

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

GASB Statement 49 addresses accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities such as site assessments and cleanups. The scope of the document excludes pollution prevention or control obligations with respect to current operations, and future pollution remediation activities that are required upon retirement of an asset, such as landfill closure and post-closure care and nuclear power plant decommissioning. (taken from GARS)

**Q1** What is a pollution remediation obligation?

A pollution remediation obligation is an obligation to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities such as spills of hazardous substances or asbestos abatement.

**Q2** What items are excluded from the requirements of GASB 49?

The scope of GASB 49 excludes the following types of obligations.

1. Landfill closure and postclosure obligations within the scope of GASB Statement 18, *Accounting for Municipal Solid Waste Landfill Closure and Postclosure Care Costs*.
2. Other future pollution remediation activities required upon the retirement of an asset during the periods preceding the retirement such as nuclear power plant decommissioning. Statement 49 does apply to these activities at the time of retirement if obligating events are met and a liability has not been previously recorded.
3. Recognition of asset impairments or liability recognition for unpaid claims by insurance activities.
4. Pollution prevention or control obligations with respect to current operations such as smokestack scrubbers, effluent treatment, or use of environment-friendly products; or to fines, penalties, toxic torts, product and process safety outlays.
5. Accounting for nonexchange transactions, such as brownfield redevelopment grants.

**Q3** What activities are considered pollution remediation activities/components?

Pollution remediation activities/components include:

- a. Pre-cleanup activities which include site assessments, site investigations, corrective measures feasibility studies and design of remediation plans.
- b. Cleanup such as neutralization, containment or removal and disposal of pollutants, and site restoration.
- c. External government oversight and enforcement-related activities which can include work performed by an environmental regulatory authority dealing with a site that is chargeable to the government.
- d. Operation and maintenance of the remedy, including required monitoring of the remediation effort (post-remediation monitoring).

The above list is not all inclusive, nor will all pollution remediation obligations involve all of the above activities; for example, asbestos abatement may require the first three activities, but would not involve post-remediation monitoring.

Pollution remediation obligations do not include prevention or control obligations with respect to current operations, such as obligations to install smokestack scrubbers, treat effluent, or use environmentally –friendly products.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**Q4** What types of expenditures/expenses are considered pollution remediation outlays?

All direct expenditures/expenses paid for pollution remediation activities such as payroll and benefits, equipment, facilities, materials, legal and other professional services fees. Outlays related to natural resource damage (such as re-vegetation outlays) are included only if incurred a part of a pollution remediation effort. Estimated indirect costs such as general overhead may be included with appropriate note disclosure.

**Q5** What types of expenditures/expenses are NOT to be considered pollution remediation outlays?

Fines, penalties, toxic torts (civil wrongs arising from exposure to a toxic substance), workplace safety outlays, litigation support involved with potential recoveries and outlays borne by society at large rather than by a specific government are not considered pollution remediation outlays.

**Q6** What should happen when an obligating event occurs?

Once an obligating event occurs, a liability **must** be recognized, assuming the liability is measurable or reasonably estimable. If the liability is not measurable or reasonably estimable, disclosure must be made in the notes to the financial statements.

**Q7** Explain the steps in recognizing and measuring pollution remediation liabilities.

- a. Once an obligating event occurs, a government should determine whether one or more components of a pollution remediation obligation are recognizable as a liability.
- b. Components of a liability (for example, legal services, site investigation, or required post-remediation monitoring) should be recognized as they become reasonably estimable. GASB 49 provides benchmarks for evaluating when various components become reasonably estimable.
- c. Measurement is based on the current value of outlays expected to be incurred. The components of the liability should be measured using the expected cash flow technique, which measures the liability as the sum of probability-weighted amounts in a range of possible estimated amounts—the estimated mean or average.

