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Ref: CPF 4-2007-5035M

Dear Mr. Seeley,

Targa Midstream Services, Limited Partnership received a Notice of Amendment resulting from an inspection by your office on October 23-27, 2006. The Notice cited apparent inadequacies found in Targa Midstream Services plans or procedures.

The plans and procedures inspected were from the Integrity Management Plan for hazardous liquid lines formerly operated by Dynegy Midstream Services. At the time of the inspection, the company was in the process of integrating those pipelines along with other pipelines operated by Targa into an expanded and more robust plan. That process has now been completed.

Targa is addressing your notice with this letter and the attachment which has excerpts from the Targa Integrity Management Program for Liquid Transmission Pipelines.

1. Targa must modify the process used to establish buffer distances to include quality assurance steps to ensure all parameters and criteria are properly applied and the calculations used to establish the buffer distances are checked against actual pipeline specifications.

Refer to attached Excerpts from Targa IMP: 1.5 HCA Segment Identification Maintenance

2. Targa's current risk model must be modified to ensure that high risk "could affect an HCA" segments within a testable section can be identified: that potentially important and meaningful risk factors, such as coating type are included; that the inclusion of mitigating factors are included in calculating the likelihood of failure, and that an appropriate weighting scheme/method for consequence is implemented. During the inspection it was identified that the lowest value possible for Urban Areas is higher than the highest value of any other consequence factors.

The pipelines inspected are now included in a Risk Assessment Model that uses a set of algorithms or "rules" incorporating all available information and data-relationships to measure risk along the pipeline. The Risk Model operates in a software environment that is designed to work in conjunction with a pipeline relational database and geographical Information System or GIS. Approximately 120 risk variables are currently included in the risk assessment. Coating type is one of the risk variables. Evaluations assess each variable and each condition along each pipeline to generate a specific numerical value representing an estimate of current risk.

The following is a description of the Risk Assessment Model. (excerpt from Targa IMP)

Since risk is defined in terms of an event likelihood and consequence, the risk of failure at any point on the system is therefore composed of two main factors: the probability and the consequences. The objective of the risk assessment is to capture all pertinent information to enable risk distinctions to be made along the pipeline.

The Risk Model includes all failure modes grouped as follows:

- Third Party
- Corrosion
- Fatigue
- SCC
- Geo Hazards
- Incorrect Operations

A probability of failure is estimated for each failure mode by assessing the unmitigated threat (or exposure level), the mitigation applied, and the inherent vulnerability to the failure mechanism: PoF = f(exposure, mitigation, invulnerability)

A consequence prioritization scheme has been established to complete the risk assessment. The scoring system uses 4 variables to show situations with relatively higher and lower potential consequences.

$$Cof = PH \times HCA \times pd^3 \times R$$

Where:

Cof = consequence of failure prioritization factor
PH = Product hazard
HCA = % of system that is exposing a defined HCA
R = Receptors, the type of HCA
pd^3 = pressure x diameter^3

The content or product transported in the pipeline is given a relative score based upon the potential for the product to produce a hazard once released. This is the PH (product hazard) in the above equation. The R value represents potential damage to the type of HCA.

After application of this formula, the pipeline systems that are prioritized as more consequential will be those that

- Transport a more hazardous product, and
- Have a greater fraction of their length exposing one or more HCA's and

- Have relatively higher pressure and diameter(more product and more stored energy), and expose more sensitive receptors

The Risk Module dynamically segments each pipeline such that each pipe segment has a uniform risk based on the parameters controlling the risk. Risks are uniform within the pipe segment and unique from neighboring segments.

