FINAL REPORT
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COMMENTS OF
POLICY PLANNING AND EVALUATION, INC.
ON THE PROPOSED TECHNICAL STANDARDS FOR
UNDERGROUND STORAGE TANKS

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I. INTRODUCTION

The Environmental Protection Agency (EPA) proposed technical standards for Underground Storage Tanks (USTs) on April 17, 1987 (52 Fed. Reg. 12662). The proposal includes standards for the design, installation, maintenance, and removal of underground storage tanks, as well as standards for detecting releases from tanks and initiating corrective action. The rules were developed pursuant to Subtitle I of the Resource Conservation and Recovery Act (RCRA).

The Small Business Administration Office of Advocacy (SBA) has a mandate to review proposed Federal regulations to examine their potential impact on small businesses. Under contract to SBA, Policy Planning and Evaluation Inc. (PP&E) has reviewed the proposed technical standards to determine the extent to which small business concerns could be addressed given the statutory requirements of Subtitle I. The proposed regulations clearly show the effort that the EPA has applied to understanding the regulated community, and the concern that has been shown for potential impacts and implementation. Nevertheless, the review showed several areas warranting improvement.

In its review, PP&E has kept in mind the legislative mandate that the standards protect human health and the environment. As the EPA recognizes in its preamble, however, the UST technical standards will affect a huge number of highly diverse facilities, and therefore, EPA must consider all possible means to reduce the regulatory impacts while meeting the legislative mandate. Many of the regulated facilities are owned and operated by small businesses with limited financial resources and technical expertise. In all, the regulation will have an impact on 500,000 facilities owning 1.4 million tanks. The incremental cost of improved tank standards is in the billions of dollars.

PP&E's review focuses on three major issues: flexibility, implementation, and cost-effectiveness.
The regulations must be flexible for several reasons. First, the EPA intends to delegate authority to the states. Both by statutory mandate and as a matter of practicality, EPA cannot administer a program encompassing 500,000 facilities. Before the states will agree to administer the program, however, they must be convinced that it meets their needs and that they can enforce it. EPA has wisely considered current State programs, and many elements of the proposed standards appear to offer sufficient flexibility for the states. Second, the technology for preventing, detecting, and correcting tank releases is in a state of rapid flux. Regulations implemented by states and localities and improvement programs initiated by tank owners have led to many recent innovations, particularly in the areas of tank monitoring and leak detection. The proposed Federal standards must be flexible enough to allow invention, so that technology can be improved and future releases can be reduced. Third, the ability of owners and operators to understand and comply with the regulations varies widely.

The regulations must also be capable of implementation which means that facilities must be willing and able to comply, and that there is an infrastructure which can perform the required functions. Because of the huge numbers of tanks and tank owners, the success of these standards depends on voluntary compliance. If the standards are so harsh that compliance would result in bankruptcy, many owners and operators are likely to risk the low chance of discovery. By implication, the minimum standards that are protective may ultimately be the most protective, simply because of wider, voluntary compliance. The standards must also be such that owners and operators are able to comply. The Agency hopes to replace or upgrade up to 1.4 million tanks over a ten year period and greatly increase the frequency of tank testing and inspection. The regulations must also, therefore, consider the limitations of the market for protected tanks, leak detection systems, and tank testing services.
The regulations must also be cost-effective. Although the regulations must protect human health and the environment, they must also consider the potential cost and economic impact on those entities required to comply. Reduced to absurdity, protection of human health and the environment could result in banning underground tanks altogether (possibly resulting in the creation of other more dangerous risks to health and the environment, e.g. fire hazards associated with above ground tanks). The danger of over-regulation does not come from such obvious mistakes, however, but rather from unwarranted dependence on a suspect model. In its proposal, the Agency has wisely avoided dependence on secondary containment. The low incidence of failure of corrosion-protected tanks, the evidence that survey results based on tank tightness tests alone greatly overstate the release rate, the evidence that properly installed protected tanks do not leak, and the large uncertainties surrounding the results of the UST model all argue for skepticism about the need for such a stringent standard. The Agency should likewise consider cost and effectiveness in other elements of its program.
Policy Planning and Evaluation Inc., is concerned about several aspects of the proposed rule and the alternatives considered by the Agency.

A. DESIGN AND INSTALLATION

The design and installation standards are the most visible part of the regulation and contribute the highest cost. The EPA has requested comments on several areas, including the potential need for double-walled tanks, the appropriateness of a "class system," and the certification and notification provisions.