**Q8** What are the 5 obligating events that require recognition of a liability for a pollution remediation obligation?

- a. The government is compelled to act because of an imminent endangerment to public health or welfare.
- b. The government is in violation of a pollution prevention-related permit or license.
- c. The government is named, or could be named, by a regulator as a responsible party or potentially responsible party (PRP) for remediation or cost sharing,
- d. The government is named, or will be named, in a lawsuit compelling participation in remediation activities.
- e. The government commences, or legally obligates itself to commence, remediation activities.

**Q9** Define reasonably estimable.

In certain instances, a government may not have sufficient information to make an informed estimate of the ranges of all components of its liability. The government should recognize pollution remediation liabilities as the range of each component of the liability becomes more defined and informed decisions can be made; the government can “reasonably estimable” it pollution remediation liability.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**Q10** In situations where a government does not have experience developing a particular type of pollution remediation obligation, the liability is defined and periodically refined as different stages in the remediation process occur. These stages, or benchmarks, should be considered when evaluating the point (or points) at which potential outlays are reasonably estimable. What are these benchmarks?

- a. Receipt of an administrative order. A government may receive an administrative order compelling it to take a response action at a site or risk penalties. Such response actions may be relatively limited, such as the performance of a remedial investigation and feasibility study (RI/FS) at a Superfund site or performance of a removal action, or they may be broad, such as remediation of a site.

The ability to estimate outlays resulting from administrative orders varies with factors such as site complexity and the nature and extent of the work to be performed. The benchmarks that follow should be considered in evaluating the ability to estimate such outlays insofar as the actions required by the administrative order involve these benchmarks. (For example, asbestos removal typically would not involve completion of an RI/FS.) The outlays associated with performing the requisite work generally are estimable within a range, and recognition of a remediation liability for this work generally should not be delayed beyond this point.

- b. Participation, as a responsible party or a PRP, in the site assessment or investigation.

At this stage, the government (and possibly others) has been identified as a responsible party or a PRP and has agreed to pay all or part of a study that will investigate the extent of the environmental impact of the release or threatened release of pollutants and to identify site-remediation alternatives. Further, the total outlay associated with the site assessment or investigation generally is estimable within a reasonable range. In addition, the identification of other PRPs and their agreement to participate in funding the site assessment or investigation typically provide a reasonable basis for determining the government's allocable share of the site assessment or investigation. At this stage, additional information may be available regarding the extent of environmental impact and possible remediation alternatives. This additional information, however, may or may not be sufficient to provide a basis for reasonable estimation of the total remediation liability. At a minimum, the government should recognize its share of the estimated total outlays associated with the site assessment or investigation.

As the site investigation proceeds, the government's estimate of its share of the site investigation can be refined. Further, additional information may become available based on which the government can refine its estimates of other components of the liability or begin to estimate other components. For example, a government may be able to estimate the extent of environmental impact at a site and to identify existing alternative remediation technologies. A government also may be able to better identify the extent of its involvement at the site relative to other PRPs, the universe of PRPs may be identified, negotiations among PRPs and with federal and state Environmental Protection Agency (EPA) representatives may occur, and information may be obtained that significantly affects the agreed-upon method of remediation.

- c. Completion of a corrective measures feasibility study. At substantial completion of the corrective measures feasibility study, both a range of the remediation outlays and the government's allocated share generally will be reasonably estimable.

The corrective measures feasibility study should be considered substantially complete no later than the point at which the responsible party or PRPs recommend a proposed course of action to the regulatory authority (for example, the U.S. EPA). If the government had not previously concluded that it could reasonably estimate all components of the remediation liability, recognition should not be delayed beyond this point, even if uncertainties remain (for example, allocations to individual PRPs and potential recoveries from third parties can be estimated; however, they have not been finalized). Uncertainties

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

about the degree and probabilities of participation by other PRPs should be factored into the measurement of the liability as discussed in paragraphs 19–21.