Refer also to attached Excerpts from Targa IMP: 5.5 Risk Factors

3. *Targa must document the process to evaluate and implement preventive and mitigative measures (P&MM) per § 195.452(i)(1)&(2) in sufficient detail to ensure consistent application.*

Refer to attached Excepts from Targa IMP: 6.0 Preventative and Mitigative Measures

4. *Targa must document the process to evaluate leak detection capabilities per §195.452(i)(3) in sufficient detail to ensure consistent application.*

Refer to attached Excerpts from Targa IMP: 6.2 Evaluation of Leak Detection Capabilities

5. *Targa must document the process for EFRD needs determination per §195.452(i)(4) in sufficient detail to ensure consistent application.*

Refer to attached Excerpts from Targa IMP: 6.3 Emergency Flow Restricting Devices (EFRD)

6. *Targa must modify their process to include additional performance metrics to provide meaningful insights to measure the effectiveness of the IMP. The performance measures reviewed by the Inspection Team did not specify metrics that provide Targa with sufficiently meaningful insights into the effectiveness of the IMP. While Targa's failure history does not show a release due to corrosion, it does show third party damage and operator error as accident causes, and use of accident history alone is not sufficient to accurately measure Targa's IMP effectiveness.*

Refer to attached Excerpts from Targa IMP: 8.0 Program Evaluation

If you have any questions or require additional information, please contact Tim Huffer, Manager Regulatory Compliance at (337) 583-4642 extension 200.

Steve Hopson
Senior Vice President, Engineering/Operations

Attachment: Excerpts from Targa Hazardous Liquid Pipelines IMP
cc: Tim Huffer, Lake Charles

Excerpts from Targa Hazardous Liquid Pipelines IMP

1.5 HCA Segment Identification Maintenance

Section 1.0 of this document describes the process applied to initially identify HCA Segments. This is a dynamic identification process and as relevant data becomes available potentially affecting the delineation of HCA Segments, the appropriate modifications will be made.

This HCA Segment identification process will be reviewed and IMP files modified to incorporate new information, at least once each calendar year. Information to be reviewed will include, at a minimum:

- Changes in HCA identification requirements as mandated or recommended by OPS;
- Changes in OPS-delineated HPA, OPA, CNW and USA boundaries;
- Recent pipeline releases to validate that product release modeling assumptions and results used to establish hazard zones are conservative and relevant;
- Calculations and assumptions supporting dispersion distances and default buffer zones.
- Modifications along ROW's which may affect the dispersion of a released vapor cloud;
- Additions of new population or environmental receptors which may affect the consequence analysis results and HCA boundaries; and
- Engineering modifications such as product type, pressure profiles, throughput, or pipeline system integrity which may affect hazard zone buffers.
- Addition of new pipeline assets. Area Manager or his designee shall inform Liquid IMP Team of new hazardous liquids pipelines prior to operation so they can be included in this plan. This is ensured via the MOC process. Liquid IMP team shall use Annual Review procedures to incorporate the new assets into the IMP, should such inclusion be warranted.

Documentation of all HCA ID maintenance is filed in IMP 301.

5.5 Risk Factors

Approximately 120 risk variables are currently included in the risk assessment. Conditions are assigned to each variable and each condition generates a specific numerical value used to estimate the risk (see file 305). Some of these variables are very location specific and are the results of calculations involving one or more sub-variables. Others are scored consistently across the whole length, either due to their uniform nature or due to absence of data to better distinguish differences along the route.

Detailed discussions of these variables and rationale for the weightings in general can be found in Reference 8. Weightings can be modified as part of the annual model review process. Values assigned and algorithms used are shown in Risk Assessment Manual and related documents (see File 305).

As part of the re-assessment process, Liquid IMP Team will review the entire risk assessment variable list to determine if additional factors need to be incorporated into the model.

General instructions for assessing risk values are detailed in Reference 8 and are not repeated in this document. These instructions offer complete descriptions to help control how the more subjective factors are scored. This helps to ensure consistency in the evaluation.

