NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

PROPOSED PART 375
RESPONSE TO COMMENTS

June 2006

Draft rule noticed: November 16, 2005
Comment period ended: March 27, 2006

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ACRONYMS and ABBREVIATIONS

BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BOA	Brownfield Opportunity Area Program
COC	Chemical of Concern
DQO	Data Quality Objective
DER	Division of Environmental Remediation [DER]
DOH	Department of Health
EC	Engineering Control
ERP	Environmental Restoration Program
IC	Institutional Control
NCP	National Contingency Plan
NYCRR	Official Compilation of NY State Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operation, Maintenance and Monitoring
PCE	Tetrachloroethene or Perchloroethylene
PRP	Potentially Responsible Party
QA/QC	Quality Assurance/Quality Control
SVOCs	Semi-volatile Organic Compounds
SSD	Sub-slab Depressurization System
SSF	State Superfund Program
SVI	Soil Vapor Intrusion
TAGM	Technical and Administrative Guidance Memorandum
TCA	Trichloroethane
TCE	Trichloroethene
TOGS	Technical Operating Guidance Series
TSD	Technical Support Document
USEPA	United States Environmental Protection Agency
VCP	Voluntary Cleanup Program
VOCs	Volatile Organic Compounds

INTRODUCTION

New York State, in furtherance of its commitment to environmental protection and economic revitalization and growth in the State, has created an array of programs and resources to help clean up and reuse contaminated sites. New York State offers programs that provide for financial assistance, as well as technical assistance and liability protection, for the investigation, remediation and redevelopment of brownfield sites. Specific to this rule-making, the State has the SSF, created in 1979; the BCP, created in 2003; and the ERP, created in 1996.

The New York State Department of Environmental Conservation (Department) issued a draft revised 6 NYCRR Part 375, the regulation that has implemented the SSF and the ERP. Revised Part 375 also will now include the regulation to implement the BCP. The draft regulation and supporting documentation was available for a public comment period of 120 days at repositories and on the Department website.

The Department drafted the regulation in response to historic legislation signed into law by Governor Pataki in October 2003, and amended in 2004. That law refinanced and reformed the SSF, enhanced the ERP, and created the BCP. The Department has been administering and implementing the new and amended programs since the legislation's passage. These remedial programs provide for the investigation and remediation of contaminated sites throughout New York State by volunteers, municipalities and the parties responsible for the contamination. The programs approach these cleanups in a common manner, with some unique aspects for each program.

That regulation is proposed to incorporate the statutory changes since the previous Part 375 rule making, and make adjustments to conform to experience acquired. The revisions are intended to clarify and streamline the current regulations and to address issues raised by program stakeholders. This proposed rule will facilitate the cleanup and reuse of contaminated sites which will stimulate economic revitalization, while ensuring the continued protection of public health and the environment.

The Department formally proposed 6 NYCRR Part 375 on November 16, 2005. The following public availability sessions were held on the proposed rule:

November 29, 2005 - Radisson Hotel, 200 Genesee Street, Utica;

November 30, 2005 — Syracuse Genesee Grande Hotel, 1060 East Genesee St., Syracuse;

December 1, 2005 - Adams Mark Hotel, 120 Church Street, Buffalo;

December 5, 2005 - U.S. Customs House, One Bowling Green, New York City;

December 6, 2005 - SUNY Farmingdale, 2315 Route 110, Farmingdale;

December 7, 2005 - Yonkers Public Library, 1 Larkin Center, Yonkers; and

December 13, 2005 - NYSDEC, 625 Broadway, Albany.

Additionally, the Department conducted 3 hearings as follows:

March 6, 2006 at the CUNY Graduate Center, 365 5th Avenue, New York City;

March 9, 2006 at the Monroe Community College, 1000 E. Henrietta Road, Rochester; and

March 15, 2006 at the NYSDEC, 625 Broadway, Albany.

The Department received written comments through March 27, 2006. The comments and responses are presented by topic (as shown in the Table of Contents) in five parts, which parallel the subparts generally:

Part A – Comment on Part 375 Generally;

Part B – Comments on Part 375-1: Provisions applicable to all subparts;

Part C – Comments on Part 375-2: State Superfund Program (SSF);

Part D – Comments on Part 375-3: Brownfield Cleanup Program (BCP);

Part E – Comments on Part 375-4: Environmental Restoration Program (ERP);

Part F - Comments on matters outside Part 375

PART A: COMMENTS ON PART 375 GENERALLY

A.1 Comment: What is the affect of this rule on the Spills Program and the VCP?

Response to A.1: The proposed rule does not apply to the Spills program or the VCP. While the VCP program is no longer accepting new applications. Sites currently in the VCP continue to implement their remedial programs under existing guidance. These sites are not affected by this rule. The Department expects to promulgate regulations for a new program which will be proposed as a new subpart to 375. Current regulations and/or guidance for these programs remain unchanged and will continue to be applicable.

A.2 Comment: What is the fate of TAGM 4046 and STARs after the proposed rule is finalized?

Response to A.2: After the rule-making is complete the final disposition of TAGM 4046 will be decided.

A.3 Comment: The Department needs to confirm that there are no conflicts between statutory and regulatory language. This is especially true in light of the "significant threat" language and "hazardous waste" limitations in Title 13.

Response to A.3: It is fundamental that an administrative agency may not adopt a regulation that is out of harmony with the totality of the statute that the agency administers. The Department believes that this regulation is in accord with the ECL. However, the proposed rule has been revised to clarify some points where questions were raised by this, and like, comments. For instance, the Department has added timeframes provided pursuant to the ECL 27-1401 et seq for review of work plans. These time frames, which act as goals, have been included under the revised 375-3.6.

A.4 Comment: The Department received various requests for an extension of the comment period, ranging from a minimum of 60 days to a maximum of 120 days. The nature of the rule-making, to wit: extensive and complex, was cited in support of these requests

Response to A.4: The Department considered the requests for an extended comment period and determined not to extend the 120 day comment period. The legislature provided for an extended comment period on the proposed soil cleanup objectives (see ECL27-1415.6(e)). In doing so, the legislature contemplated, and provided for, the importance and complexity of the issues. In addition to the statutorily required 3 public hearings, the Department conducted 7 public information meetings across the State during the comment period.

A.5 Comment: The Department received various requests for additional public hearings in other parts of the State.

Response to A.5: The Department considered these requests and determined that the 3 hearings provide the public with sufficient opportunity to provide oral testimony on the proposed rule. Importantly, written comments, which have the same weight as oral testimony, were also accepted.

A.6 Comment: Many commenters commended the Department for undertaking the complex and time-consuming task of reviewing the rules governing its various programs and reorganizing them into a coherent structure. The comments opined that the proposed form of organization of these rules will make them more easily accessible to the public and the regulated community and will provide for more transparency in the way the Department administers these programs. It was noted that the rule clarifies the programs under the current proliferation of remediation programs; reduces confusion in the brownfield community; encourages the use of industry best practices; promotes consistency across the Department's regions; improves public awareness; and reduces transaction costs.