1. Support for EPA's Choice of the Single- versus Double-Walled Tank Standard

PP&E concurs with the Agency's decision to propose a standard of corrosion-protected, single-walled tanks. An alternative standard of secondary containment (double-walled tanks) has three fatal flaws: it would not provide sufficient flexibility, it would be extremely difficult to implement, and it is not justified from the standpoint of cost-effectiveness.

First, more stringent standards would reduce the flexibility of owners and operators and state and local officials. Most existing programs require corrosion-protected, single-walled tanks. More rigid standards would require changes to the existing programs before authority and responsibility could be delegated. The reduction in flexibility will retard the state implementation process, to the detriment of the enforcement process.

Second, it is unclear whether a standard of secondary containment could be implemented. Faced with the potentially bankrupting cost of tank replacement, many facilities could elect to
ignore the standards until enforcement action is taken. Even if all facilities undertake compliance, it is unclear that tank manufacturers and installers could upgrade all existing and future tanks to a standard of secondary containment within the next 10 years. According to EPA's studies, merely replacing existing tanks with tanks meeting the Interim Prohibition standards will take 22 years at the replacement rates through early 1986. A standard requiring secondary containment will strain capacity even more.¹

Third, there is clear and convincing evidence that the statistical model used by the Agency to estimate the frequency of releases overestimates both the potential number and the severity of releases. The Agency refers to much of the evidence in its preamble: the experience in Ontario and Denmark, the warranty results from the Steel Tank Institutes sti-P3 tank standard, the claims experience from the Pollution Liability Insurance Association, and the results of detailed surveys of tank installations. The background documents prepared by the Agency show the range of uncertainty inherent in the model. To its credit, the Agency has included a study of the effect of some alternative, reasonable assumptions about the effectiveness of leak detection methods in its background documentation.

The Agency's underground storage tank model, with which we disagree, calculates that the proposed standard (requiring that all tanks meet corrosion protection standards within 10 years) will lead to an eventual release of 2,912 million gallons of petroleum from 2,158,000 release incidents. Upgrading to a standard of mandatory secondary containment within 8 years reduces releases to 1,530 million gallons from 1,271,000 release incidents. (Inasmuch as the standards have equivalent requirements for monitoring, spill prevention, etc., the

difference must be from tank failures.) If real, the incremental reduction would be significant.

However, the UST model seems to severely overstate the baseline failure rate, and probably the failure rate of corrosion protected tanks. Other data reported in the preamble suggest that the survey results may overstate release rates by an order of magnitude. A testing program in Suffolk County, New York, found that about 1,600 of 6,200 tanks (26 percent) failed a tightness test. The initial results were thus similar to those from the National Survey. However, less than 1 in 10 of the non-tight tanks were actually leaking. Chevron also found that nonleaking tanks failed the tank tightness test (about 2.6 percent leaking tanks, with only one-fourth of non-tight tanks actually leaking) in a study of 3,600 tanks. Thus, several studies find widespread failure of tank tightness tests, but also show that the true baseline rate of currently leaking tanks is closer to 2 to 3 percent. This potential inaccuracy of the model overwhelms the relative effectiveness of secondary containment. Assuming (1) the UST model overstates releases by a factor of 10, and (2) failure results for other options are strictly proportional to the base case results, a standard of mandatory secondary containment would eliminate only 90,000 release incidents over 30 years, instead of the more than 900,000 estimated by the failure model.

EPA correctly considered the available data on the effectiveness of corrosion protection in stopping tank failure. The Steel Tank Institute warranty program, for example, has had no known warranty claims over a 17 year period. The preamble cites results of programs in Denmark and in Ontario, Canada, that there have been no detected releases after a 13 year experience with corrosion protection standards. Consequently, even the 90,000 incremental releases are likely too high.

A standard that requires secondary containment, with its dramatically higher costs, would impose undue hardships on all tank
owners, especially the small business community. PP&E believes that the proposed standard is fully protective of human health and the environment, and that a standard requiring secondary containment would provide little, if any, incremental benefit.

2. **Class System Approach**

The Agency states that it is considering the use of a class system for technical standards. Under the class system, some tank owners and operators would be required to install more protective equipment, such as double-walled tanks. As discussed above, the PP&E believes the Agency's data show that the proposed technology, corrosion-protected tanks coupled with leak detection, is more than adequate. Therefore, no class system is necessary.

