual basis
- Stakeholders are unaware of their responsibilities as assigned by policy and procedure
- Training is not delivered or does not reflect current policies and procedures

Context

Description

The Context subdomain describes key activities regarding asset tracking as they pertain to vulnerability management. Examples include asset discovery, ownership, and criticality as determined by underlying data type or operational function.



Maturity Level & Recommendations

Schneider Downs has noted its recommendations under the Key Recommendations section as recommendation #2. These recommendations address multiple levels of the subdomain maturity.

Level	Description	Conformity
1	Contextual data (e.g., asset details, ownership, relationships) are available from multiple data sources with varying degrees of accuracy.	Partially Conforms
2	There is a central repository of contextual data that has some data for most systems and applications.	Partially Conforms
3	The central repository requires that certain contextual information be tracked and updated for each system and that it is based on program needs.	Partially Conforms
4	Reports show compliance with contextual information requirements and processes are in place to identify non-compliant, missing, or retired systems and applications.	Partially Conforms
5	Automated or technology-assisted processes and procedures exist to both create and remove systems and applications and associated attributes from the central repository, or data is correlated and reconciled with other systems that contain information about tracked systems and applications.	Partially Conforms

Observations

Qualys mapping and discovery scans are run bi-weekly, however blind spots are difficult to quantify because the Qualys scanners can only identify the presence of devices. Root causes for these issues are detailed further in the Technical Assessment section of this report.

Additionally, based on inquiry with multiple NiSource IT Security Operations personnel, it was noted that the ServiceNow Configuration Management Database (CMDB) is unreliable and data accuracy is an issue. Management is aware and working to mature asset management processes.

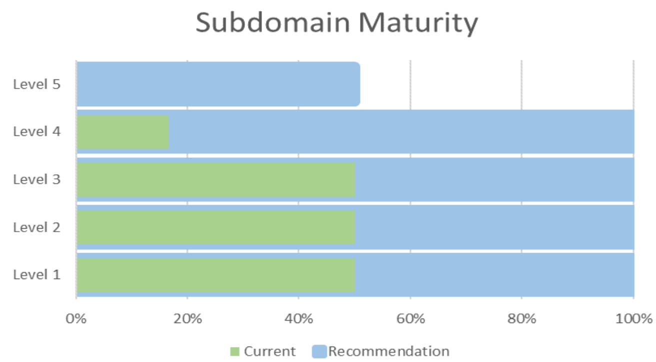
Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- High count of assets in the ServiceNow CMDB that do not have all required attributes to support vulnerability management
- High count of assets that appear in other asset inventories but not Qualys

Identify

Automated



Description

The Automated subdomain outlines all of the activities performed to support the detection of vulnerabilities through scanning tools. This function may range from ad hoc to fully integrated into system design processes.

Maturity Level & Recommendations

Schneider Downs recommends prioritizing the use of authenticated vulnerability scanning as captured in Recommendation #2 of the Key Recommendations. These recommendations address many of the subdomain maturity levels.

Level	Description	Conformity
1	Infrastructure and applications are scanned ad-hoc or irregularly for vulnerability details, or vulnerability details are acquired from existing data repositories or from the systems themselves as time permits.	Partially Conforms
2	The process, configuration, and schedule for scanning infrastructure and applications is defined and followed for certain departments or divisions within the organization. Available technology may vary throughout the organization.	Partially Conforms
3	There are defined and mandated organization wide scanning requirements and configurations for infrastructure and applications that set a minimum threshold for all departments or divisions. Technology is made available throughout the organization through enterprise licensing agreements or as a service.	Partially Conforms
4	Scanning coverage is measured and includes the measurement of authenticated vs. unauthenticated scanning (where applicable), the types of automated testing employed, false positive rates, and vulnerability escape rates.	Partially Conforms
5	Scanning is integrated into build-and-release processes and procedures and happens automatically in accordance with requirements. Scanning configurations and rules are updated based on previous measurements.	Does Not Conform

Observations

Qualys is utilized for vulnerability scanning, however most scans are currently performed in an *unauthenticated* manner, which means the scanner runs anonymously and does not have full access to the asset configuration. Because known issues exist with performing *authenticated*, as noted in the Technical Assessment section, most scans are reverting back to being run as unauthenticated. Authenticated scanning should be used whenever possible to gain full visibility over existing vulnerabilities.

Because NiSource does not have a comprehensive asset inventory to compare the Qualys inventory against, the coverage for vulnerability scanning is not measured and reported to management. As the ServiceNow CMDB has been selected as the “source of truth” at NiSource, use of available integrations between ServiceNow and Qualys or a combination of custom and manual methods would provide the capability to reconcile these two asset databases.

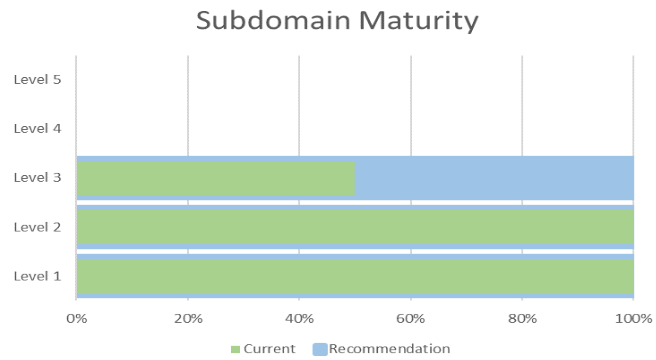
CrowdStrike, an endpoint security, threat intelligence and cyberattack response tool, will be considered as a potential source for cross-referencing vulnerability data in the future, pending internal approval.

<u>Key Risk Indicators</u>

The following metrics may indicate the failure of controls or processes in this subdomain:

- Low ratio of authenticated to unauthenticated vulnerability scans
- High count of devices appearing in the ServiceNow CMDB or other asset databases that do not appear in the Qualys inventory

Manual



Description

The Manual subdomain provides guidance on activities for the manual triage and assessment of vulnerabilities. Initial manual review processes may materialize as a service performed at request while a mature manual review process will consider historic risks.

Maturity Level & Recommendations

Schneider Downs recommends guidelines be established to trigger the manual review of a given vulnerability (e.g., at system owner request, identified out of cycle, impact to key systems, etc.). This recommendation addresses Level three of the subdomain maturity.

Level	Description	Conformity
1	Manual testing or review occurs when specifically required or requested.	Generally Conforms
2	Manual testing or review processes are established and some departments and divisions have defined requirements.	Generally Conforms
3	Manual testing or review occurs based on reasonable policy-defined requirements that apply to the entire organization and is available as a service where not specifically required by policy.	Partially Conforms
4	Deviations from manual testing or review requirements are tracked and reported.	Does Not Conform
5	Manual testing or review processes include focused testing based on historical test data and commonalities or threat intelligence.	Does Not Conform

Observations

Weekly meetings are held to discuss the "Top 10" and "Severity 5" vulnerabilities. These meetings are followed by weekly action planning sessions.