Response to A.6: The Department appreciates the supportive comments.

A.7 Comment: The regulations need to recognize that urban centers present more complex conditions than elsewhere in the State. Urban centers have a unique set of conditions that are not adequately addressed by the regulations. Indeed, the regulations are either silent or unclear on many issues. Unless the regulations specifically require consideration of circumstances found in urban environments, there is a concern that the regulations in their current form will present an obstacle to cleanup and reuse of brownfields in NY's urban centers. Other commenters indicated that the regulations should be inclusive of all community needs including urban communities, rural communities, communities of diverse ethnic makeup, and all those in between.

Response to A.7: Comment noted. In selecting an appropriate remedy, the Department considers, and has historically considered, many factors including ubiquitous groundwater contamination from multiple sources over a long period of time; lack of use of groundwater for drinking water resources; presence of large quantities of fill material; presence of sites adjacent to rivers. This exercise is necessarily undertaken on a site-by-site basis because of the unique facts and circumstances associated with each site. The regulation does not, and need not, set out specific factors relevant to urban settings in order for the Department to consider the site-specific considerations during the remedial program. It is noted that while the above noted considerations are appropriately considered, the commenter urges the Department to also consider the "high cost of construction" and the "pressing need for affordable housing," and we decline to consider such factors. These two factors are outside the jurisdiction of the Department.

A.8 Comment: The proposed Part 375 regulations contain numerous instances where consideration of

guidance is made a mandatory component of the Department's decision-making process. The extensive reliance on guidance raises concerns about due process and compliance with SAPA. The issuance of those guidance documents must still fully comply with SAPA and due process requirements, which is not always the case with Department guidance documents. But the reliance on guidance set out at various points in the proposed Part 375 is not limited to Department guidance (except in the single instance of submission and approval of work plans). It is not clear that the Department has the right to impose obligations created by other agencies' guidance documents in its implementation of the regulatory programs addressed by the proposed Part 375.

Response to A.8: Use of interpretative documents in guiding the remedial process is not beyond the Departments authority. To issue guidance is an inherent power of any administrative agency. Further ECL 3-0301 (2) (z), enacted in 1996, expressly recognized the authority to "issue and amend guidance memoranda and similar documents of general applicability which are to be relied upon by the Department personnel" in the implementation of the Department's mandates under the ECL. Considering guidance is consistent with our approach over the past two and one half decades and was discussed in the Official History (March 1992) at pages; where we stated that we will consider guidance. This is intended to put the public on notice that appropriate guidance will be considered by the Department in its decision-making based upon the context of the circumstances we may encounter at a particular site. We have used such documents for years, have made them publicly available, and fully intend to continue sing them and to develop additional ones when the need for them arises. It is a well-settled principle of administrative law that an administrative agency may properly utilize unpromulgated guidance in the performance of its duties. Moreover, SAPA itself, in excepting from the definition of the term "rule" such matters as "interpretative statements and statements of general policy which in themselves have no legal effect but are merely explanatory" – clearly contemplates that there is no requirement to promulgate a guideline. (SAPA 102.2(b)(iv)) We are clearly authorized to develop guidance and our authorized to use that guidance in our decision-making process, notwithstanding that the guidance is not adopted as a regulation. Additionally, the Department has considered, and will continue to consider, other relevant and appropriate guidance (e.g. USEPA guidance).

A.9 Comment: Several commenters found it essential to re-emphasize the basic premise behind brownfield programs adopted by New York and other states. These programs are not a trade-off between "complete" cleanups and less complete cleanups. For the majority of sites involved, brownfield programs address the prospect of no site cleanup at all. By allowing for protective, risk-based remediation of sites, by providing liability protection for brownfield program participants and their lenders, and by providing financial incentives through tax credits, brownfield programs promote the cleanup and redevelopment of sites that otherwise may likely sit uncleaned, and unused, for decades to come. By providing for both state oversight and approval, and extensive public participation, these brownfield programs also assure that environmental and public health concerns are addressed at these sites.

Brownfield programs, by their nature, eliminate the significant, immediate threats posed by direct exposure to a contaminated site, including elimination of health hazardous posed by exposure to abandoned chemicals and the physical hazardous posed by abandoned buildings. They also address the ongoing risks posed by continuing

release of, or migration of, contaminants into the environment. Last but not least, by providing for the economic reuse of sites, brownfield programs help address the very real impacts of local economic decline, and provide economic opportunities for communities and their residents.

Response to A.9: The Department agrees that addressing brownfields represent a balancing of policy considerations that promotes the protection of public health and the environment, while at the same time promoting economic development. That balance saw the recognition of use based cleanups, liability protections, and financial incentives in order to encourage remedial actions and economic stimulus. Pursing either goal to the extreme (pre-disposal cleanups on the one hand, or sacrificing environmental and public health concerns for the benefit of the reuse or redevelopment) is sure to be the nemesis of the underlying public policy. To achieve that balance, the Department has structured the rule in a way that satisfies the mutual goals of protection of public health and environment while at the same time serving as an engine for economic stimulus. The rule represents an appropriate and just compromise between the two and we have consistently written the proposed regulation so as to effectuate the public policy expressed at ECL 27-1403.

A.10 Comment: Several commenters asked about the application of this rule to existing remedial programs implemented, or being implemented, under order, agreement or SAC. The commenters advocated for an amnesty provision for approved work plans and remedies, including those remedies that include cleanup levels higher than the SCOs citing that these regulatory revisions cannot apply to any final order or agreement in place on the date the rules become effective, nor should its provisions apply to any workplan developed pursuant to such orders or agreements, unless the remedial party agrees to their application. It is stated advanced that to do otherwise would result in an invalid application of this rulemaking on an *ex post facto* basis to prior agreements and result in a potential revisiting of final decisions on remedies, the content of existing orders and agreements, and the issues addressed therein (e.g., cost reimbursement; oversight cost reimbursement; force majeure; dispute resolution; submittals requirements, schedule and sequence, etc.) Therefore, the purpose and applicability sections of subparts 1, 2 and 3 should state that the provisions of these subparts apply as of its effective date to orders and/or agreements entered into by the Department after the effective date. [1, 4, 39, 59]

Response to A.10: The Department has revised the proposed 375-1.1 to make clear that the proposed rule does not apply to existing orders, agreements or SACs, nor approved remedial programs. Department will not seek to apply re-open remedies which have been approved under the BCP prior to the finalization of the SCOs solely based upon the finalization of this rule.

It is important to recognize that ECL Article 27, Title 14 lists a number of specific requirements upon which the SCOs are to be based, including a requirement that the SCOs for individual contaminants shall not exceed an excess cancer risk of one in one million for cancer endpoints and a hazard index of one for non-cancer endpoints. The law also requires generic tables of contaminant-specific SCO values. That is, the SCOs are applicable statewide and do not account for many site-specific considerations which could potentially result in higher SCO values.