If the Agency adopts or recommends any class system, it should meet several criteria. It must protect human health and the environment. It should account for the current potential use of the aquifer. It should realistically account for migration of contaminants. It should be understandable by the regulated community, so they can readily determine the standards to which they will be held. It should be flexible enough that it can be tailored to specific state and local concerns.

If the Agency chooses to impose a class system for requiring secondary containment, the PP&E encourages that the standards be easily understood. The key concerns should be flexibility, capability to implement and cost-effectiveness; the best option may be for the EPA to delegate the issue of establishing more restrictive standards to the states and localities. Local governments will have a better understanding of the specific conditions they are guarding against, and will be able to develop regulations tailored to their concerns. If the Agency adopts this approach, the appropriate Federal role would be to develop technical guidance to support the local efforts.
In contrast, Federally established requirements cannot consider local concerns, and may be difficult for states and localities to implement. For example, the Ground-Water Protection Strategy referred to in the preamble has not been widely implemented, and areas meeting the standards of the three classification levels have not been defined. Consequently, the regulated community will be faced with additional uncertainty and ambiguity in attempting to comply with the regulations.

3. **Line Leak Detectors**

Section 280.42 of the proposal imposes strict performance standards on piping systems. For pressure piping, the proposal requires either double-walled pipes with interstitial monitoring, environmental effects monitoring (i.e., vapor well monitoring, ground-water monitoring, or vadose zone monitoring), or a line leak detector capable of detecting and shutting off a release greater than two gallons per hour. Testimony by the American Petroleum Institute suggests that there are no proven technologies capable of detecting releases of two gallons per hour, and that existing technology restricts flow as a warning rather than shutting off the flow. Consequently, tank owners will need to install either double walled piping or wells.

The EPA should realize that a leak rate of two gallons per hour would result in a loss of 1,440 gallons per month (based on 24 hour operation). According to the EPA's affordability model, the typical station owned by a small, independent chain has revenues of $160,000 per month. Assuming the station has three tanks and the average price of gasoline is $1.00 per gallon, the average tank has a throughput of approximately 50,000 gallons per month. A piping leak of 1,440 gallons per month represents more than 2 percent of monthly throughput, and should be easily detectable with inventory control methods. There is no apparent need to require either double-walled tanks or monitoring wells if the standard afforded by the line leak detectors greatly exceeds the detection limits allowed under other tank leak detection options.
PP&E is not discounting the potential importance of piping leaks. It believes, however, that the technical standards for piping should be commensurate with those for tanks. As written, the regulation provides no incentive for stations with pressurized delivery systems to use the option of inventory control and periodic tank testing for detecting tank leaks. For many facilities, and particularly small businesses, that option is both the most affordable and the one that makes the most sense.

4. **Installation Standards**

The proposal requires that the owner submit a certification that new tank systems are installed correctly. The Agency has recognized some of the difficulties inherent in this approach by developing a simple form requiring that the owner merely check the type of protection installed and that the installer certify the information. However, the Agency has not required that the installer certify the installation of corrosion protection systems if applicable. The installer certification is much more important to the success of this program.

The Agency's approach has three major drawbacks. First, few, if any, tank owners (particularly small businessmen owning few tanks) will have the expertise to certify the installation. Unless the owner is physically present throughout the installation (to the potential detriment of any other business interests), the owner will be unable to certify that checklists were followed or that tanks and piping are checked for leaks. Without experience in tank installation or detailed knowledge of the standard, the tank owners could be present and still not know if proper procedures are being followed. Nevertheless, the proposal requires owners to certify that they are "familiar with the information" and that it is "true, accurate, and complete."

Second, the certification may tend to relieve installers of any obligations and warranties, decreasing the ability of owners to pursue them in court if the tanks fail because of installation errors. The
certification may thus reduce the incentives of tank installers, and force the owner to pay for problems not of his doing.

Third, the installer, who is qualified, should provide certification of proper installation. This requirement will offer the owner additional protection, while giving the installer additional incentives to perform a proper installation.


The proposal provides no mechanism for allowing variances to the proposed standards. Failure to allow for variances greatly restricts the flexibility of the program, to the potential detriment of environmental protection. Variances may take two forms: extensions of compliance deadlines, and allowance for trade-offs between the mechanisms for mitigating releases.