Stand-up calls are held daily where management uses a feedback loop from UNITE and E-ISAC identifying threats to peer organizations, along with open source intelligence, to identify vulnerabilities that need to be prioritized outside of the standard process.

However, manual testing and review of vulnerabilities is not available as an optional service, and deviations are not tracked and reported to management.

From the Top 75 Weekly Reports, Schneider Downs noted the following:

- 114 vulnerabilities appeared on at least five of the reports, meaning the vulnerabilities remained open for at least five weeks. This is over the 30-day remediation timeline defined for all medium and above vulnerabilities in the IT Vulnerability Management Program
- Schneider Downs sampled 15 of the 114 vulnerabilities that appeared on at least five of the weekly reports, noting that:

1. Ten (of 15) vulnerabilities appeared on the most recent (8/18/2020) "Top 75" weekly report and therefore have not been remediated to date
2. Five (of 15) vulnerabilities did not have a change ticket documented
3. Twelve (of 15) vulnerabilities resulted in an increase of affected assets compared to the prior week's report

From the Severity (Sev) 5 Weekly Reports, Schneider Downs noted the following:

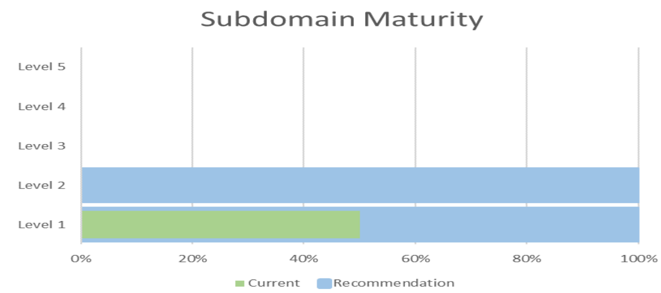
- 178 vulnerabilities appeared on at least five of the reports, meaning the vulnerabilities remained open for at least five weeks; this is over the 30-day remediation timeline defined for all medium and above vulnerabilities in the IT Vulnerability Management Program
- Schneider Downs sampled 15 of the 178 vulnerabilities that appeared on at least five of the reports, noting that:
    1. All 15 vulnerabilities in the sample appeared on the most recent (8/18/2020) Sev 5 weekly report and therefore have not been remediated to date
    2. All 15 vulnerabilities in the sample did not have a change ticket documented
    3. Four (of 15) vulnerabilities resulted in an increase of affected assets compared to the prior week's report

Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- High ratio of vulnerabilities that exceed mitigation timeframes without manual review
- High count of vulnerabilities that have been both:
    1. Accepted as risk items
    2. Exceeded their risk review period without manual review by a member of the vulnerability management team

External



<u>Description</u>
Activities that fall under the External subdomain include all those related to the intake and review of external vulnerability scans and/or research.

<u>Maturity Level & Recommendations</u>
Schneider Downs has noted its recommendations under the Key Recommendations section as recommendation #5. These recommendations address multiple levels of the subdomain maturity.

Level	Description	Conformity
1	External vulnerability reports and disclosures are handled on a case-by-case basis.	Partially Conforms
2	Basic vulnerability disclosure policy (VDP) and contact information published, but backend processes and procedures not documented.	Does Not Conform
3	More comprehensive VDP in place, along with terms and conditions for external vendors and security researchers, that outlines rules of engagement, tracking, and feedback processes.	Does Not Conform
4	Compliance with VDP and terms and conditions is tracked and measured and information is used to streamline processes and evaluate vendors and researchers.	Does Not Conform
5	A mature external testing and research program is in place with specific goals and campaigns that may only be available to specific vendors or researchers.	Does Not Conform

<u>Observations</u>
NiSource performs their own internal scans, but also receives several scans from external scanning companies per year that are then tracked as risk items. These scans usually come in after publishing a Request for Proposal (RFP) or due to considering a product or service.

Some reports of external vulnerabilities have been submitted through standard customer service channels. It is unknown if any such reports have been incorrectly routed internally. NiSource has not published a policy for how external parties should interact with NiSource systems when performing security research or submit identified vulnerabilities to the NiSource team.

<u>Key Risk Indicators</u>
The following metrics may indicate the failure of controls or processes in this subdomain:

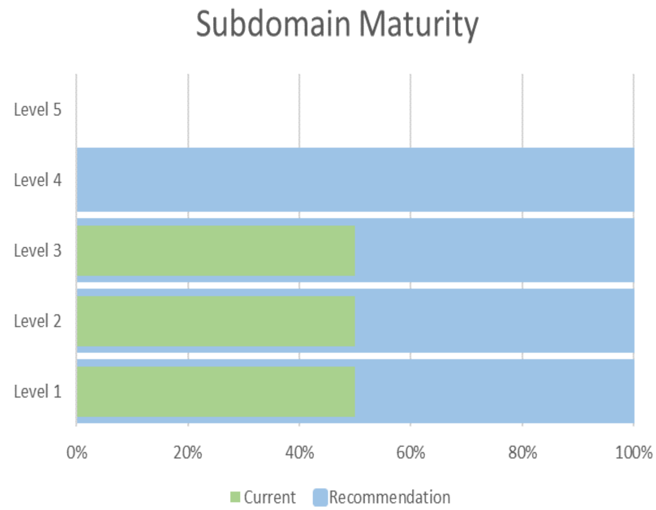
- High ratio of externally reported vulnerabilities that arrive via unofficial channels

Analyze

Prioritization

Description

Processes supporting the assignment of a criticality score for individual vulnerabilities fall into the Prioritization subdomain. These processes typically utilize a combination of publicly available data, such as the Common Vulnerability Scoring System (CVSS) and NIST Common Vulnerabilities and Exposures (CVE) database, and contextual data gathered by the organization based on its established risk criteria.



Maturity Level & Recommendations

Schneider Downs' recommendations for the Prioritization subdomain are addressed by Recommendation #3 in the Key Recommendations. These recommendations address multiple levels of subdomain maturity.

Level	Description	Conformity
1	Prioritization is performed based on CVSS/Severity designations provided by identification technology or indicated in reports.	Partially Conforms
2	Prioritization also includes analysis of other available fields such as whether or not exploits or malware exist or confidence scores.	Partially Conforms
3	Prioritization includes correlation with the affected asset, asset group, or application to account for its criticality in addition to the severity designation. This may require light to moderate customization depending on architecture and design.	Partially Conforms
4	Generic threat intelligence or other custom data, which may require additional products or services, are leveraged to perform prioritization.	Does Not Conform
5	Company-specific threat intelligence, or other information gathered from the operating environment, is leveraged to perform prioritization. This information may require human analysis or more extensive customization.	Does Not Conform

Observations

CVSS scores are incorporated into the Qualys scoring system, whereby NiSource has established a process to target the highest vulnerabilities based on Qualys scoring (Severity 5). Currently, contextual data is not factored into the prioritization process due to perceived inconsistencies within the ServiceNow CMDB. The only exception is the NiSource Call Center as the call center assets are prioritized over other systems due to uptime requirements.