6.0 Preventive and Mitigative Measures

6.1 Evaluation for Risk Reduction

Preventive and mitigative measures are part of risk management. One of the benefits of the risk assessment approach used in this IMP is that risk reduction opportunities are identified during the assessment. Mitigation opportunities are apparent with a review of the risk scores. Since the risk model incorporates ~120 risk factors, the specific details of what is driving the risk in any segment are readily identified. The relative benefit of a mitigation measure can be estimated by noting the change in risk score that would accompany the mitigation. Assigning a cost to the change produces a cost-benefit for each option.

Since lack-of-information is conservatively treated as increased risk, one of the first ways to reduce the risk is to obtain more accurate and current information. This encourages the performance of surveys and data collection as risk reduction opportunities.

6.1.1 Action Triggers

Establishing an absolute level of acceptable risk is not thought to be the best approach to risk management. The first problem with an absolute level is the inherent inaccuracies associated with failure probability and consequence calculations. Addressing risks above a certain threshold and ignoring any risks below that threshold requires more confidence in the risk assessment accuracies than is probably prudent. Another problem is the realistic premise that risk tolerance is not a fixed value in any company. In the complexities of the business world, it is influenced by economic conditions, public perception, and political conditions. A further complication is the need for a time factor in setting a risk tolerance. A certain level of risk is tolerable for some period of time, until the situation can be reasonably addressed. At some level, however, the risk is seen to be so unacceptable that immediate action, even the shut down of the pipeline, may be warranted.

Even without a formal risk management system, certain levels of risk will trigger immediate action. A trigger or action point can be seen as the risk level that is not tolerable, not even for a short time. One trigger point currently at Targa is any active leak. This trigger point is obviously a reaction to consequences that are already occurring and a failure that has already happened. Nevertheless, it can also be viewed as a risk that is no longer acceptable. Other less apparent and less time-sensitive indications that a risk is no longer viewed as acceptable include anomalies discovered during integrity assessments. These are fully discussed in Sections 3 & 4.

Beyond the definitive action points discussed in Section 4, Targa's approach to risk management emphasizes prioritization. The choice of risk assessment system reflects this. In a prioritization approach, Targa will always be ranking portions of its system, based upon the level of risk. This ranking in turn generates a list of possible projects to reduce the risk level. More resources may then be allocated towards changing the risk level of the worst sections first, and then progressing down the list.

In the practice of prioritizing, Targa may expand the consequence definition to include some economic and other non-safety considerations. This does not detract from safety issues since more efficient operations free resources that can be applied to more beneficial efforts.

6.1.2 Using Results of Risk Assessment in Risk Management

The risk results are regularly validated and updated by Liquid IMP Team. The risk management process generally includes the following use of risk assessment results:

1. Identifying highest overall risk segments. Higher risk segments will have priority in resource allocations towards risk mitigation.

2. Determining where higher risks are due to missing information. Where risk levels are higher due to missing information or higher uncertainty, the associated pipeline segments might be viewed as having a higher apparent risk.

Where risk levels are higher due to actual threatening conditions, those segments will have priority over segments with high apparent risks.

3. Identifying highest overall failure probabilities. This includes ensuring that a deficiency in some failure mode is not being masked in the overall summation.

4. Identifying segments with the highest overall failure consequences. Higher consequence segments might warrant additional mitigations.

5. Evaluating trends by comparing year-to-year assessment results.

6. Correlating actual pipeline failure or "near miss" information with risk assessment results. These correlations are used to improve the risk model and calibrate the assessments so that more specific mitigation opportunities can be identified and appropriately valued.

7. Identify pipeline segments that are candidates for mitigation, based on prioritization of various risk factors and scores.

8. Develop list of potential mitigation projects. Identify risk factors that would be improved by each project.

9. Run "what if" scenarios to determine impact of potential mitigation projects on risk scores. Assign cost-benefit ratios to potential projects.

10. Develop risk management strategies based on assessment results. This will include an evaluation of the distribution of risk scores to identify outliers or other data patterns that might suggest more timely response is warranted. Integrity assessment intervals will be adjusted, when necessary, based on most current risk assessment results.