It is quite conceivable that tank owners will make significant progress towards compliance with the standards, but will not be able to meet the compliance deadlines. Lack of compliance with the standards will not necessarily endanger human health and the environment, as long as the tank owner and operator are acting to monitor the tanks for releases and are making "good faith" efforts to fulfill the requirements. Because state programs must be no less stringent than the Federal program, a failure to include variance options in the regulations will withhold flexibility from the local implementing authorities. The Agency should, therefore, consider mechanisms for allowing variances from the regulations.

Several factors may prevent tank owners from meeting the schedule. For example, owners with multiple facilities may need to upgrade many facilities, with tens or hundreds of tanks. Under the proposed rules, the Agency makes no allowance for their progress in upgrading facilities, even though they may have upgraded a substantial majority of their installations. Small businesses may be unable to
obtain financing. Under the proposed rules, they will be penalized for not meeting scheduled deadlines even if they can demonstrate both that their tanks are secure and that they have made a good faith effort to obtain the necessary funding. The sheer number of tanks to be upgraded and replaced under the standards means that there is significant potential for shortages of qualified tank manufacturers and installers. Tank owners should be able to obtain a variance if they can demonstrate a commitment to obtaining tanks, such as a contract with a qualified vendor.

The standards should also allow for owners and operators to make trade-offs between the various mechanisms for mitigating releases. For example, as technology improves, the Agency may wish to consider allowing facilities to install better release detection systems in lieu of tank upgrades. Under this option, facilities would still detect and mitigate releases before posing a danger to health and the environment, while incurring lower costs. Alternately, the Agency may wish to allow facilities to delay the upgrading of relatively new tanks in low risk areas in exchange for accelerated upgrading of older tanks in higher risk areas. With this flexibility, protection would be enhanced, because the most sensitive areas and the most risky tanks would receive accelerated protection.

There is precedent within the Agency and within other RCRA programs to allow for interim standards and waivers. The waiver procedure does not relieve the owners and operators of their eventual commitment to meet the standards, but instead recognizes legitimate obstacles to performance.

The Agency may wish to consider several factors in its waiver program. First, the applicant must demonstrate efforts to meet the standards. The demonstration may include records of upgrades to a substantial majority of his tanks; valid contracts for purchasing and installing equipment meeting the standard; or correspondence showing unsuccessful efforts to obtain funding. Second, the applicant must
demonstrate the tanks are not a hazard to human health and the environment. The demonstration may include reconciliations from manual inventory control, the result of mandatory leak tests, or other evidence selected by the Agency. Third, the applicant must agree to a reasonable schedule for meeting the standards. The important concern is that the EPA provide itself and the regulated community the flexibility to protect the environment at the least possible cost.

6. **Non-Petroleum Tanks**

The proposed standards require that all chemical tanks be designed with secondary containment systems unless the owner or operator can certify that the compound contained can be detected with the same technology used for petroleum. While PP&E understands the EPA's desire for caution, the proposed standard excludes several large classes of tanks from consideration, even though they contain compounds frequently found in petroleum products. According to one EPA study, benzene, toluene and xylene account for roughly 25 percent of the number and volume of contents of hazardous substance USTs. Acetone accounts for roughly 20 percent of the number of tanks and contained volume of hazardous substance USTs.²

Benzene, toluene and xylene are common constituents of gasoline, and are frequently used as octane enhancers. The EPA should be able to determine whether the technology suitable for gasoline will be able to detect them. Although acetone is not a common gasoline constituent, it is sufficiently volatile to be detected by vapor wells. Because tanks with these four compounds account for 45 percent of the hazardous substance USTs, the EPA should determine whether standards less stringent than secondary containment are feasible.

B. GENERAL OPERATING REQUIREMENTS

The Agency has also proposed standards for the routine operation, inspection, and maintenance of underground storage tank systems. Although generally reasonable, some of the standards are unnecessarily stringent.

1. "Independent" Corrosion Expert

The Agency specifies that owners and operators selecting corrosion protection systems use "independent" corrosion experts. The requirements fall into two areas. First, the regulations require that owners and operators selecting field-installed corrosion protection systems use independent experts for the design and installation. Second, the regulations require that periodic inspection and maintenance be performed by independent experts (semiannually for field-installed protection systems, and every 5 years for factory-installed systems). Both of these requirements are unduly restrictive, and may serve to reduce the rate at which older tanks are retired, while unnecessarily increasing the costs to tank owners. EPA should permit businesses to use trained inspectors rather than corrosion protection experts to make the inspections.