SCOs are set well below those levels that are known to cause health effects. Thus, soil concentrations that are higher than the SCOs are not necessarily a health concern. The degree of public health concern when an SCO is exceeded depends on several factors, including (among others) the magnitude of the exceedance, the accuracy of the exposure estimates, other sources of exposure to the chemical, and the strength and quality of the available toxicological information on the chemical.

A.11 Comment: It was questioned whether the Department's budget supports the State staff, contractors and laboratories needed to implement the proposed rule. The concern was raised whether the NYS Legislature will permanently insure the NYSDOH and Department has an adequate budget to do all it promises to do in these new draft regulations.

Response to A.11: The actions of the NYS Legislature (e.g. budgets) are clearly beyond the scope of this rule. However, the Department notes that the Legislature has provided for long term funding of the remedial programs. The 2003 Superfund/Brownfield law authorized up to $120 million annually, for ten years, for the State Superfund Program. Since SFY 03/04, $120 million has been approved in each State Fiscal Year's (SFY's) annual budget and it has been sufficient to cover all costs associated with the State Superfund Program, however, it is beyond our power to provide any guarantees as to the adequacy of future budgets.

The 2003 Superfund/Brownfield law also authorized $15 million for the Brownfield Cleanup Program, Brownfield Opportunity Areas Program and to provide Technical Assistance Grants. The $15 million has been included in the annual budget each year since SFY 03/04. It does require a Memorandum of Understanding (MOU) between the Governor and legislative leadership each year that determines the split of the $15 million between the programs. An MOU was signed for SFY 03/04 and SFY 04/05 and is pending for SFY 05/06. Funding is sufficient to cover the three programs.

The 1996 Clean Water/Clean Air Environmental Restoration Program has a dedicated funding source of $200 million. The funding source has been sufficient to fund staff oversight costs and all eligible grants approved.

The Petroleum Program's (i.e. Emergency Response Program, Petroleum Remediation Program, Bulk Storage Program) annual budget has been approximately $38 million annually, which is sufficient to cover the costs of the existing program.

A.12 Comment: The draft regulation fails to properly incorporate environmental justice concerns, especially in light of Commissioner's Policy #29.

Response to A.12: The Department notes that the remedial program is not a permitting program. In this regard, the Department is not passing on an application for a permit (e.g. air discharge, SPDES discharge, landfill, TSDF, etc). Rather, the Department is acting to ameliorate environmental insults in the community.

The proposed regulation serves to ensure that no particular racial or ethnic or socioeconomic group will be compelled to bear a disproportionate share of any negative environmental consequences resulting from the execution of State programs that the proposed regulation implements. This rule is consistent with Commissioner's Policy #29 in providing enhanced access to information, reliance upon geographic information systems to identify environmental justice areas; and extensive public participation and public notification mechanisms, including those that are most effective in potential environmental justice areas.

PART B – COMMENTS ON PART 375-1
PROVISIONS APPLICABLE TO ALL SUBPARTS

B:0 General Comments on 375-1

B.0.1 Comment: The provisions in proposed Section 1 must take care to account for the important differences in the statutory provisions. Examples of general provisions which need to address conflicts in the underlying statutory sections are set forth below:

1.2 – Definitions of contaminant, contaminated, contamination, disposal, environment, grossly contaminated media, and waste.
1.5 – (b)(2) provisions regarding dispute resolution and (b)(3) provisions for payment of state costs.
1.6 – (c)(6) certificate of completion/no further action. documentation.
1.8 – (c) hierarchy of source removal and control measures
1.9 – certificate of completion requirements.
1.10 – citizen participation.

Response to B.0.1: See response to A.3.

B.0.2 Comment: The Department should avoid confusion between the regulations and its guidance document DER-10 by using the same definitions in each.

Response to B.0.2: The Department agrees and expects to revise DER-10 consistent with the final rule.

B.0.3 Comment: The Department should add provisions to the Draft Regulations (like what the Department has done in the SPDES program) that make clear that compliance with the Education Law is necessary.

Response to B.0.3: The Department has considered this comment and determined no change is necessary.

B:1 Comments on Subpart 375-1.1

B.1.1 Comment: The Department received several comments relative to the incorporation of the NCP into Subpart 1. One commenter noted that the BCP does not need to be NCP compliant and questioned whether the State has concluded that the existing remedial programs, including the BCP, comply with the NCP. Another commenter applauded the Department for incorporating the limitation on the SSF that such programs be "not inconsistent" with the NCP. Both comments suggested revisions to expressly state that the remedial programs are "consistent with" or "substantially consistent with" the NCP.

Response to B.1.1: The Department has considered this comment and determined not to change the proposed rule. Section 102 of the Executive Law permits State agencies to reference outside publications as long as the publication is precisely identified in the NYCRR and filed with the Department of State. The incorporation of the National Contingency Plan (NCP) at proposed 375-1.1(g)(2) does not imply that each of the remedial programs is NCP compliant. Rather, where the NCP is referenced in the NYCRR, it is this incorporated document that is being referenced; which document has been duly incorporated in accordance with Section 102 of the Executive Law. The Department expects that the application of 375-1 and 375-2 under the SSF and 375-1 and 375-4 under the ERP will

result in a remedial party being required to implement a program that is "consistent" with the NCP. The application of 375-1 and 375 –3 under the BCP would not necessarily result in a remedial party being required to implement a program which is "consistent" with the NCP. However, nothing in this rule forbids a remedial party to do more than what the Department requires, if the remedial be so advised in the interest of protecting or preserving its rights. The Department declines the invitation to go further and include the substance of this response in the rule.

B.1.3 Comment: Many commenters noted that the regulations should be revised to be consistent with the new federal due diligence rule, which supercedes ASTM 1527-00 and 1527-97.

Response to B.1.3: The Department has revised the list of incorporated documents at 375-1.1(g)(1) to include ASTM 1527-05.

B:2 Comments on Subpart 375-1.2

B.2.1 Comment: The "all appropriate inquiry" definition in the proposed rule refers to ASTM 1527-00, which is outdated as a result of the 2005 revisions. The Department should revise this provision to provide for ASTM 1527-05 and to allow for subsequent revisions thereto. It should also recognize geologists.

Response to B.2.1: 375-1.2(a) has been revised to remove the reference to ASTM "1527-00" and to replace it with "1527-05". The USEPA finalized its rule for all appropriate inquiry in late 2005. The ASTM simultaneously issued its revised guidance as ASTM 1527-05. The timing of the finalization of that standard didn't allow for the reference to be included in the draft rule.