These processes will be conducted at least annually, following the annual risk assessment. One of the results will be a continuously changing list of prioritized or ranked segments. This list will play a role in annual budgeting for risk mitigation. See file 306 for latest lists.

6.1.3 ***Risk Mitigation***

Risk can be reduced through either reducing the probability of an event or the consequences of an event. While there are some consequence-minimizing measures to employ, it is usually much more problematic to reduce the impact once a pipeline failure has occurred. This is especially true for the HVL pipelines. It is normally preferable to reduce the probability of an event rather than the consequences.

Most of the risk assessment's risk factors deal with failure probability. Many are candidates for change in order to mitigate risk when warranted. Examples include patrol frequency, public education, corrosion surveys, operating procedures, training, and many others.

General mitigation opportunities include:

- Additional damage prevention practices such as permanent and temporary marking of pipelines, increased public education, etc.
- Additional corrosion control measures such as close interval surveys,
- Increased SCADA monitoring,
- Additional personnel training,
- Emergency response drills.
- Error prevention mechanisms

Some of these might be appropriate risk management activities, depending upon the situation. As noted by the process above, the risk drivers are first identified and then appropriate responses (mitigation measures) evaluated.

When the risk management process suggests that additional mitigation is warranted for any pipeline segments, what-if scenarios will be created using the risk model to determine impacts of proposed mitigation projects. Projects with favorable cost-benefit aspects will be considered for implementation.

Potential risk mitigation projects that are identified through processes other than the risk assessment are funded by normal maintenance spending procedures or considered in existing budget-setting processes. These also may have cost-benefit estimates assigned. See file 306 for latest evaluations.

As noted in Section 8.6, Targa SME's and all field personnel participate in the evaluation of preventive and mitigative measures and/or the identification of changes in risk (via PAR process) that may prompt additional measures.

6.1.4 Consequence Minimization

Focusing on public safety type consequences and the previously discussed elements of consequence, there are four general ways to reduce the potential consequences of a leak:

1. Reduce the spill size—this is done by reducing flowrates, pipe diameter, and/or pressure; or by improving shut-in times, or by using a pipe material that minimizes potential hole size. Some of these are not practical options for these pipelines.

2. Reduce the potential spread—this is done by reducing the range of the spill, often by using secondary containment of some kind. Reducing spread by improved leak detection and reaction time is a possible mitigation measure, as discussed below.

3. Reduce the product hazard—this is done by changing the product transported and is not a practical alternative for these pipelines.

4. Reduce the receptors—this is accomplished by either moving the pipeline or moving the receptors (i.e. people). These are not practical alternatives. Receptor vulnerability may be somewhat impacted by leak detection time including reaction time, under certain circumstances.

While leak detection and emergency response capabilities are mentioned in several consequence-minimizing actions, their role is less predictable and therefore less certain than other mitigation actions. This is because, especially in the case of mostly-vapor releases, the worst events often occur immediately after the leak, leaving little opportunity for even the most rapid reaction times to have much impact. Only in certain scenarios where a leak site can be more-quickly isolated, product contained, ignition either avoided or controlled, people evacuated, property protected, etc., will the emergency response actions appreciably and reliably reduce consequences. However, the importance of such actions is not discounted. Leak detection capability analysis can be found in File 306. The emergency response procedures in the O&M manual address the capabilities.

6.1.5 General Actions Identified

The following general mitigation and prevention activities have been implemented as part of on-going IMP actions.

- Improved data collection and management (stationing, new forms, etc)
- Data integration processes
- Formal risk assessment
- Integrity re-assessments for certain pipelines
- Regular reviews of all integrity-related information
- Formal leak detection analysis
- Formal EFRD analysis

Specific preventive and mitigative projects are identified and evaluated as part of the IMP annual review and at any time as needed (where need is determined by any Liquid IMP team member). Current and potential project lists can be found in file 306.1. Specifics on formal leak detection capabilities and emergency flow restricting devices (EFRD) are in File 306, with the general evaluation process discussed below.