The EPA may be confusing two separate issues: the detection of potential problems with corrosion protection systems, and the identification and repair of those problems. Detecting potential problems is a matter of ensuring that the proper electrical potential is maintained between the tank and piping systems and the soil. According to the Steel Tank Institute, less than one day's training is required to learn whether the cathodic protection is working adequately. Correcting problems with corrosion protection systems may require more qualified personnel. As with the installation standards, however, the EPA does not gain by its insistence on "independent" experts.
Many businesses are sufficiently large that they can hire professional engineers with experience in the design of corrosion protection systems. These businesses, ranging from the major oil companies to larger chains operators, will have adequate expertise to properly design corrosion protection systems and to verify their proper installation. The Agency is properly concerned that only qualified individuals design corrosion protection systems, but the requirement of independence does not add to the protection afforded by the regulations. Indeed, because of the potential shortage of qualified contractors, the regulations may impede progress in meeting the standards.

More importantly, there seems little need to require that "independent corrosion experts" routinely inspect the tanks. Testimony by the Steel Tank Institute suggests that tank inspection requires only minimal training. Under the proposed rules, however, facilities would need to hire fully qualified engineers to perform the routine inspections. The difference in cost to the facility owner is clear. The incremental protection of the environment is not.

2. Presence of Owner/Operator at Delivery

The proposed standards require that all owners and operators ensure that the volume available in the tank is greater than the volume to be transferred and that a person be physically present at all times during transfer. Testimony before the EPA indicates that much of the product shipping is performed by common carriers. PP&E agrees with the EPA that deliveries should be attended, but believes the EPA should make it clear that this responsibility can be delegated to responsible third parties.

3. Semiannual Tank Tightness Testing

Facilities selecting inventory control as their mechanism for detecting tank leaks must also conduct tank tightness testing every six
months. The tightness test must be capable of detecting leaks of 0.1 gallon per hour. The proposed frequency is excessive, particularly for facilities with new tanks. The proposed requirements appear to be the result of two factors: a fundamental distrust of the effectiveness of inventory control systems, and a belief that the release rates predicted by the UST model may be correct. Both of these factors lead to an overstatement of the problem and overregulation of the industry.

In its initial development of tank standards, the EPA depended on the results of a large sample of tanks tested for leakage. In the sample, up to 35 percent of tanks were found "not tight." The development of the UST model and the subsequent regulations acted on the basis that leaking petroleum tanks were frequent occurrences. As acknowledged in the preamble, a great deal of work has been done since then. The experience of Chevron in testing 3,600 tanks and Suffolk County in testing more than 6,000 tanks suggest that the tightness test may overstate the fraction of leaking tanks by a factor of 10.

Chevron's census of 1,000 stations in eight states found that about 2.6 percent of the tanks were leaking, in a population with an average age of 13 years. The count of "leaking" tanks includes facilities where petroleum products were found on the ground water, even though the tanks and piping systems themselves were tight. These results contrast sharply with UST model estimates that up to 11 percent of USTs will have leaks in any given year. Many of the tanks tested (although not necessarily the ones found to be leaking) were more than 20 years old, with some more than 40 years old. Although the preamble does not provide data on the causes of release, they likely follow the pattern set in other EPA references: predominantly corrosion or installation failure, followed by lesser numbers of piping releases and spills and overfills.

EPA also has a distrust for inventory control systems. Although manual inventory control may not measure releases to the degree of tightness testing, properly performed inventory control, by the EPA's
estimation, should be able to detect a release rate of 0.5 percent of tank throughput. The Agency recognizes the uncertainties of out-of-tank hydrocarbon detection systems, yet considers them more reliable than the inventory control systems. The Agency should consider the size of a release needed to ensure that such systems would detect the release.

EPA should change its requirement of semiannual tank tightness testing for tanks meeting the new tank standards, because it is overly expensive for the incremental protection offered. At the risk of redundancy, tank tightness testing demonstrates potential tank leaks. Tank leaks have two primary causes: structural failure, generally caused by poor installation, and corrosion.