Additionally, the Department has revised the proposed rule to provide for a definition of a "qualified environmental professional." This term is modeled after the definition used in conjunction with the all appropriate inquiry and ASTM Standard 1527-05. (see 375-1.2(ak)) The Department has not, and can not, allow this rule to be changed by subsequent revisions to the ASTM standard. That would constitute an impermissible delegation of rulemaking authority. To the extent the standard changes, the Department will consider amendments to this rule.

B.2.2 Comment: In defining "brownfield site", the rule should clarify that a "site" can include one or more properties or parcels, or could include only a portion of a specific property or parcel. Note that in Section 375-1.8 regarding certification of controls, the draft rule refers to sites that may be comprised of multiple properties or parcels.

Response to B.2.2: The definition of "remedial site" or "site", subsection 375-1.2(aq) has been revised to address this comment, to provide that a brownfield site or any other remedial site can include adjacent properties or parcels, or may include only a portion of a specific property or parcel. The Department has made a similar change under the eligibility section of the BCP. (see 375-3.3(a)(3)(i))

B.2.3 Comment: The definition of "Brownfield site" in the proposed regulations at 375-1.2 differs from that in 375-3.3(a). In defining "brownfield site," the rule should include the Department's eligibility criteria.

Response to B.2.3: See Response to D.3.1 relative to the eligibility guidance. The balance of this definition follows ECL 27-1405.2.

B.2.4: Comment: The definition of “contaminant” only appears in ECL Title 14. However, it is also used in this regulation to apply to all remedial programs under the proposed Part 375 and it includes “petroleum.” Since ECL 27-1301 does not apply to petroleum, it is inappropriate to include this definition in this subpart as it would not apply to all of the remedial programs. Alternatively, the Department should use the definition of "contaminant" appearing in DER-10 (i.e., any discharged hazardous substance as defined pursuant to ECL 37-0101, hazardous waste as defined pursuant to ECL 27-1301 or petroleum as defined in ECL 17-1003 or section 172 of the Navigation Law).

Response to B.2.4: The current SSF, ERP, and the BCP contain different, and in some respects, contradictory regulatory approaches, requirements and cleanup objectives. The net effect is that the Department and the regulated community have been responsible for learning, implementing and complying with different regulations which address the various remedial programs. Having different remedial action regulations for different programs can cause inconsistent results under comparable circumstances. Such differences are difficult to justify, cause unnecessary confusion and frustration, and unnecessarily burden the public and private resources that must learn, implement, and comply with different corrective action regulations. Additionally, such differences make it difficult to interface between and among the programs, e.g. if a municipality wants to conduct the investigations under the ERP and the remediation under the BCP. Further, the previously applicable regulations do not in all situations provide clear, consistent or complete requirements.

Accordingly, the Department has made a concerted effort to identify commonalities and consistencies between and among the remedial programs affected by this rule and to include, where appropriate, those commonalities and similarities in this proposed rule. In furtherance of this effort, the Department has elected to use common terminology (e.g. contaminant) and common elements (e.g. source removal) to the greatest extent reasonable. Here, the specific definition (“contaminant”) provides a common thread through all the remedial programs. However the Department, recognized the need to make clear that the SSF is not addressing petroleum sites, by redefining “contaminant” and “contamination”, under subpart 375-2 to highlight that the authority of the SSF is limited to hazardous waste only. These definitions expressly exclude petroleum and limit the application of the requirements of Part 375-1 to “hazardous waste” as that term is defined at 375-1.2(y). Additionally, the Department has added a paragraph clarifying that certain terms used in 375-1 which contain the term “contaminant,” “contaminants” or “contamination” shall apply that term as defined in 375-2.2(j).

The Department notes that the legislature adopted a similar approach in the 2004 amendments to the BCP and ERP. Among other amendments, the legislation incorporated the terms “contaminant” and “contamination” rather than the former terms “hazardous waste” or “hazardous substances.”

B.2.5 Comment: The definition of “contamination” includes “indoor air” but does not include sediment, even though the definition of “environment” does. The definition of “contamination” in §375-1.2(h) should include sediments. As a result, a significant threat to the environment can include contaminated sediment, even though the contamination to be addressed in the cleanup program does not include contaminated sediment. EPA recommends that the draft regulations clarify the classification of “air” in the context presented above (e.g. ambient air).

Response to B.2.5: As proposed, the definition of “contamination” (375-1.2(h)) provided a list of media which is expressly included. It was not, and is not, the Department’s intention that the list be construed as an exhaustive list, to the exclusion of other media. Nonetheless, the Department has revised proposed 375-1.2(h) to expressly include “sediment ” and has clarified “air” as “ambient air”. However, the list is not intended to be exhaustive of the media considered by the Department to be within that definition; rather the list is illustrative of the type of media considered to fall within the definition.

B.2.6 Comment: By defining “disposal” as applying to “contaminants”, there is the suggestion that petroleum disposal is potentially subject to the SSF, which isn’t accurate. Either "contaminant" should be deleted or the definition of "disposal" should be removed from this subpart. The Department should consider using the definition of "disposal" appearing in DER-10.

Response to B.2.6: The Department has revised proposed 375-2-2 to include a definition of “disposal”(see revised rule at 375-2.2(d)). Further, as previously stated the term “contaminants” has been defined in section 375-2.2 to only include “hazardous waste.” This was intended to clarify that petroleum is not addressed under the SSF. (See response B.2.4)

B.2.7 Comment: Non-native, exotic, and/or invasive species should be excluded from the definition of “ecological resources.”

Response to B.2.7: The Department has considered this comment and declines to make this revision.

B.2.8 Comment: The definition of "emergency" refers to an imminent threat. Since there is case law defining what constitutes an "imminent and substantial endangerment", we recommend that this phrase be used in place of "emergency." In addition, the reference to "contaminant" should be deleted since it would not apply to ECL 27-1301. Instead, the Department may want to replace that word with "hazardous waste or petroleum.” The word “threat” should be changed to “threatened.”

Response to B.2.8: The Department has considered this comment and determined not to make a change to the proposed rule. This phrase is a continuation of the present regulation 375-1.3(f), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.2.9 Comment: The definition of “engineering control” includes “monitor,” yet the list of examples does not include anything used to monitor. The definition is restricted to containment systems and barriers that prevent exposure to hazardous substances left in place at a site at which a remedial action has been completed. As the Department is aware, remedial action programs frequently entail other contaminant controls, such as groundwater treatment and product recovery systems, that must be operated and maintained long after the initial remedial construction phase of a site remedial action program has been completed. In subsequent sections of the draft regulations the Department requires that “engineering controls” be properly maintained, and prohibits interfering with the effectiveness of such controls.

Response to B.2.9: The Department has considered this comment and determined not to make a change to the proposed rule. This definition mirrors the same definition set forth at ECL 27-1405.11. Further, it is noted that the list is not intended to be inclusive.