Some vulnerabilities with known exploits are handled out of cycle, but Qualys reports are not specifically broken out by exploitability. For example, during the week of 8/17/2020, NiSource completed a "Patch

Now" remediation since they are able to escalate any CVSS score, or a score from a vendor, even if it was considered low.

Threat intelligence is not factored into severity scores, but is monitored to identify vulnerabilities that have not yet hit Qualys. No organization-specific feeds are implemented at this time, but research is performed in an ad hoc fashion from E-ISAC, Twitter, and other industry sources.

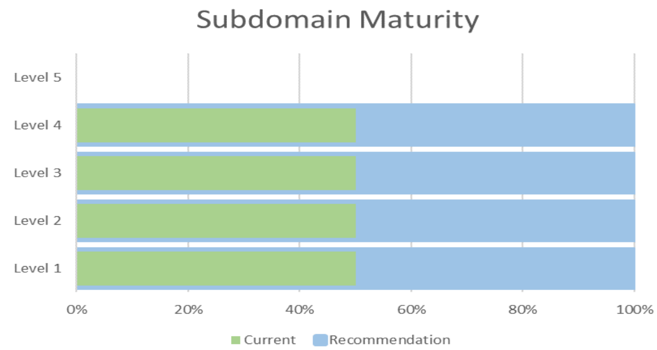
From the Top 75 Weekly Reports, Schneider Downs sampled 15 of the 114 vulnerabilities that appeared on at least five of the reports. Schneider Downs assessed that, based on the NIST CVE Base Scores (looking at the factors including Exploitability Scores, Access Vector, Access Complexity, and Authentication), five (or 33%) of the QID's (Qualys unique ID number assigned to a vulnerability) were lower risk vulnerabilities that received prioritization over higher risk vulnerabilities.

Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- Vulnerability closure rates that do not align with priority (i.e., low risk vulnerabilities are closed more quickly than high risk vulnerabilities)
- High count of vulnerabilities that exceed the remediation timeframe for their severity level

Root Cause Analysis



Description

Root Cause Analysis pertains to all activities that aid in the identification of underlying causes of persistent vulnerabilities. Examples are systems that are exempt from patching policies or gaps in patch management processes.

Maturity Level & Recommendations

Schneider Downs recommends NiSource develop reporting specific to system owners, applications, infrastructure, departments, or other business-relevant classifications in order to identify potential root causes for areas with lagging vulnerability remediation. These recommendations address multiple levels of the subdomain maturity.

Level	Description	Conformity
1	Root cause analysis is performed based on out-of-the-box information such as standard remediation/patch reports or other categorized reports (e.g., OWASP Top 10 category).	Partially Conforms
2	Data is lightly customized to apply less granular or more meaningful groupings of data than CVE, CWE, or Top 10 identifiers to facilitate root cause analysis.	Partially Conforms
3	Data is also identified, grouped, and/or filtered by department or location to enable identification of location- or group-based deficiencies. This may require light to moderate customization depending on architecture and design.	Partially Conforms
4	Data is also identified, grouped, and/or filtered by owner or role. This may require more extensive customization and ongoing maintenance.	Partially Conforms
5	An executive dashboard is in place and includes the highest-risk root cause impediments, exclusions, project cost projections, etc. This will require more detailed analysis and customization to become meaningful and should integrate with existing executive business intelligence tools.	Does Not Conform

Observations

Root cause is discussed on the weekly calls with Wipro where the “Top 10” (number of assets affected) and “Severity 5” vulnerabilities are reviewed. An IT security analyst pulls these reports from Qualys for the calls, then asks Wipro to put remediation dates in place including pilot and testing dates. Wipro also provides a root cause for monthly patching cycles when deployments do not meet SLAs. It takes a month to evaluate patches and note if the patches are actually remediating the vulnerabilities. While root cause analysis does track underlying system owners, it does not incorporate attributes that may aid in identifying true root cause such as operating system patching and/or software dependency. The root causes of delays in remediating identified vulnerabilities are not formally investigated, which may impair the effectiveness and efficiency of vulnerability remediation.

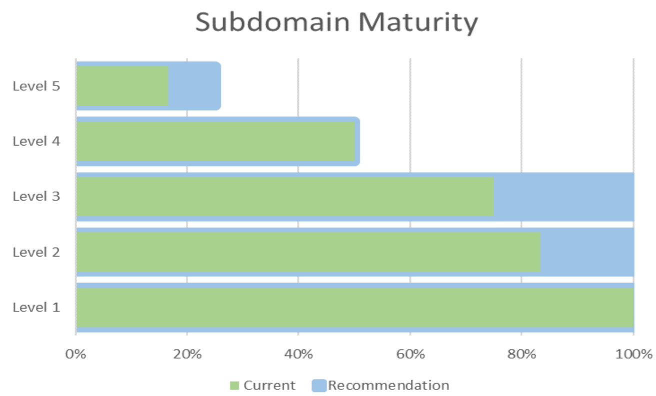
Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- Vulnerabilities sharing an owner, application, infrastructure, departments, etc. repeatedly exceed standard remediation timeframes

Communicate

Metrics & Reporting



Description

The performance of all other vulnerability management activities cannot be effectively reported to management without developing metrics that align with organizational objectives. Such metrics should be vetted with leadership and reviewed on a regular basis.

Maturity Level & Recommendations

Schneider Downs recommends formal key risk indicators and reports be developed for vulnerability management as outlined in Recommendation #2 in the Key Recommendations. These recommendations address multiple levels of the subdomain maturity and focus on metrics and reporting as a means of identifying and communicating risks that exceed the established risk appetite.

Level	Description	Conformity
1	Simple, point-in-time operational metrics are available primarily sourced from out of- the-box reports leveraging minimal customization or filtering.	Generally Conforms
2	Filtered reports are created to target specific groups or prioritize findings. Specific divisions or departments have defined their own reporting requirements, including both program and operational metrics, and generate and release the corresponding reports at a defined interval.	Partially Conforms
3	Reporting requirements, including all required program, operational, and executive metrics and trends, are well-defined and baseline reports are consistent throughout the organization and tailored or filtered to the individual departments or stakeholders.	Partially Conforms
4	Reports and metrics include an indication of compliance with defined policy and standards, treatment timelines, and bug bars. Correlation with other security or contextual data sources allows for more meaningful grouping, improves accuracy, and allows for identification of faulty or inefficient design patterns.	Partially Conforms
5	Custom reporting is available as a service or via self-service options, or feedback is regularly solicited and reports are updated to reflect changing needs. Automated outlier and trend analysis, along with exclusion tracking, is performed to identify high/low performers and highlight systemic issues/successes.	Partially Conforms

Observations

The reports coincide with weekly meetings and align with workstations, servers, and applications as well as an executive level report. Weekly reports sent to stakeholder groups are filtered down in Excel-format to the areas covered by each team. However, a specific feedback loop has not been developed to ensure reporting provides all necessary information to stakeholders required to perform their roles in the process.