Because installation errors and structural failure will show up rapidly, tank testing within the first year or two should detect tank failures attributable to these causes. The proposed standards require testing of field-installed systems every six months, and of factory-installed systems every five years. As long as the tests indicate adequate protection, corrosion failures should not occur. Particularly for new tanks, but also for tanks upgraded to the new tank standards, there is no need for semiannual tank testing as long as testing of the corrosion protection systems and the inventory reconciliation fail to indicate a potential problem.

C. RELEASE REPORTING AND CORRECTIVE ACTION

The Agency has also proposed strict standards with respect to reporting and correcting suspected releases. Although PP&E agrees that releases must be contained to prevent danger to human health and the environment, it is concerned that some aspects of the proposal are overly restrictive.

1. Reporting of Suspected Releases

The Agency requires owners and operators to report confirmed
releases with 24 hours. In addition, however, the proposed reporting standards require that "all UST owners and operators must report with 24 hours to the implementing agency" any of several conditions, including indications from release detection systems, "unusual operation conditions," impact on surrounding areas, or indications from gas chromatography that hydrocarbon levels in the soil are at or above 100 parts per million. Leak detection can include tank tightness testing, inventory monitoring, vapor wells, ground-water monitoring wells, or monitoring wells in the interstitial area. Unless the Agency believes that facility owners and operators are more likely to report suspected releases than confirmed releases, the dual notification seems to serve no purpose.

Many of the events triggering reporting have either a high potential for false readings or have a variety of alternate causes. For example, testimony by Brian Conron, on behalf of the Society of Independent Gasoline Marketers of America, claimed that manual inventory control at 36 stations indicated more than 1,000 potential releases over an 8 year period, of which only 6 were actual leaks. "Erratic behavior of product dispensing equipment" is more likely caused by mechanical or electrical problems than by leaky pipes or tanks.

PP&E is concerned that the proposal makes no allowance for the accuracy of the detection systems or their likelihood to indicate false alarms. From the one chain of 36 stations, the Agency would receive more than 100 false alarms per year. With nearly 200,000 service stations, the Agency can expect up to half a million false alarms per year from the retail motor fuel sector alone.

This level of reporting has clear costs to both the regulated community and the implementing agencies. For the owners and operators, the requirement will mean that they spend unnecessary time reporting false alarms and their "resolutions." Because of the high proportion of false alarms, there will be a tendency for owners and operators to delay reporting until they have verified the release. For the implementing
agencies, the standards will require the maintenance of large files of useless paper, and high costs for attempting to track the false alarms. An additional concern arises because of the public nature of the reports. The EPA must agree that there would be no benefit in publicizing half a million suspected releases reported each year, when most will be false alarms.

The Agency may have a need to know about potential releases when the evidence of a release is strong. The Agency does not gain by requiring the reporting of all suspected releases regardless of the accuracy of the test method.

PP&E realizes the difficulty the Agency faces in trying to resolve the conflict between the desire for earlier and more complete reporting and the desire to reduce unnecessary burdens on the regulated community. PP&E encourages the EPA to reduce or eliminate its requirement that suspected releases be reported. If the Agency cannot reduce reporting requirements to include only confirmed releases, it should at least restrict the reporting of suspected releases to those where either (1) the probability of false alarms is low, or (2) the detection method has determined the actual presence of contamination, either of water into tanks, or of tank contents into the environment. If the Agency does not do so, it provides the tank owners with considerable incentive to not comply with this and possibly other related rules.

2. Removal of Contaminated Soil

The proposed regulations require the owners and operators to "remove and properly dispose of visibly contaminated soil from the excavation zone." In the preamble the Agency suggests that owners and operators "must take additional steps to remove visibly contaminated soil in the excavation zone and in the immediately surrounding area" (emphasis added). PP&E believes that this standard will impose an undue burden on tank owners and operators, particularly small businesses. As
written, the regulation could require owners to incur extensive costs for the excavation and disposal of soil. In many localities, the excavated soil may be classified as hazardous waste. Because of the recent changes in regulations under RCRA, all costs of disposing of hazardous waste have greatly increased, including transportation, incineration, and land disposal.

PP&E understands from conversations with EPA staff that the Agency is only concerned about highly contaminated soil with concentrations of product on the order of 10,000 parts per million. Such soil may pose a threat to human health and the environment because of its potential for continued releases to the environment. However, soil may be "visibly" contaminated at much lower concentrations that do not have a potential for continued release. PP&E encourages the EPA to require only such excavation as may be necessary for protection of human health and the environment, as it specifies for the rest of the corrective action requirements.