- d. Issuance of an authorization to proceed. At this point, the regulatory authority has issued its determination (for example, an EPA record of decision) specifying a preferred remedy. Normally, the government and other PRPs have begun, or perhaps completed, negotiations, litigation, or both for their allocated share of the remediation liability. Accordingly, the government's estimate normally can be refined based on the specified preferred remedy and a preliminary allocation of the total remediation outlays.
- e. Remediation design and implementation, through and including operation and maintenance, and post-remediation monitoring. During the design phase of the remediation, the government develops a better understanding of the work to be done and is able to provide more precise estimates of the total remediation outlays. Further information likely will become available at various points until site remediation work is completed, subject only to post-remediation monitoring. The government should continue to refine its estimate of its liability as this additional information becomes available.

**Q11** How are pollution remediation liabilities to be measured?

Pollution remediation liabilities are measured based on the outlays expected to be incurred to settle those liabilities. The liability should include profit(s) and risk premiums that another party would claim only if the government expects to use an outside contractor. In this situation, the liability would be the contract total.

Pollution remediation liabilities should also be measured at their current value. Because of the complex nature of some pollution remediation obligations, it is not possible to settle the related liabilities in the current year and thus they will involve future periods. The current value of a pollution remediation liability should be based on "reasonable and supportable" assumptions about future events that may affect the eventual settlement of the liability. For example, the current value of a pollution remediation liability should be based on applicable federal, state, or local laws or regulations that have been approved, regardless of their effective date, and the existing technology expected to be used for the cleanup. The probabilities of these various expectations affect the probability-weighted measurement of the liability under the expected cash flow technique

**Q12** What is meant by "expected cash flow"?

"Expected cash flow" is a method to measure pollution remediation liabilities as the sum of probability-weighted amounts in a range of possible estimated amounts, the estimated mean or average.

Because of previous experience with particular types of pollution remediation activities or third-party contracts, a government may be able to develop reasonable estimates for pollution remediation liabilities. In other situations, a government has access to only limited data about the possible cash flows within a range. At such times, a limited number of discrete scenarios and probabilities should be developed to capture the array of possible cash flows. In developing those scenarios, a government could use actual cash flows for other pollution remediation projects, if available, and make adjustments for changes in circumstances. Each application of the expected cash flow technique will differ based on the facts and circumstances of each measurement situation, available information, and judgments applied. Such judgments include determining whether to apply a continuous or discrete probability distribution and, if a discrete probability distribution is applied, the number of discrete scenarios.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**Q13** How often should pollution remediation liabilities to be re-evaluated or re-measured?

Pollution remediation liabilities need to be reviewed and/or adjusted when benchmarks are met or new data becomes available that provides more accurate estimates of the liability. Examples include changes in the remediation plan or operating conditions, types of equipment or facilities, price increases or decreases, or changes in required services, to name a few.

**Q14** Some pollution remediation outlays by a government include outlays that should or will be paid by other responsible parties or potential responsible parties. After remediation is complete, the government will seek to recover those costs. Other pollution remediation outlays are covered by insurance. How are recoveries from other parties, including insurance recoveries, handled?

Expected recoveries from other parties and expected insurance recoveries should be included in the measurement of pollution remediation obligations. The expense amount is reduced by the expected recovery. The liability is affected by whether or not the recovery is realized or realizable. If the expected recoveries are **not yet** realized or realizable, the expected recovery should reduce the amount of the pollution remediation liability. This means that if a responsible party has not acknowledged or accepted responsibility for its share of the cost, the recovery is unrealized at this point and will reduce the remediation expense and liability.

If the expected recoveries are realized or realizable, they should be recognized separately from the liability as a recovery asset. At the time a recovery asset (cash or receivable) is reported, the same amount would increase the pollution remediation liability.

**Q15** Paragraph 20 mentions that expected recoveries from other responsible parties, potential responsible parties and insurers should follow the guidance in paragraphs 21 and 22 of GASB 42 to determine when an insurance recovery is realized or realizable. What are the provisions of GASB 42 paragraphs 21 and 22?