B.2.10 Comment: The definition of “environment” includes “sediment,” “soil vapor,” “indoor air,” and “humans.” These terms are neither found in the statutory definition of “environment” under ECL Title 13 nor in current Part 375. ECL Title 14 does not define “environment”. However, Title 14 defines “contamination” as presence of contamination in “any environmental media, including soil, surface water, groundwater, air or indoor air.”

Response to B.2.10: The commentor is mistaken relative to indoor air, which is not inlcuded in the defintion of environment, however ECL 27-1301(7) provides: “Environment means any water, water vapor, any land including land surface or subsurface, air, fish, wildlife, biota and all other natural resources.” (emphasis added) Present 375-1.3(g) provides that “Environment" means any water including surface or subsurface, water vapor, any land including land surface or subsurface, air, fish, wildlife, other biota including humans, and all other natural resources.”

This statutory and regulatory definition is broad enough to encompass “sediment”, “soil vapor,” “indoor air,” and “humans.” There is no merit to the argument that the term “air” is limited to “outdoor air.” Further, the present 375.1.3(g) definition expressly includes “humans.” The Department has historically looked at all media, including sediment and soil vapor, in the remedial programs. For instance, see DER-10 (draft December 2002), which includes both of these media for consideration during the remedial program under all programs.

B.2.11 Comment: The incorporation of “indoor air” into the definition of “environment” violates OSHA, since that is considered preeminent relative to indoor air in work environments.

Response B.2.11: Relative to OSHA, we are not persuaded that Congress intended to preempt a State measure such as the proposed regulation, which is applicable generally and does not purport to be applicable specifically to the employer/employee relationship. The proposed regulation is a valid exercise of the State police power under authority of a statute intended to protect all individuals from exposure to contaminants in all locations. The happenstance that the regulation may serve to protect an employee from exposure to contaminants in the workplace does not transform it into an invalid intrusion into the employer/employee relationship.

B.2.12 Comment: The term “environmental damage” is used in 375-2 to in part define “significant threat to the environment”. It should not be used to apply to all the programs under 375 and needs to be consistent with “significant threat.” The definition of "environmental damage" refers to " all flora or fauna" while the definition of "environment" refers to "fish, wildlife, other biota.” There is no need to refer to "flora or fauna" in the definition of "environmental damage" since "environment" is a defined term. The definition of “environmental damage” includes an overly broad phrase of “injury to the environment” and “any adverse public health impact.

Response to B.2.12: The Department agrees that this term is only used in Subpart 2. Accordingly, the Department has revised the rule to move this definition from Subpart 1 to Subpart 2. (see revised rule 375-2.2(e)) Further, the term is revised to eliminate the redundant reference to “flora and fauna.” Relative to the phrase “injury to the environment,” the Department has not made any change to the proposed rule. This is a continuation of the present regulation 375-1.3(h), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.2.13 Comment: Draft Part 375-1.2(s) defines "environmental easement" as an interest in real property, created under ECL Article 71 Title 36, which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls . . ." Title 36 states that easements are applicable to both land use restrictions (i.e., institutional controls) as well as engineering controls. The definition should be amended to refer to both categories of site use controls.

Response to B.2.13: The Department agrees that the term encompasses restrictions on use of the site and engineering controls. However, the definition in the proposed rule has been revised and the new375-1.2(q) remains based upon the statutory definition. (see ECL71–3603(2)) Accordingly, no change to the proposed rule is made. It is noted that an "environmental easement" is not something fundamentally different from an institutional control: an "environmental easement" is a device for imposing an institutional control.

B.2.14 Comment: The term "feasible" should incorporate the concept of financial feasibility or affordability. Cost effective should be based upon a cost-benefit analysis (i.e. weighing the incremental monetary cost versus the incremental remedial benefit). "Implementable" and "suitable to site conditions" should be modified to include "proven and commercially available" to "available technology." This will eliminate the implication that a remedial party may be required to implement a radically new and unproven technology that, although it might be technically "available," would constitute a gamble.

Response to B.2.14: ECL 27-1405.12 sets forth the definition of "feasible" for purposes of the BCP. The Department has opted to carry that statutory definition into all the remedial programs in the furtherance of consistency. (see response to comment B.2.4) "[F]easible" as defined in the BCP doesn't expressly incorporate or exclude the concept of "financial feasibility" or "affordability" and we note that the definition of "feasible" at ECL27-1405.12 is essentially a codification of the "feasibility" remedy-selection factor at the present regulation in 375-1.10(c)(6). We also note that in a similar context the Court of Appeals has held that a statute, which required the promulgation of regulations with "due regard to the economic and technological feasibility of compliance therewith", did not require that we take into account the financial ability of a particular member of the regulated community: see *Flacke v. Onondaga Landfill Systems Inc.*, 69 N.Y.2d 355 (1987). The concept of "cost effectiveness" has historically been used in evaluating what is feasible for purposes of selecting a remedy. This approach is consistent with the NCP. The Department will continue to consider cost effectiveness when evaluating "feasibility." Lastly, the Department does not believe there is a need to qualify "available technology" with "proven and commercially available." This concept is a continuation of the present regulation 375-1.7, which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.2.15 Comment: The definition of groundwater includes perched water. This definition is incorrect and will lead to unreasonable and unnecessary decisions in the course of characterization and cleanup.

Response to B.2.15: The Department has considered this comment and determined not to make a change. The definition of groundwater is as defined at ECL 27-1405.16.

B.2.16 Comment: Draft Part 375's definition of "grossly contaminated media" is narrower and less clear than its statutory counterpart. The regulatory definition excludes media that may be highly contaminated, yet not evident on a sensory level (e.g. visual, olfactory). Finally, the statutory definition is limited to "grossly

contaminated soil." This definition inappropriately extends the "grossly contaminated soil" definition to additional media (i.e. sediment, surface water, or groundwater). This definition is troubling. Further, the definition should exclude chemicals used in the remedial program.

> Response to B.2.16: This definition of "grossly contaminated media" closely mirrors, but is not the same as, the definition of "grossly contaminated soil" at ECL 27-1405(15) . Contrary to the comment, the use of this term does not result in the application of any substantive provisions of the BCP to the SSF. The application of certain substantive provisions (e.g. source removal) to all the remedial programs is the result of the incorporation of common elements of remedial programs into Subpart 375-1. These provisions are added to avoid conflict, reflect past practice and to reinforce programmatic consistency, where appropriate. (see response to comment B.2.4) This term appropriately considers all media, rather than focusing on just soil. The Department agrees that some of the above comments have identified the need for, and provided some suggestions, that can further clarify the definition of "grossly contaminated media" and 375-1.2 (u) has been so revised.

B.2.17 Comment: The definition of "hazardous waste" includes "petroleum." Since ECL 27-1301 does not apply to petroleum contamination, subparagraph 4 should either be deleted or the entire definition moved to 375-2. Also, it should refer to "a hazardous waste defined in Part 371 of this Title" rather than referring to ECL 27-0903. Also, the definition of hazardous waste, set forth in the current rule at 375-1.3.(k), should be included in this proposed rule.