Reports can also be generated on an ad hoc basis, although NiSource's goal is to create automated reports that will be generated for users on a defined basis. This will allow for best allocation of resources given that generating ad hoc reports can be taxing on the system.

Remediation SLAs are handled outside of Qualys. Open vulnerabilities and the change in the overall numbers, as well as how long vulnerabilities have been open, are tracked during weekly meetings.

From the Top 75 Weekly Reports, Schneider Downs noted that a process to report/escalate risks when they reach a defined threshold; i.e., the vulnerabilities that had not been remediated for over 30 days did not make it to the IT risk register either in an individual or aggregate form.

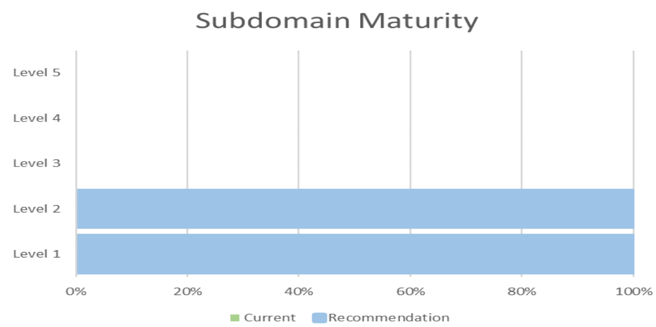
Also, during the transition of the reporting process from Verizon to NiSource (in-house), there was a 26-week gap in the available reports between 1/3/2020 and 8/18/2020.

However, Schneider Downs did note that, after assuming the reporting processes from Verizon, NiSource began tracking the Severity (Sev) 5 vulnerabilities on a weekly basis in addition to the Top 75 Vulnerabilities, and the average time to remediate Sev 5 vulnerabilities has decreased.

<u>Key Risk Indicators</u>
The following metrics may indicate the failure of controls or processes in this subdomain:

- High count of vulnerabilities that exceed their defined remediation timeline thresholds are not reported to Risk Management
- Reporting does not enable relevant business risk decisions

Alerting



Description

Alerts communicate either new vulnerabilities as they are discovered or existing vulnerabilities when they exceed remediation timeframes to the appropriate stakeholder groups.

Maturity Level & Recommendations

Schneider Downs recommends implementing stakeholder alerts for newly discovered, high-risk vulnerabilities and for vulnerabilities that have exceeded their accepted mitigation timeframes. This recommendation addresses Levels one and two of the subdomain maturity.

Level	Description	Conformity
1	Alerting is either not available or only available within security-specific technologies.	Does Not Conform
2	Integrations exist and alerts are being sent for specific divisions or departments or for users of specific non-security technologies already being leveraged by some stakeholders.	Does Not Conform
3	Alerting is available for most stakeholders in their technology of choice.	Does Not Conform
4	Visibility and both timing and detail of response to alerts is measured and tracked.	Does Not Conform
5	Data is analyzed to develop a standard or automated response to alerts for common issues that can be tied to a common response.	Does Not Conform

Observations

The only alerts currently in use by NiSource are on scan start and completion. The company has not yet explored other alerting functions available in Qualys.

Reports are sent out following scans for each of the stakeholder groups, but this is driven by the Vulnerability Management team versus the stakeholders subscribing to alerts or reports. The company's Vulnerability Management Program could be further improved by stakeholders proactively researching alerts published by manufacturers and industry resources rather than waiting for scans results.

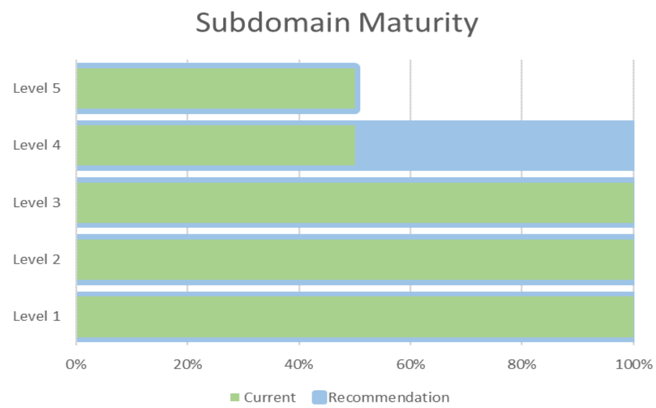
Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- High count of delivered alerts that are not acted upon
- High count of alerts that require escalation or reassignment

Treat

Change Management



Description

To balance operational and security priorities, organizations should establish healthy Change Management processes. These processes allow for approval from stakeholders across the organization prior to the deployment of patches or configuration changes.

Maturity Level & Recommendations

Schneider Downs identified instances where change tickets were closed prior to vulnerability remediation and recommends the Segregation of Duties for Change Management be realigned to ensure that changes are closed only after the vulnerability has been sufficiently remediated. Schneider Downs further recommends tracking closure metrics for Change Management activities to identify root causes for other potential process failures.

Level	Description	Conformity
1	Changes related to vulnerability management activities pass through the same workflow as any other change.	Generally Conforms
2	Some changes related to vulnerability management activities have a custom workflow or are treated as standard changes.	Generally Conforms
3	Most changes related to vulnerability management activities follow a custom workflow or are treated as standard changes.	Generally Conforms
4	Changes related to vulnerability management activities, along with success rates, are tracked. Timing is also measured for different stages of the change or subtasks related to the change.	Partially Conforms
5	Metrics from vulnerability management change activities are used to modify requirements or streamline future change requests. At least some standard changes are automated.	Partially Conforms

Observations

Wipro follows a change management workflow during the remediation process. However, some of the sampled change requests were observed to be closed prior to all systems being remediated. When an IT service provider opens a change, they are able to close the change prior to the vulnerability being fully addressed. The current agreements define Service Level expectations for patching, but are unclear on vulnerability remediation expectations.

There are custom workflows in the ServiceNow Change Management module for each level of change. For instance, a "Patch Now" would be considered an emergency change.

Changes related to vulnerability management are tracked and success rates are reported to management monthly. Items that fail, including patching, are tracked weekly and a feedback loop exists for improving future deployments.

From the Top 75 Weekly Reports, Schneider Downs noted that 114 vulnerabilities appeared on at least five of the reports, meaning those vulnerabilities remained open for at least five weeks. Schneider Downs evaluated 15 of those 114 vulnerabilities and noted that only 10 (of 15) of the vulnerabilities was associated with at least one open change ticket. Schneider Downs reviewed change ticket details for 14 change tickets associated with the 10 vulnerabilities. Of these 14 change tickets, Schneider Downs noted that:

- Change management duties were not appropriately segregated for eight change tickets, meaning that the Requestor, Tester, and/or Approver was the same person
- Six change tickets were closed at least 25 days before the associated QID was last reported on the Top 75 Weekly Status Reports (i.e., changes were closed early)

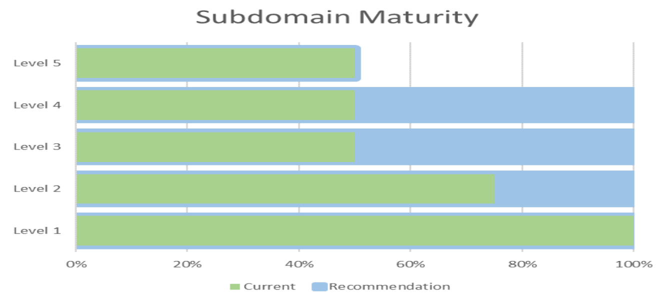
However, across the entire population of Top 75 Weekly Reports, Schneider Downs noted that the average remediation timeframe decreased to 20 days (from a previous 23 day average) after NiSource assumed vulnerability management responsibilities from Verizon.

Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- High ratio of tickets with segregation of duties conflicts between requestor, approver, and worker roles
- High count of tickets that are closed prior to remediation of the applicable vulnerabilities
- High ratio of tickets that exceed Service Level Agreements for vulnerability mitigation

Patch Management



Description

The regular application of operating system and application updates, and measurement thereof, comprise the Patch Management subdomain.

Maturity Level & Recommendations

Schneider Downs recommends NiSource create formal thresholds for tracking failed/missed patches as risk items. These recommendations address Levels four and five of the subdomain maturity.

Level	Description	Conformity
1	Patches are applied manually or scheduled by admins and end-users.	Generally Conforms
2	There is a standard schedule defined and technology is available for some divisions or departments or for some platforms to automate patch testing and deployment.	Partially Conforms
3	All departments are required to patch within a certain timeframe and technologies are available to assist with testing and applying patches for all approved platforms.	Partially Conforms
4	Patch management activities are tracked along with compliance with remediation timelines and the success rate.	Partially Conforms
5	Data from patch management activities, security incidents, and threat intelligence are used to right-size remediation timelines and identify process or technology changes.	Partially Conforms

Observations

Monthly patching processes are considered standard changes within the ServiceNow Change Management module. There is a schedule for monthly patching that is aligned with “Patch Tuesday”. By design, NiSource remains one month behind for the monthly patches. Because this practice is established in policy and conforms to industry standards, the one month delay is an accepted risk. However, there is not a formal process in place to monitor when patches exceed established lag times.

Patching statistics are reported through the CISO. Wipro provides their metrics/statistics around patching and vulnerability information. In addition, NiSource IT Security is able to perform vulnerability reporting out of Qualys and is looking to enhance the tool’s statistical capabilities in 2021.

Key Risk Indicators

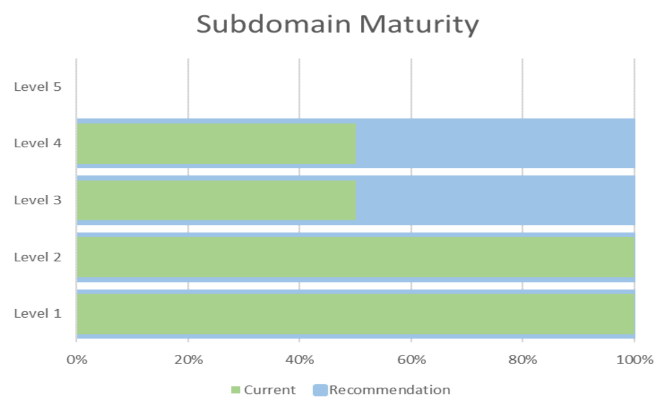
The following metrics may indicate the failure of controls or processes in this subdomain:

- High ratio of failed patch deployments

Configuration Management

Description

Configuration Management refers to the establishment, deployment, and measurement of standards for information systems in regards to cybersecurity. Examples include minimum software versions that may be deployed or protocols that must be enabled or disabled to enforce appropriate security controls.



Maturity Level & Recommendations

Schneider Downs recommends NiSource continue expanding coverage using the CIS Benchmarks and Qualys Policy Compliance. This recommendation addresses Levels four and five of the subdomain maturity.

Level	Description	Conformity
1	Configuration requirements are not well-defined and changes are either applied manually or the automatic application of configurations is only available for a subset of platforms.	Generally Conforms
2	Configurations are defined for some divisions or departments or for specific platforms.	Generally Conforms
3	Configurations are defined for all supported platforms and technologies are available to automate or validate configuration changes for all platforms.	Partially Conforms
4	Deviations from configuration requirements and associated service impacts are measured and tracked.	Partially Conforms
5	Data from the configuration process along with security incidents and threat intelligence are leveraged to strengthen or relax requirements as needed.	Does Not Conform

Observations

Policies are in place for standard configurations. Security technical specifications are being built for the entire environment. Build documents are in place for all systems. CIS Benchmarks were evaluated and adopted and the agreed upon values are being measured by the Qualys Policy Compliance tool. Wipro also measures compliance using their own tool.

Not all client machines are measured using Policy Compliance as Policy Compliance reporting is still in its infancy.

Key Risk Indicators

The following metrics may indicate the failure of controls or processes in this subdomain:

- High count of devices that do not adhere to established secure configurations
- Low ratio of devices that are covered by an established secure configuration

Technical Assessment

As part of this engagement, Schneider Downs reviewed the technical configuration of the Qualys platform as implemented at NiSource. During this review, the following observations were noted (recommendations are located in the corresponding subdomain section of this report).

<u>Observations</u>

NiSource has deployed six internal scanning appliances as well as several external scanners. Scanning agents are deployed to many devices and are incorporated as part of the server build process. Scans are configured to be run from both a network and agent perspective.

Most scanning configurations were observed to be set to run as *authenticated*, but are defaulting to *unauthenticated* scanning due to issues with the authentication configuration. This creates an inability to correlate scanning data from the network and agent-based scans.

Scans that fail to execute are tracked and an informal root cause analysis is performed as time permits. Future goals include a formal auditing process to verify scan integrity and resolve any configuration issues.

Currently, Qualys reports roughly 14,183 assets in its scanning inventory. Asset criticality is not currently tracked. Regular discovery scans are only performed in the DMZ and only look at a defined range of 13 TCP ports. Internal discovery scans are not performed and there is no database of internal subnets to audit for scanning coverage. A process has not been formalized to validate that Qualys scanners have access to all network segments or that all devices are being discovered by Qualys. Scanning for rogue devices is a future state goal.

DMZ scanning is currently configured to “light” mode, which only scans 190 commonly used ports. For contrast, the “standard” scanning mode covers 1900 ports. DMZ scans are also performed from an internal versus external perspective.