“In governmental fund financial statements, restoration or replacement of an impaired capital asset should be reported as a separate transaction from the associated insurance recovery, which is reported as an ‘other financing source’ or extraordinary item, as appropriate. In governmental and business-type activities in government-wide financial statements and in proprietary fund financial statements, restoration or replacement of an impaired capital asset should be reported as a separate transaction from the impairment loss and associated insurance recovery. The impairment loss should be reported net of the associated insurance recovery when the recovery and loss occur in the same year. Insurance recoveries reported in subsequent years should be reported as a program revenue, non-operating revenue, or extraordinary item, as appropriate. Insurance recoveries should be recognized only when realized or realizable. For example, if an insurer has admitted or acknowledged coverage, an insurance recovery would be realizable. If the insurer has denied coverage, the insurance recovery generally would not be realizable. If not otherwise apparent in the financial statements, the amount and financial statement classification of insurance recoveries should be disclosed.

Insurance recoveries other than those related to impairment of capital assets, such as for theft or embezzlement of cash or other monetary assets, should be accounted for as described in paragraph 21.”

**Q16** What if recoveries are not expected until periods after the completion of remediation work?

Upon completion of remediation activities, the pollution remediation liability will no longer exist and recoveries should be recorded as revenue and cash or accounts receivable when they become realized or realizable.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

- Q17** Generally, outlays for property, plant, and equipment acquired for pollution remediation are expensed when a liability has been recognized. Government-wide and proprietary funds will capitalize pollution remediation outlays when goods and services are acquired in specific circumstances. What are those circumstances?
- a. To prepare property in anticipation of a sale. The amount capitalized cannot exceed the estimated fair value upon completion of remediation,
  - b. To prepare property for use when it was acquired with known or suspected pollution that was expected to be remediated. Only those pollution remediation outlays necessary to place the asset into its intended location and condition for use should be capitalized.
  - c. To perform pollution remediation to restore a pollution-caused decline in service utility recognized as an impairment to a capital asset. Capitalize only those outlays necessary to place the asset in its intended location and condition for use.
  - d. To acquire property, plant, or equipment that have a future alternative use. Capitalize outlays only to the extent of the estimated service life that will exist after pollution remediation activities have ceased.

For items a and b to be capitalized, outlays must be made in a reasonable period before the anticipated sale or after acquisition, respectively, or if delayed, the delay is beyond control of the government.

- Q18** How are pollution remediation costs, revenues, assets, liabilities to be displayed in the financial statements for governmental funds, proprietary funds and at the government-wide level?

In governmental funds, the modified accrual basis of accounting must be used. This means amounts that are expected to be liquidated with available expendable resources should be recognized as liabilities upon receipt of goods and services. Acquisitions of pollution remediation facilities or equipment should be reported as expenditures in the statement of revenues, expenditures, and changes in fund balances. Estimated recoveries of pollution remediation outlays should reduce the associated expenditures when the recoveries are measurable and available.

Pollution remediation costs (or revenues if applicable) in government-wide financial statements should be reported in the Statement of Activities and related assets or liabilities in the Statement of Net Assets. Proprietary funds will report costs in the Statement of Revenues, Expenses, and Changes in Fund Net Assets and related assets or liabilities in the Balance Sheet.

- Q19** What disclosures must be included in the notes to the financial statements?

Governments should disclose the following for recognized pollution remediation liabilities and recoveries of outlays:

- a. The nature and source of the pollution remediation obligations, such as federal, state, or local laws or regulations;
- b. The amount of the estimated liability (if not apparent from the financial statements), the methods and assumptions used to develop the estimate, and the potential for change, such as price changes, newer technologies, or applicable laws or regulations;
- c. Estimated recoveries that reduce the liability.

Disclosures for liabilities or portions of liabilities that cannot yet be recognized because they are not reasonably estimable need to include a general description of the nature of the pollution remediation activities.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**Q20** Explain “Superfund”.

Superfund sites are those to which the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) apply. These acts provide the Environmental Protection Agency (EPA) with broad authority to order liable parties to remediate polluted sites or use Superfund money to remediate them and then seek to recover costs and additional damages.