> Response to B.2.17: The Department has not omitted the definition of "hazardous waste." The definition is at proposed 375-1.2(y) and is as the definition appears in the law today. Accordingly, the Department declines to revise the definition as suggested by these commenters. Further, that definition, contrary to the comment, expressly excludes petroleum. See response to comment B.2.4 regarding the use of the terms "contaminant" and "contamination"; and the Department's clarification that such terms under the SSF do not extend to petroleum.

B.2.18 Comment: The "historic fill" definition is confusing and not used in the regulation. If it is used at all, instead of referring to "non-hazardous solid waste" in the definition of historic fill, the Department should state that historical fill consists of materials that are (1) imported to a site to raise the site's topographic elevation and (2) do not contain any hazardous waste appearing on the list promulgated pursuant to ECL § 27-0903. Further, there are no cleanup requirements for historic fill in the rule. The last sentence in the fill definition which reads: "In addition, historic fill material does not include waste at or from a municipal solid waste disposal site." Where does this sentence leave landfills?

The definition of "historic fill" seems to cast a bright-line, arbitrary distinction between historic fill sites and sites contaminated through subsequent activities, even though it may be the case that contamination at historic fill sites may equal or exceed contamination levels at non-historic fill sites. . Given the use of the term "historic fill" in DEC's BCP Eligibility Guidance, it can only be surmised that DEC will use the regulatory definition to determine a site's eligibility for the BCP.

The definition of "historic fill material" should not be limited to non-indigenous material that is used to raise the topographic elevation of a site since such material is also used to fill in depressions and bring the area up to the grade of the rest of the property. In addition, the definition should not be linked to the origins of the non-indigenous material. Because fill material is not heavily regulated, many property owners will not be able to

identify the source of the fill material that is brought to a site now, much less that was imported to a site 100 or more years ago. In addition, while historic fill material consists, inter alia, of non-hazardous solid waste, it can also contain constituents that would cause the fill material to be regulated as hazardous under state law. . If the fill material qualifies as a hazardous waste, then property is contaminated with a hazardous waste and should qualify as a brownfield site. The Department should also indicate how the Part 360 Beneficial Reuse Determination (BUD) rules may be used in remedial programs to allow re-use of on-site materials.

Defining material as "historic fill" should not be a basis to leave contamination unaddressed.

> Response to B.2.18: The Department has considered these comments and revised 375-1.2(x) to clarify this definition. See response to comment D.3.13 relative to the application of this definition in the BCP. The definition of historic fill is a recognition that large areas of urban landscape in New York is the result of the filling of depressions, the filling of areas to bring the area up to surrounding topography or in many cases the filling of wetlands, tidal areas or water bodies to create useable land. This is, in part, due to the long history and use of such areas. This material is ubiquitous in many areas; extends well beyond the boundaries of a site defined for a remedial program; and generally has had little or no impact on the use and development of these areas for decades. Therefore the definition and application of the definition is considered appropriate for these areas. Relative to landfills, these are waste management facilities created for the express purpose of the disposal of waste and are not considered historic fill. In revising the regulation in response to comments, the term historic fill has been used. The Department has added a discussion of the use of fill at sites for cover material and backfill in the revised regulation as subdivision 375-6.7(d) but declines to discuss the application of beneficial use determinations as that is a matter more appropriate for Part 360.

B.2.19 Comment: The "inactive hazardous waste disposal site" definition should refer to subdivision 375-1.2(ao), not (an) and "the effective date of this title" should be replaced with "August 25, 1979" to avoid confusion. Further, this definition should add "long term storage or" before "disposal of hazardous waste" relative to the NPL site information.

> Response to B.2.19: The Department has revised the proposed rule to replace "ao" with "an." However, the Department disagrees with the commentor relative to the purpose of statutorily adding the NPL provision. This language was not added for the purpose of clarifying that an NPL listing did not prevent a listing on the State Registry. Rather, this was added to make clear that a site on the NPL shall also be on the State Registry

B.2.20 Comment: The definition of institutional controls should be amended to add the last two sentences of the definition in DER-10. The Department should also consider adding the definition of "engineering controls" set forth in ECL 27-1401(11).

> Response to B.2.20: The Department has considered this comment and determined not to make a change to the proposed rule. This is the same as that definition set forth at ECL 27-1415.18. It is noted that "engineering control" is defined in the revised proposed rule at 375-1.2(o). The DER-10 definition will be modified to be consistent with the final regulation.

B.2.21 Comment: The IRM definition uses the term "removal of free product" rather than the phrase "removal of wastes and contaminated materials including environmental media" as set forth in the current Part 375. This

is confusing, especially since “free product” is not defined. We suggest that the Department use the definition contained in DER-10. This definition also refers to "without extensive investigation.” IRMs should be available without extensive investigation or evaluation. It would be more accurate to refer to a "remedial investigation" or perhaps "during site characterization.”

Response to B.2.21: The use of the term “free product” in the definition of interim remedial measures provides only one of many examples of the types of activities that constitute interim remedial measures. The list is illustrative and not exclusive. Accordingly, DNAPL or LNAPL removals, while not expressly mentioned, may constitute an interim remedial measure. Therefore to apply the broadest definition for IRMs the term “source area” will be utilized in this definition in place of “free product”, and the DER-10 definition will be revised accordingly. Also see Response to B.2.23. No other change will be made to this definition.

B.2.22 Comment: The definition of covered "off-site contamination" in the regulations should be revised to make the on-site origin element clear by delineating that it refers to contamination that has migrated off-site from an on-site source area. The Legislature did not intend to require remedial parties to address off-site contamination that has originated off-site and merely migrated through the remedial site to an off-site area.

Response to B.2.22: The definition of off-site contamination is the same as ECL 27-1405.24 and as such will not be revised. Where the regulations address off-site contamination they have been revised to clarify that it is not the Department’s intent that the remedial program for a site remediate an off-site source of contamination entering the site. The site remedial program shall however remediate or mitigate the impact of the off-site source to allow the proposed use of the site. For example, if contaminated groundwater enters a site from an up-gradient source, the remedy must provide for mitigation of any impacts resulting from the presence of the contaminated groundwater, such as soil vapor intrusion on buildings developed on the site and/or restrictions on groundwater usage at the site.

B.2.23 Comment: The Department received several comments relative to operable units. Some recommended that the rule be amended to say that the decision to establish operable units is determined in the remedial work plan, which would be develop and proposed by the remedial party, subject to approval by the Department. Also, one commenter stated that the single criteria, “complexity of a site,” is difficult to understand and is limiting. Another commenter advocated that a remedial party should be able to prevent a site from being addressed in separate operable units. A commenter urged that there should be some requirement that a technical justification be provided to divide a site into operable units, and the justification should be related to increased protectiveness or some emergency situation. One commenter sought clarification that there is little difference between an IRM and an operable unit and that an operable unit can be approved and implemented before remedy selection and implementation.