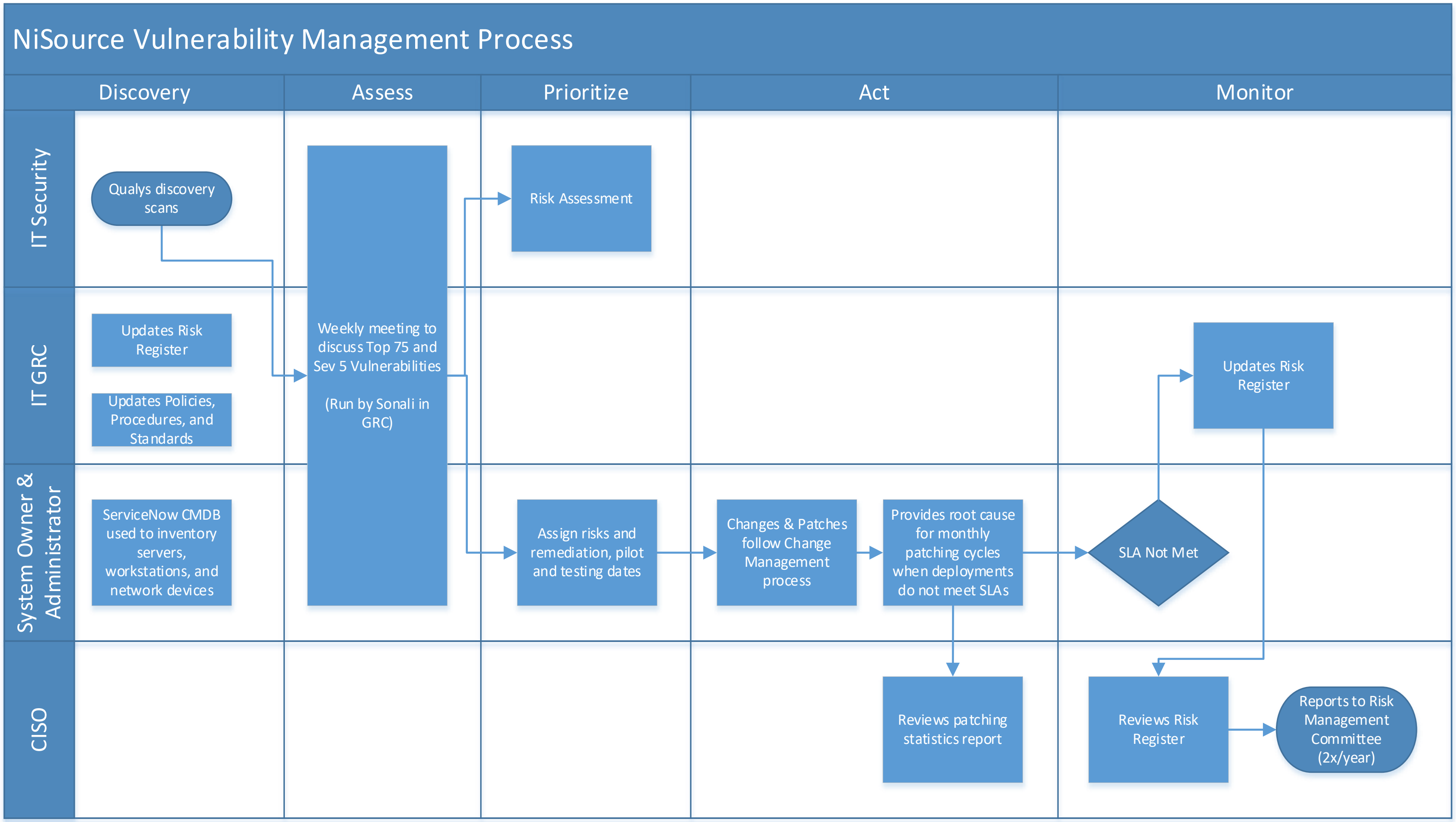
Appendix A: SANS Vulnerability Management Maturity Model

Domain	Subdomain	Level 1	Level 2	Level 3	Level 4	Level 5
Prepare	Policy & Standards	Policy and standards are undocumented or in a state of change.	Policy and standards are defined in specific areas as a result of a negative impact to the program rather than based on a deliberate selection of best practices or standards from recognized frameworks.	Policy and standards have been carefully selected based on best practices and recognized security frameworks and are updated as needed to fulfill the program's mission. Employees are made aware of standards and training on requirements is available.	Adherence to defined policy and standards is tracked and deviations are highlighted. Training of personnel on requirements is required at least annually.	Automated, proactive controls enforce policy and standards and provide input to regular updates and training requirements.
	Context	Contextual data (e.g., asset details, ownership, relationships) is available from multiple data sources with varying degrees of accuracy.	There is a central repository of contextual data that has some data for most systems and applications.	The central repository requires that certain contextual information be tracked and updated for each system and that it is based on program needs.	Reports show compliance with contextual information requirements and processes are in place to identify non-compliant, missing, or retired systems and applications.	Automated or technology-assisted processes and procedures exist to both create and remove systems and applications and associated attributes from the central repository, or data is correlated and reconciled with other systems that contain information about tracked systems and applications.
Identify	Automated	Infrastructure and applications are scanned ad-hoc or irregularly for vulnerability details, or vulnerability details are acquired from existing data repositories or from the systems themselves as time permits.	The process, configuration, and schedule for scanning infrastructure and applications is defined and followed for certain departments or divisions within the organization. Available technology may vary throughout the organization.	There are defined and mandated organization-wide scanning requirements and configurations for infrastructure and applications that set a minimum threshold for all departments or divisions. Technology is made available throughout the organization through enterprise licensing agreements or as a service.	Scanning coverage is measured and includes the measurement of authenticated vs. unauthenticated scanning (where applicable), the types of automated testing employed, false positive rates, and vulnerability escape rates.	Scanning is integrated into build-and-release processes and procedures and happens automatically in accordance with requirements. Scanning configurations and rules are updated based on previous measurements.