CERCLA and its related amendments authorize the EPA to issue unilateral administrative orders to compel pollution remediation at “Superfund” sites and to levy treble damages on non-cooperative PRPs. In situations where the EPA performs the pollution remediation, it is allowed by CERCLA to sue the uncooperative PRPs for recovery of remediation outlays. Also, if a PRP believes it has paid a disproportionate share of the outlays, it may identify other PRPs and sue them in a contributory action. Requests for reimbursement from Superfund can also be made for allocations attributed to unidentified or unknown parties (the orphan share) under certain conditions, but this is not often allowed.

**Q21** What are brownfields?

The EPA defines a Brownfield as “...a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” The EPA’s Brownfields Program has been designed to allow states, parishes (counties), municipalities and other stakeholders to work to together in a timely manner to prevent, assess, safely clean up, and sustainably reuse these sites. More information is available at the EPA’s website: <http://www.epa.gov>.

**Q22** Provide examples of the expected cash flow technique for developing pollution remediation liabilities.

EXAMPLE A: Voluntary commencement of asbestos removal Assumptions

In 2004, XYZ agency decided to remove the asbestos ceiling and floor tiles from an older building. The building is not used in the summer months so plan called for the work to be done over two summers. Environmental laws require asbestos to be removed when it becomes friable<sup>1</sup>. The asbestos at the building had not reached that point of deterioration. A detailed cost estimate for asbestos remediation outlays ranged from \$190,000 to \$220,000.

In 2005, the contract was let for bid and the winning bid for the asbestos remediation was \$198,000. In 2005, the first half of the tiles was removed; the remaining half was removed in 2006.

Reporting:

In 2004, no obligating event occurred that would require the recognition of a remediation liability. No disclosures specific to the asbestos remediation are required.

In 2005, beginning the removal process caused the asbestos to become friable. At that point, an obligating event occurred requiring the agency to record a liability for the expected outlay of completing removal work that had been initiated. The district does not have a legal obligation to remove the rest of the tile.

The expected outlay for the remediation effort was \$99,000 in 2005 and the same in 2006 (\$198,000/2). The district need not record a liability because all remediation work commenced is completed in the same year. Because no liability existed at year-end, the district had no remediation obligation to disclose.

<sup>1</sup> friable – easily crumbled or pulverized to powder by hand

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**EXAMPLE B:** Asbestos removal due to imminent threat

Assumptions

Assume the same facts as in the example above, except that after signing the contract for the asbestos removal in 2005 it was determined that the presence of asbestos tiles presented an imminent threat to the health of employees and temporarily closed the building to remove all asbestos tiles. Asbestos removal commenced in late 2005 and was completed in early 2006.

Reporting

The determination that the asbestos created an imminent threat to public health, causing building closure, is an obligating event. At that time, the agency should record a pollution remediation liability and expense for the expected outlay for the entire remediation project (\$198,000). The liability would be reduced as remediation services were provided and any amounts remaining at year-end would be reported in the financial statements.

The agency would disclose, for example, that it was "compelled to remove the asbestos because it presented an imminent threat to the health of the customers and employees, that "the amount of the liability is derived from a construction contract," and that "the amount assumes no unexpected change orders." Additionally, the agency may need to disclose the amount of its estimated liability or liabilities (if not apparent from the financial statements).

**Q23** Provide an example of outlays that are capitalized, not expensed.

**EXAMPLE C:** Leaking underground storage tanks acquired in road expansion project – Pollution remediation is not primary purpose or acquisition

Assumptions

As part of a road expansion project, the Department of Transportation (DOT) acquires a truck stop through eminent domain. Based on the age of the facility, the department suspects that in addition to the 6 known underground storage tanks, there may be several undocumented tanks as well. DOT assumes pollution is present and less for the property than if it was pollution free. As part of the sale, DOT assumes all remediation obligations.