Response to B.2.23: The Department has revised proposed 375-1.2(af) to allow the remedial party to propose, subject to the Department’s approval, dividing the site into operable units. However, the remedial party does not have the authority to “veto” an operable unit approach determined appropriate for a site by the Department. Further, the reference to “complexity of a site” has been deleted. As the Commentor accurately notes, all appropriate factors should be considered in determining whether a site should be divided into operable units, not just the complexity.

The Department has considered the remaining comments and determined not to make a further change to the proposed rule. An IRM is an interim remedial "action" undertaken during the overall remedial program; whereas, an operable unit is a defined sub-unit of the site (e.g. on-site, off-site; soil, or groundwater). An operable unit is not a remedial action. While not required, an operable unit is usually defined during the investigation or remedy selection. However, there is no limitation on the timing of creating an operable unit.

B.2.24 Comment: The definition of "petroleum" should be removed from this subpart since it does not apply to ECL 27-1301. It should be located in subpart 3 and simply refer to the Navigation Law Section 172 as defined in DER-10.

Response to B.2.24: The Department has considered this comment and determined not to make a change to the proposed rule. Petroleum is used in the definition of "hazardous waste" and "contaminant."

B.2.25 Comment: The definition of "presumptive remedy" should be modified to include "feasible" so as not to require the implementation of a presumptive remedy which isn't feasible. Also, the list of presumptive remedies should be put out to public review with this proposed rule. This definition makes reference to the "Department's scientific and engineering evaluation of performance data...". This definition should be expanded beyond the experience of the Department.

Response to B.2.25: The Department has considered this comment and determined not to make a change to the proposed rule. The Department is presently developing presumptive remedy guidance, which will be issued in draft for public comment in accordance with ECL 3-0301(2)(z). Such guidance will also consider the experience of our federal counterpart, US EPA.

B.2.26 Comment: The definition of remedial party should be modified to state that it is a person implementing "any aspect of" a remedial program.

Response to B.2.26: The Department has considered this comment and determined not to make a change to the proposed rule. The definition is sufficiently broad to cover this comment.

B.2.27 Comment: Numerous comments were received relative to the definition of "remedial program" One commenter stated that the Department should use defined terms such as "hazardous wastes" or "petroleum." Also, the phrase "post-remediation management" should be changed to "Operations, Maintenance and Monitoring" since this is the terminology used in DER-10. The proposed one definition of remedial program under Title 13 and Title 14 is inappropriate in the context of Title 13, or should use the Title 13 definition. It was urged that the Department add operable units and containment to the list of actions set forth as part of this definition. A comment was received to the effect that the Department should consider including a provision in the draft, revised regulations that would allow for an alternate environmental action, which is deemed more beneficial under a "good cause" analysis. This would enable consideration of a complimentary or substitute environmental action to meet "site-specific goals" by demonstrating an equal or better environmental outcome (e.g. supplemental environmental project).

Response to B.2.27: The Department declines to make the changes suggested by the comments. (See also response to comment A.3) DER-10 will be revised to be consistent with the rule-making proposal,

which will address the inconsistency and confusion noted. The list of activities are not intended to be exclusive, rather they are illustrative. Accordingly, there is no need to add every conceivable activity (i.e. containment). This comment also criticizes the inclusion of "wastes and contaminated materials" in the proposed regulation definition of "remedial program"suggesting substitution of "contamination" which would mean only the presence of a "contaminant" which is "hazardous waste and/or petroleum". This would limit the "remedial program" to addressing waste which although noxious does not constitute "hazardous waste and/or petroleum." The definition in the present regulation was not a pure invention, it was deliberately derived from the definition at ECL § 27-1301(3). This substitution would diminish the permissible scope of a "remedial program" as explained at the Official History at pages 15-16 "since the statutory definition encompasses activities to address wastes and waste contaminated materials, without being restricted to management of hazardous wastes and hazardous waste contaminated materials. A program aimed at eliminating the threat posed by hazardous waste may concomitantly include the management of nonhazardous waste and nonhazardous waste contaminated materials, such as environmental media, when necessary and appropriate to the accomplishment of the program's central purpose of elimination of the threat posed by hazardous waste."

B.2.28 Comment: This definition of an "remedial investigation" states that it is generally performed concurrent with the feasibility study. It should be broadened to be prior to or concurrent. Under Title 13, most orders have the feasibility study being performed after Department approval of the remedial investigation.

Response to B.2.28: The Department has revised proposed 375-1.2(an) to delete the timing relative to the feasibility study and the discussion on the scope of the remedial investigation has been moved to 375-1.8(e).

B.2.29 Comment: Various commenters asked for an expansion of the definition of "Remedial site" to include adjacent properties or a portion of a property or parcel. Also, it was requested that the Department explain the difference between "remedial site" and "site."

Response to B.2.29: The Department has considered this comment and has made a change to the proposed rule to indicate site can be one or more parcels, or a portion thereof. Remedial site and site have the same meaning and are used interchangeably

B.2.30 Comment: The definition of "sediment" should refer to "organic matter" and not "particulate matter." It should exclude material found in enclosed sumps, sewers or piping systems not accessible to fish and wildlife, and that does not form any benthic or aquatic habitat for purposes of comparison to the Department's Technical Guidance for Screening Contaminated Sediment. The definition should track the 1992 Technical Guidance for Screening Contaminated Sediments.

Response to B.2.30: The Department has considered this comment and determined not to make the suggested change. The Technical Guidance for Screening Contaminated Sediments is being revised, and definition included in the draft regulations will be incorporated into the revised document. Sediment does not only consist of organic matter, but also includes inorganic matter such as sand and other non-organic particles. The definition specifically refers to "lakes, rivers, streams and other water bodies" which cannot be confused with sewers and sumps, therefore the requested clarification is unnecessary.

B.2.31 Comment: The Department should revise the "site contact list" definition to include adjacent property owners" and to include adjacent tenants as opposed to a landlord.

Response to B.2.31: The Department has considered this comment and has revised proposed 375-1.2(as) to add adjacent property owners.

B.2.32 Comment: The "site management" definition uses the phrase "closed out" and "completion". The terms are similar but not identical. It is recommended that language changes be made to avoid confusion and reflect how IC/ECs will affect the timing of the COC.

Response to B.2.32: The Department has revised proposed 375-1.2(at) to delete "until the remedial action objectives for the project are met and the site can be closed out" and to replace that phrase with "after a Certificate of Completion is issued."