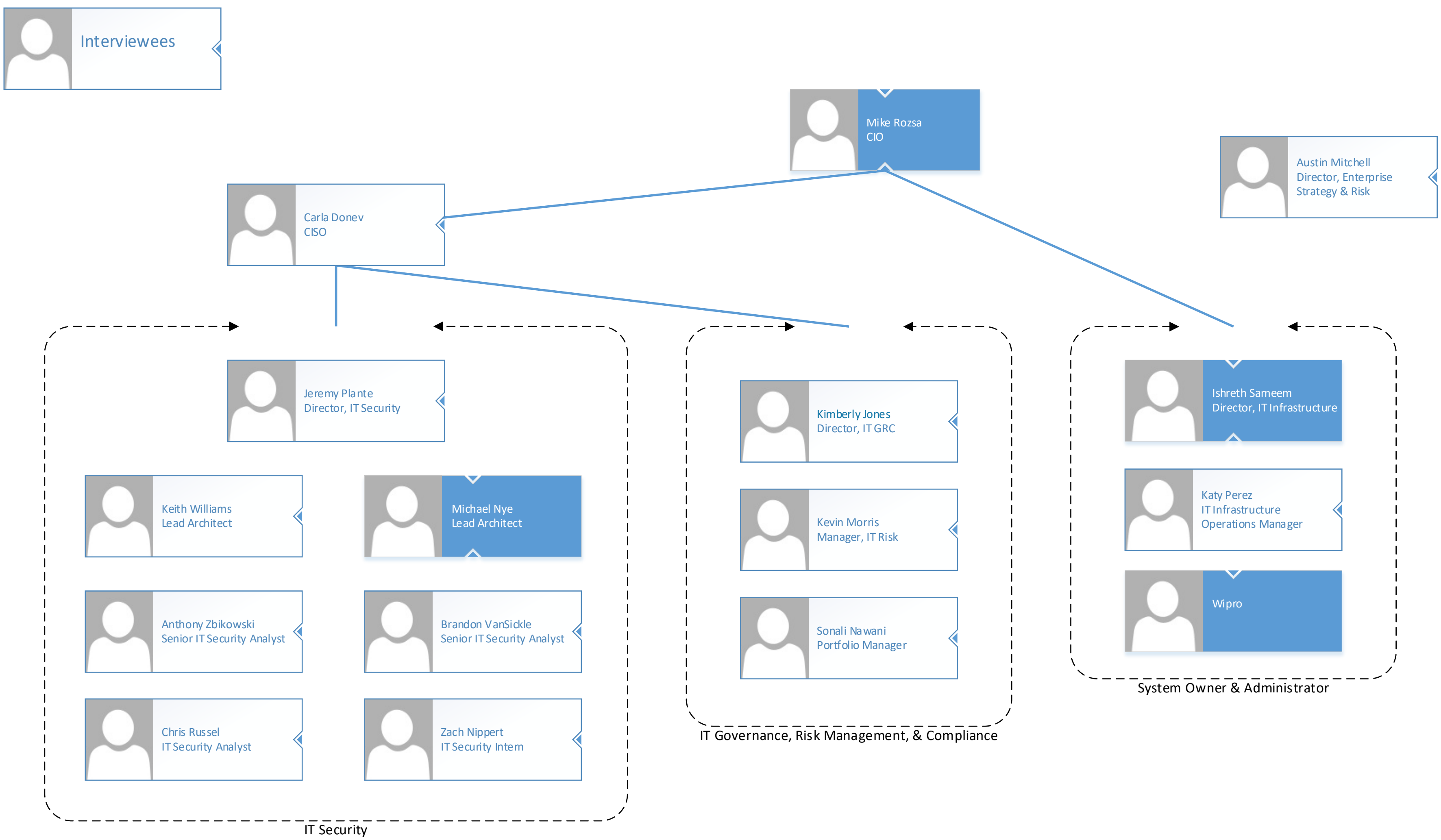
Domain	Subdomain	Level 1	Level 2	Level 3	Level 4	Level 5
	Manual	Manual testing or review occurs when specifically required or requested.	Manual testing or review processes are established and some departments and divisions have defined requirements.	Manual testing or review occurs based on reasonable policy-defined requirements that apply to the entire organization and is available as a service where not specifically required by policy.	Deviations from manual testing or review requirements are tracked and reported.	Manual testing or review processes include focused testing based on historical test data and commonalities or threat intelligence.
	External	External vulnerability reports and disclosures are handled on a case-by-case basis.	Basic vulnerability disclosure policy (VDP) and contact information published, but backend processes and procedures not documented.	More comprehensive VDP in place, along with terms and conditions for external vendors and security researchers, that outlines rules of engagement, tracking, and feedback processes.	Compliance with VDP and terms and conditions is tracked and measured and information is used to streamline processes and evaluate vendors and researchers.	A mature external testing and research program is in place with specific goals and campaigns that may only be available to specific vendors or researchers.
Analyze	Prioritization	Prioritization is performed based on CVSS/Severity designations provided by identification technology or indicated in reports.	Prioritization also includes analysis of other available fields such as whether or not exploits or malware exist or confidence scores.	Prioritization includes correlation with the affected asset, asset group, or application to account for its criticality in addition to the severity designation. This may require light to moderate customization depending on architecture and design.	Generic threat intelligence or other custom data, which may require additional products or services, are leveraged to perform prioritization.	Company-specific threat intelligence, or other information gathered from the operating environment, is leveraged to preform prioritization. This information may require human analysis or more extensive customization.
	Root Cause Analysis	Root cause analysis is performed based on out-of-the-box information such as standard remediation/patch reports or other categorized reports (e.g., OWASP Top 10 category).	Data is lightly customized to apply less granular or more meaningful groupings of data than CVE, CWE, or Top 10 identifiers to facilitate root cause analysis.	Data is also identified, grouped, and/or filtered by department or location to enable identification of location- or group-based deficiencies. This may require light to moderate customization depending on architecture and design.	Data is also identified, grouped, and/or filtered by owner or role. This may require more extensive customization and ongoing maintenance.	An executive dashboard is in place and includes the highest-risk root cause impediments, exclusions, project cost projections, etc. This will require more detailed analysis and customization to become meaningful and should integrate with existing executive business intelligence tools.

Domain	Subdomain	Level 1	Level 2	Level 3	Level 4	Level 5
Communicate	Metrics & Reporting	Simple, point-in-time operational metrics are available primarily sourced from out-of-the-box reports leveraging minimal customization or filtering.	Filtered reports are created to target specific groups or prioritize findings. Specific divisions or departments have defined their own reporting requirements, including both program and operational metrics, and generate and release the corresponding reports at a defined interval.	Reporting requirements, including all required program, operational, and executive metrics and trends, are well-defined and baseline reports are consistent throughout the organization and tailored or filtered to the individual departments or stakeholders.	Reports and metrics include an indication of compliance with defined policy and standards, treatment timelines, and bug bars. Correlation with other security or contextual data sources allows for more meaningful grouping, improves accuracy, and allows for identification of faulty or inefficient design patterns.	Custom reporting is available as a service or via self-service options, or feedback is regularly solicited and reports are updated to reflect changing needs. Automated outlier and trend analysis along with exclusion tracking is performed to identify high/low performers and highlight systemic issues/successes.
	Alerting	Alerting is either not available or only available within security-specific technologies.	Integrations exist and alerts are being sent for specific divisions or departments or for users of specific non-security technologies already being leveraged by some stakeholders.	Alerting is available for most stakeholders in their technology of choice.	Visibility and both timing and detail of response to alerts is measured and tracked.	Data is analyzed to develop a standard or automated response to alerts for common issues that can be tied to a common response.
Treat	Change Management	Changes related to vulnerability management activities pass through the same workflow as any other change.	Some changes related to vulnerability management activities have a custom workflow or are treated as standard changes.	Most changes related to vulnerability management activities follow a custom workflow or are treated as standard changes.	Changes related to vulnerability management activities along with success rates are tracked. Timing is also measured for different stages of the change or subtasks related to the change.	Metrics from vulnerability management change activities are used to modify requirements or streamline future change requests. At least some standard changes are automated.
	Patch Management	Patches are applied manually or scheduled by admins and end-users.	There is a standard schedule defined and technology is available for some divisions or departments or for some platforms to automate patch testing and deployment.	All departments are required to patch within a certain timeframe and technologies are available to assist with testing and applying patches for all approved platforms.	Patch management activities are tracked along with compliance with remediation timelines and the success rate.	Data from patch management activities, security incidents, and threat intelligence are used to right-size remediation timelines and identify process or technology changes.
	Configuration Management	Configuration requirements are not well defined and changes are either applied manually or the automatic application of configurations is only available for a subset of platforms.	Configurations are defined for some divisions or departments or for specific platforms.	Configurations are defined for all supported platforms and technologies are available to automate or validate configuration changes for all platforms.	Deviations from configuration requirements and associated service impacts are measured and tracked.	Data from the configuration process along with security incidents and threat intelligence are leveraged to strengthen or relax requirements as needed.