6.2 Evaluation of Leak Detection Capabilities

For Targa's Part 195 pipelines that transport low vapor pressure products (remain at least partially in liquid form under most ambient conditions), leak detection can play a role in risk reduction impacting potential consequences. Especially where the dominant hazard is contamination-related, minimizing the volume spilled is important. For low vapor pressure liquids, pipeline proximity to HCA is a critical aspect of potential impact to a wetland, drinking water source, population center, or unusually sensitive areas that are prevalent in the region.

For Targa's Part 195 pipelines that transport only HVL's, leak detection capabilities play a different role in risk reduction compared to lower vapor pressure liquids. Risk reduction and more specifically, consequence reduction, is achieved through leak detection only where the detection and response can reduce the vapor cloud size created by a released HVL. Since the largest cloud size will almost always occur immediately after release and then quickly diminish as the pipeline depressurizes, there are few reasonable scenarios where leak detection and response could play a significant role in consequence reduction.

Targa employs several methods to detect leaks, including computational methods that rely on SCADA data. The methodology to evaluate SCADA based leak detection capabilities is generally taken from API1155 and API1149. This includes an evaluation of the type of SCADA hardware and software including type and locations of equipment; scan rates; instrument sensitivities; errors/accuracies; control room protocols; alarm limits; etc.

The methodology to evaluate all leak detection capabilities includes the following steps:

1. List all opportunities by which leaks might be detected.
2. For each, estimate the time-to-detect various leak rates or volumes.
3. Assess if improvements are needed.

Maximum leak sizes, time-to-detect, and time-to-isolate estimates are produced from an evaluation of the following:

1. Leak history
2. System schematics,
3. SCADA instrumentation and alarms,
4. Elevation profile,
5. Topographical features,
6. Emergency response procedures,
7. Control room procedures,
8. Estimated release volumes,
9. Estimated product behaviors, and
10. Estimated travel times and accessibility issues for valve sites.

Personnel response times, especially when travel to valve sites is needed, are a critical part of the overall emergency response and are evaluated as part of the overall leak response capabilities.

The value of leak detection capabilities is thought to fall into the following categories:

1. Reduction in spill volumes—minimize consequences from contamination or from wider dispersion with delayed ignition.

2. Emergency response—mobilization time for emergency responders may be improved. This might lead to more rapid securing of the leak site and, under some scenarios, additional evacuations of people and/or better protection of other receptors.

3. Avoidance of larger release rates—if a smaller leak, that might otherwise grow into a larger event, is detected before it has an opportunity to worsen, the event sequence may be interrupted before the worsening occurs.

HVL scenarios where leak detection might play a larger role include:

1. Slower forming and dissipating cloud possibly due to colder ambient temperatures. Such temperatures are not common in this location.

2. Failure mechanism that tends to rapidly create a larger leak hole once a leak has initiated. A cracking type failure anomaly, coupled with the chilling effect of the releasing product might lead to this.

These HVL scenarios are thought to be very rare compared to the more likely scenarios of a cloud formation followed immediately by relatively rapid cloud dissipation and leak rate reduction.

Risk assessment results are used in evaluating appropriateness of leak detection capabilities. These risk results consider all PoF mechanisms and proximity to HCA's. Where potential consequences must be reduced, leak detection improvement projects are considered.

The assessment of nominal leak detection capabilities can be found in a report in file 306. In addition, special SME forms are used to capture more qualitative aspects of leak detection and benefits of EFRD. The IMP annual review ensures both report and forms are current. Reviewers may recommend enhancements to current capabilities.

6.3 Emergency Flow Restricting Devices (EFRD)

EFRD's are occasionally used to minimize release quantities in the event of a pipeline rupture. As with leak detection capabilities, they are most effective where an increased release volume is more detrimental and such an increase can be avoided. This is often the case for hazardous liquids that present chronic hazards. That is, they remain mostly in the liquid phase after a spill and can damage larger areas as more volume is released. Potential damages include contamination of waters, destruction of flora and fauna through contact with the released product, and delayed ignition followed by damages from the ensuing thermal event.