The road expansion project is expected to result in incremental outlays attributable to remediation activities. When the truck stop is razed and the underground tanks removed, several leaks were discovered upon removal of the tanks. State law requires such leaks to be reported to the state environmental regulator. Agency officials are aware that the environmental regulator will require cleanup action and do not wait for official notification. Clean up of the site commences to keep the road project on schedule.

Based on experience with similar sites, engineers believe a reasonable estimate of the range and probabilities of current incremental cleanup outlays is as follows:

	<u>Cost</u>	<u>Probability</u>	<u>Amount</u>
Best case	\$150,000	25%	\$ 37,500
Most likely	320,000	60%	192,000
Worst case	450,000	15%	<u>67,500</u>
			<u>\$297,000</u>

Including the remediation outlay in the remainder of that part of the roadway expansion project, will not exceed the amount originally expected to be necessary to complete that part of the road expansion.

Reporting

An obligating event occurred when the tanks were removed and leaks were discovered. Aware that it will be named as a responsible party for pollution remediation, the DOT begins remediation to avoid unnecessary delays in the project. The incremental expected outlay for the remediation is determined to be \$297,000 (see chart above). Because the incremental outlay is to prepare property acquired with suspected pollution that was expected to be remediated, the remediation cost is capitalized. No pollution liability or expense is accrued on this site.

GASB Statement 49 – Accounting and Financial Reporting for  
Pollution Remediation Obligations  
Implementation Issues in a Question and Answer Format

**Q24** Provide an example of a brownfields remediation.

EXAMPLE D: Brownfield Remediation

Assumptions

In an effort to revitalize downtown, Zee City purchases vacant buildings and properties, performs pollution remediation, and resells the buildings and property. State law requires the owner of polluted property to take appropriate action to remediate the pollution.

In 2004, Zee City performed a site assessment for a site with a building. Engineers determined it would cost between \$100,000 and \$130,000 to clean the site. No amounts within the range were considered to be better estimates than any other amounts. In late 2004, the city entered into an agreement with the property owner and a prospective buyer for the city to purchase the property for \$80,000, perform pollution remediation, and sell the property to the buyer for \$175,000. The property was purchased that year and placed the remediation work out for bid. Bids were received in early 2005. The low bid, \$125,000, was accepted; remediation work commenced and was completed in 2005.

State regulations required the city to notify the state's environmental quality department of the site assessment results and the transfer of title to the city. Based on the results of the site assessment, the city was aware that the level of pollution was such that the state environmental quality department would require remediation of the pollution.

Reporting

2004

This example illustrates two obligating events. Zee City voluntarily obligated itself to start remediation when it purchased the property in 2004. At that time, Zee City became aware that it would be named as a responsible party for pollution remediation, which is measured at its expected outlay. The expected outlay amounts to \$115,000, or the weighted average of the estimated range of cleanup outlays  $((\$100,000 + \$130,000)/2)$ . The purchase price and expected remediation outlays for the property  $(\$80,000 + \$115,000)$  exceed the fair value  $(\$175,000)$  by \$20,000. Amounts in excess of fair value are not capitalized so a pollution remediation liability and expense of \$20,000 should be recorded in 2004. No accounting entry needed to be made for the amount of expected pollution remediation outlays that would be capitalized because those outlays do not meet the criteria for recognition until incurred.

Zee City would provide a general description of its brownfield remediation program and disclose that "state law requires the city to perform pollution remediation upon acquisition of the property because of the level of pollution." Additionally, the city should disclose that "the liability was measured by estimating a reasonable range of potential outlays and multiplying those outlays by their probability of occurring." Separate disclosure of the estimated liability or liabilities must also be included if not apparent from the financial statements.

2005

Expected outlays rise to \$125,000 (the bid for the remediation work). This \$10,000 increase is in excess of the fair value of the property and, therefore, is recorded as an increase in the remediation liability and expense. Depending on the city's policy, the first progress billings from the contractor reduce the remediation liability, create a capital asset, or are ratably applied to both.

The disclosures would be updated for the current year. For example, the city could disclose that "the liability is measured at the cost of the remediation contract" and that "the amount assumes no unexpected change orders."