Appendix B: NiSource Vulnerability Management Process Flow



Appendix C: Vulnerability Management Program Organization Chart



Appendix D: Summary of Recommendations

Recommendation	Risk & Observations	Recommendation	Owner/Dependencies	Related VMMM Subdomain(s)
#1: Vulnerability Management Roadmap	Without a defined timeline for adopting or implementing program activities, there is risk of misalignment with management objectives. Schneider Downs observed during this assessment that a number of key activities have been implemented by NiSource IT management after the transition of the vulnerability management function from Verizon. While significant progress has been made in implementing the Vulnerability Management Program, a number of challenges identified by multiple stakeholder groups (e.g., incomplete or inaccurate asset inventories, technical issues with authenticated scanning, conflicting priorities between IT service provider SLAs and vulnerability remediation timeframes, etc.) do not have a defined plan in place for being addressed.	Schneider Downs recommends the adoption of a roadmap to address known issues and continue maturing the program within a defined timeframe. Areas for consideration include: a. Conformance to an industry standard(s) such as SANS VMMM, NIST Cyber Security Framework (CSF), and Cybersecurity Capability Maturity Model for the Oil and Natural Gas Subsector (ONG-C2M2) b. Time bound future state milestones selected based on the organization’s risk threshold c. Alignment of required resources to perform activities on the vulnerability management roadmap	**Owner:** IT Security Operations **Stakeholder Dependencies**: IT Tower Leadership	The roadmap does not address a specific domain but provides a timeline for implementing activities for each.

Recommendation	Risk & Observations	Recommendation	Owner/Dependencies	Related VMMM Subdomain(s)
#2: Asset Management & Discovery	Incomplete or inaccurate data regarding IT assets has downstream effects to the identification and prioritization of vulnerabilities. Without a complete IT asset inventory, there is risk that assets may be overlooked when performing vulnerability scans and without accurate information about each asset, vulnerability severity scoring may be inaccurate. Schneider Downs noted through inquiry that inconsistencies appear to exist between the ServiceNow CMDB and other inventory databases, including Qualys. Testing was not performed to quantify this observation.	Schneider Downs recommends NiSource continue to mature its steady-state operation of the ServiceNow CMDB with consideration for the attributes that support the prioritization or assessment of vulnerability exposure. Attributes critical to vulnerability management include: a. Asset ownership b. Data type(s) stored or processed c. Operating system d. Service(s) supported Schneider Downs further recommends the use of authenticated vulnerability scanning for all assets, when possible, to ensure all asset attributes are collected. Authenticated scans were observed to be configured but failing due to technical issues. Data collected from authenticated scanning can effectively assist in aligning inventory databases either through available integrations between Qualys and ServiceNow or via custom/manual processes.	**Owner:** IT Infrastructure **Stakeholder Dependencies:** IT Security Operations	Context – Levels 1-4
#3: Risk Tracking	Without tracking vulnerabilities that exceed the remediation time frames established by NiSource policy, management cannot reliably assign resources to manage the risk. Schneider Downs noted 178 severity level 5 vulnerabilities that had exceeded acceptable remediation timeframes per NiSource policy, but had not been tracked in the IT risk register or formally accepted as risks.	We recommend that NiSource risk management team members, whether IT Risk Management and/or ERM, be either integrated into the vulnerability resolution process or systematically notified when a vulnerability exceeds the established resolution timeframe. Where possible, specific alerts or reports should be developed to ensure the following are tracked within the risk management function: a. New, high risk vulnerabilities b. Vulnerabilities that exceed established remediation timeframes c. Vulnerabilities that have been accepted as risk items and exempted from scan reports	**Owner:** IT Risk Management **Stakeholder Dependencies:** Enterprise Risk Management (ERM)	Policy & Standards – Levels 3-4 Alerting – Levels 1-2 Patch Management – Levels 2-4

Recommendation	Risk & Observations	Recommendation	Owner/Dependencies	Related VMMM Subdomain(s)
#4: Vulnerability Remediation Execution	Prioritization of lower risk vulnerabilities for remediation can lead to extended remediation times for higher risk vulnerabilities. Schneider Downs observed 33% of vulnerabilities sampled from "Top 75" reports were considered moderate risk based on their severity scores, as well as 178 severity level 5 vulnerabilities that exceeded acceptable remediation timeframes per NiSource policy, indicating a misalignment of resources to remediating lower risk vulnerabilities.	Schneider Downs recommends NiSource establish criteria for the prioritization of vulnerabilities that aligns with the organizational risk profile. Proper alignment of service level agreements and remediation timeframes with risk thresholds ensures that resources are directed first at mitigating the vulnerabilities posing the highest risk to the organization before addressing those with a lesser potential impact. This should include: a. Increasing focus on key factors such as access vector, access complexity, and contextual criteria about the assets impacted b. Remediation timeframes for lower criticality vulnerabilities be extended to allow focus on higher risk items c. Incorporation of threat intelligence data into the identification and prioritization of vulnerabilities, especially zero-day vulnerabilities that are not yet noted in Qualys	**Owner:** IT Infrastructure **Stakeholder Dependencies:** IT Security Operations	Policy & Standards – Levels 3-4 Prioritization – Levels 1-4
#5: External Vulnerability Reporting	Externally facing assets are subjected to the greatest number of threats and thus any vulnerabilities present on these systems have a high likelihood of exploit. NiSource does not currently utilize a single process for managing vulnerabilities identified by external sources and runs its own scans of externally facing systems using the "light" mode in Qualys.	Schneider Downs recommends a single intake process be established to ensure appropriate routing of these reports. This process should include: a. A standardized approach for external vulnerability scanning, including the regular use of a third-party scanning provider and/or increased levels of Qualys scanning in the DMZ b. A publicly available means to report vulnerabilities, such as an email address or contact form c. A published Vulnerability Disclosure Policy (VDP) addressing how external parties should communicate with NiSource regarding vulnerabilities d. An internal procedure for incorporating externally identified vulnerabilities into the existing vulnerability management processes	**Owner:** IT Security Operations **Stakeholder Dependencies:** None	External – Levels 1-2

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

19. List extraordinary property losses as a separate item, not included in operating expenses or depreciation and amortization. Sufficient supporting data must be provided.

Response: Columbia Gas of Pennsylvania, Inc. has no extraordinary property losses.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

27. Submit a schedule for gas producing units retired or scheduled for retirements subsequent to the test year showing station, units, Mcf capacity, hours of operation during test year, net output produced and cents/Mcf of maintenance and fuel expenses.

Response:

None.