For any type of product release, EFRD's usefulness in Targa's current operations is questionable due to the following technical limitations.

- Check valves are not practical on bi-directional pipelines.
- Automatic valves are subject to erroneous closures, leading to significant operational problems and possibly increased threats to pipeline integrity.
- Most subject pipeline segments are relatively short and already equipped with remote and automatic EFRD's on both inlets and outlets and/or are within manned facilities with personnel trained to perform rapid line isolations during emergencies.

In the case of HVL releases, leak rate tends to decrease immediately upon pipeline loss-of-integrity, as the pipeline loses pressure. One can envision a few scenarios where EFRD's might reduce the cloud size from an HVL release. These scenarios involve a quite rare combination of unusual aspects such as very cold ambient temperatures or the immediate action by EFRD, in close enough proximity to a rupture site so that the leak rate is reduced before it reaches a maximum. Since the maximum release rate occurs almost instantly, this is not a reasonable scenario.

An evaluation of possible benefits from additional EFRD's will be reviewed as part of the annual risk assessment process. This evaluation considers all pertinent factors, including:

- Leak detection time
- Pipeline shut in time
- Product characteristics, especially during release episodes
- Potential leak rates
- Potential leak volume
- Topography and pipeline profile effects
- Terrain, especially as it pertain to possible HCA impacts
- Potential for ignition
- Response time of emergency responders (including locations of such responders)
- Practical issues surrounding EFRD installations such as power source proximity and benefits of spill reduction

Risk assessment results are used in evaluating the need for additional EFRD's. Where potential consequences must be reduced, EFRD projects are considered. Updates to this evaluation can be found in file 306. In addition, special SME forms are used to capture more qualitative aspects of leak detection and benefits of EFRD. The IMP annual review ensures both report and forms are current. Installation of additional EFRD's will be considered when an evaluation determines that hazard zones or other aspects of potential consequences can be reasonably reduced by their presence.

8.0 Program Evaluation

8.1 Performance Metrics

Once risk prevention and mitigation activities/projects are approved, their implementation follows standard Targa practices for either capital expenditures or operating expenditures depending on the nature of the work.

Once implemented, the effectiveness of risk mitigation activities/projects is determined by measuring performance to ensure that the intended results are achieved. Historically, performance monitoring has focused on tracking the status of objectives involving project completions within the specified timeframes and expenditures budgeted.

Targa has always had performance measures related to pipeline risk. For example, on a macro scale, the number of incidents has always been reported by the company and tallied by the state of Louisiana and OPS for the pipeline industry. On a micro scale, direct and indirect inspection and maintenance results serve as a performance measure for pipeline integrity. Abnormal results from these inspections and maintenance activities indicate that there may be an increasing integrity threat, or higher risk issue, on the particular pipeline segment. Through the IMP process this would result either in an immediate response or in a project request for funding in the next annual budget plan, if it meets cost-benefit criteria for risk reduction.

Refer to Tables 8.1-1 and 8.1-2 below for examples of IMP performance metrics.

Table 8.1-1 IMP Performance Measures

Category	Performance Measures	Expected Outcome	Data/Information Source
Incident Data (see also Table 8-2)	Incidents by Cause (#), Fatalities (#), Injuries (#), Property & Environmental Damages ($)	Decrease; however a statistically significant trend is not expected	Existing incident reports
Risk Awareness	Identification of new risks not previously recognized by codes	List of risks addressed will increase beyond those currently addressed in codes	New risk algorithm variables, risk drivers and risk mitigation measures
Public Awareness	Public and industry presentations (#) and letters to and owners/lessees (#)	Decrease in 3rd party incidents	Incident and encroachment reports; public awareness program perf. metrics
Operator Customer Service	Significant unplanned service interruptions	Overall decrease	Operations reports
Risk estimates	Overall risk; PoF; CoF	Decreasing risks; offsets to increasing risk factors (such as pop density increases)	Risk assessment result files

Additional metrics that may be included in measuring overall IMP effectiveness include:

Table 8.1-2 IMP Performance Metrics

See file 308.03 for the latest performance metrics.

Segment Data	Total miles of pipeline
	Number of miles in HCA's
	Miles of pipeline scheduled
	Total miles of pipeline inspected
	Miles of HCA pipeline inspected
Threat Data	**Number of the following occurrences in HCA's**
External Corrosion	Pressure test failures caused by external corrosion
	Repair actions due to inline inspection results
	Immediate
	Scheduled
	Repair actions due to direct assessment results
	Immediate
	Scheduled
	External corrosion leaks
	If low stress pipeline, state leak classification:
Internal Corrosion	Pressure test failures caused by internal corrosion
	Repair actions due to inline inspection results
	Immediate
	Scheduled
	Repair actions due to direct assessment results
	Immediate
	Scheduled
	Internal corrosion leaks
	If low stress pipeline, state leak classification:
Stress Corrosion Cracking	In-service leaks due to SCC
	In-service failures due to SCC
	Repair or replacements due to SCC
	Pressure test failures due to SCC
Manufacturing	Pressure test failures caused by manufacturing defects
	Leaks due to manufacturing defects
Incorrect Operations	Pressure test failures due to incorrect operations
	Repairs or replacements
Third Party	Pressure test failures due to third party activities
	Repairs or replacements

Targa's pipeline risk model provides a means of tracking risk management performance based on the overall reduction for the probability and consequence of a failure, as well as overall risk. Since the compilation of risk estimates for multiple segments and even entire pipelines uses probabilistic methods of 'summation', the risk estimates are directly comparable over time. Tracking of changes in risk for any length of pipeline is done by simply comparing recent risk estimates with previous. Failure rates for pipelines and related equipment, obtained from internal and external sources, is used to calibrate the risk assessment in more absolute terms.

IMP-related performance metrics will be developed over the course of several years by tracking average HCA Segment risk score changes annually, then analyzing results for trends which will provide valuable insight regarding the effectiveness of implemented risk prevention and mitigation measures.

Goals and expectations related to these measures will be developed as a history of the metrics is obtained. Industry-wide sources of information may be used to establish goals and benchmark performance.

8.2 Monitoring

Through implementation of the IMP, improvements are expected in the areas of overall pipeline facility safety and reliability. Indicators of these improvements are identified to directly measure, and monitor the program's effectiveness. Refer to Table 8.1-1, *IMP Performance Measures.*

The Liquid IMP Team verifies that expected IMP improvements are achieved through defining, measuring, and tracking each IMP performance metric and comparing the results to baseline and expected values in the areas of safety, environmental, reliability, communication and resource allocation.

At least annually, IMP team representatives meet with the Operations Managers to review the past period's risk control plans and to discuss possible changes to the IMP. The following positions are invited to all such IMP reviews:

- Engineering Manager,
- Pipeline Foreman, and
- Operations Manager.

<u>Annual review and update of the Integrity Management Plan.</u>

The annual IMP evaluation shall determine:

- Effectiveness of administrative documents, audits, communications and documentation of IMP process elements;
- Effectiveness of analytical processes used to assess risks, identify prevention and mitigation measures, reallocate resources to achieve acceptable risk levels, and monitor performance;
- Effectiveness of direct and indirect integrity assessments, assessment result evaluations, mitigation actions and performance evaluations; and
- Recommended IMP enhancements.

Excerpts from Targa Hazardous Liquid Pipelines IMP

The Liquid IMP Team has overall responsibility for identifying, implementing, monitoring and documenting any changes to Targa's IMP. Results of evaluations and any changes made are communicated to appropriate personnel. See also sections 5.3 and 8.5 for procedures