B.2.33 Comment: The Department received various comments on the definition of a contaminant "source," Some commenters stated that it was overly broad, and not applicable to Title 13 sites. Others indicated that the mere presence of a "source," in the absence of a significant threat, does not mandate remediation under ECL Article 27, Title 13. One commenter recommended aligning the definition of a source with the description of source material in US EPA's definition of principal threat waste. A commenter suggested that the area of concern definition of DER-10 be used and a release of hazardous waste or petroleum that exceeds applicable SCG's be considered a significant release. One commenter proposed that the definition be revised to consist of discrete areas at or near the location of the initial release, disposal or discharge of the contaminant where the concentrations of contaminants to other environmental media (at levels that exceed site-specific or background concentration) so that, under reasonably anticipated circumstances, they are likely to pose a significant threat to public health or the environment for the site's current, intended, or reasonably anticipated future use.

Response to B.2.33: The Department has considered these comments and determined to make a change to the proposed rule to clarify that the contamination must be discrete area and a substantial quantity. The proposed 375-1.2(au) sets forth the definition for "source area" or " source" based upon ECL 27-1415. The term is sufficiently defined so as not to warrant further clarifying "area of concern" or a "release of significant levels of contamination."

B.2.34 Comment: The following definitions, omitted from this proposed rule, should be included: "waste", "release", and "responsible party". ECL Section 27-1301.5 contains a detailed definition which basically includes "discarded material." The rule should make clear that only hazardous substances that are discarded meet the definition of hazardous waste.

Response to B.2.34: The definition of "responsible party" was not omitted from the proposed rule. It is set forth at the proposed 375-2.2(i). We reject the commenter's assertion that only hazardous substances that are discarded meet the definition of "hazardous waste." The amendment to the definition of "hazardous waste" at ECL27-1301.1 created a twofold definition whereby two distinct categories of materials are defined to be "hazardous waste": first, material that is a "hazardous waste" according to the present regulation 371.1 et seq. promulgated under ECL 27-0903; and, second, (with certain exclusions) material that is a "hazardous substance" according to the present regulation 597.2 promulgated under ECL 37-0103. The concept of "discarded" is pertinent only to the former and is reflected in the referenced provisions, see present regulation 371.1(c)(2). The concept of "discarded" is

not pertinent to the latter with the result that a "hazardous substance" may be a "hazardous waste" for these purposes without regard to whether it is "discarded", so as to bring it within the ambit of the industrial hazardous waste management regulatory program administered under ECL 27-0900 et seq. Finally we note that the present regulation is deemed amended by operation of law to include that twofold definition see ECL 27-1315.2.

B.2.35 Comment: The rule does not include ECL Title 14 definition of "light nonaqueous phase liquid (LNAPL)."

Response to B.2.35: The Department recognizes that this term is not included in this proposed rule and declines to include this term.

B.2.36 Comment: It was suggested that the definition of "remediation" clarify whether the use of sub-slab depressurization systems are considered remediation or mitigation. If the latter, the commenter asked to explain how OM&M requirements differ from those for remediation?

Response to B.2.36: The Department has considered this comment and determined not to make change to the proposed rule. A sub-slab depressurization system is an engineering control designed to mitigate an impact. However, the requirement for engineering control is not based solely upon the soil media since soil vapor impacts are typically the result of a combination of factors which include groundwater, soil vapor migration in the subsurface or other preferential migration pathways. Accordingly, such a control does not preclude eligibility to Track 2 or 3 in the BCP. However, Track 1 doesn't allow any engineering controls, unless the party is a volunteer fitting within the limited exception of having undertaken a groundwater remediation effort to reduce bulk contamination but not achieving groundwater standards in which case a groundwater use restriction may be employed. There is no distinction between the obligations related to a remediation system as compared to a mitigation system.

B.2.37 Comment: The present proposal does not define "soil" and therefore it is unclear how far the SCOs should be applied. For instance, do the SCOs pertain to unsaturated soil, the soil above high water table?

Response to B.2.37: The Department has considered this comment and declines to add a definition of "soil." The applicability of the soil cleanup objectives has been clarified in 375.3.8.

B.2.38 Comment: The Department should define "remedial action objectives" and distinguish the difference between a remedial action objective and a remedial goal.

Response to B.2.38: The Department has considered this comment and declines to add a definition of "remedial action objectives." The term "remedial action objectives" is utilized and defined in the remedy selection section of the draft guidance document DER-10.

B.2.39 Comment: The definition of "permanent" in Subpart 375-3 should be applied to all remedial programs by including this term in Subpart-1.

Response to B.2.39: The Department has considered this comment and determined not to change the proposed rule.

B.2.40 Comment: The Department should define and use the term "approved" or "Department-approved" in a more functional and unambiguous manner. The definition of "approved" should, as appropriate, (1) indicate specifically what Department entity is providing the approval; (2) provide finality and (3) specifically exclude the possibility of an approval with conditions constituting a final approval. Default approvals or, at a minimum, automatic stipulations for extensions, should be implemented if the Department is not able to meet statutory or regulatory deadlines. At a minimum, the regulated community should not be prejudiced by a delayed response of the Department.

Response to B.2.40: The Department has considered this comment and determined not to change the proposed rule. While the Department will use best efforts to timely review submissions, the Department expressly rejects the concept of default approvals in the context of the remedial programs.

B.2.41 Comment: Free product is not defined but should be as that LNAPL or DNAPL that is readily pumpable under existing conditions. If material is potentially, but not yet mobile, then at most it is merely residual saturation.

Response to B.2.41: "[F]ree product" is defined at ECL 27-1405(14) as "an immiscible non-aqueous phase liquid, other than a dense non-aqueous phase liquid present as a liquid in surface or sub-surface soils, surface water or groundwater in a potentially mobile state. In other words, it is all NAPLs excluding DNAPL; or more simply stated, all LNAPL. In developing this proposed rule, the Department considered including the definition of "free product" from ECL 27-1415(14). However, that definition is not "technically correct" and therefore, is misleading. In remedial parlance, free product includes both LNAPL and DNAPL. Yet, as noted above, the referenced definition strangely expressly excludes DNAPL. For this reason it was not added to the definitions in section 375-1.2.

In the context of the BCP and this rule, this narrow definition isn't fatal. Nonaqueous phase liquids (NAPLs) are contaminants that exist as a separate, immiscible phase when in contact with water and/or air. Nonaqueous phase liquids are typically classified as either light nonaqueous phase liquids (LNAPLs) which have densities less than that of water, or dense nonaqueous phase liquids (DNAPLs) which have densities greater than that of water.

The proposed rule used the term "free product" four times, three of which are in the definitions of Subpart 1; which definitions apply in all the remedial programs unless a program-specific definition appears under a specific subpart. The fourth reference is part of the source removal and control hierarchy that applies to all the remedial programs. The specific references are as follows:

(a) "grossly contaminated media" (375-1.2(w)) is defined to mean "soil, sediment, surface water or groundwater which contains 'free product' or mobile contamination ...";
(b) "interim remedial measure" (375-1.2(ad)) is defined as activities including those to "removal of free product";
(c) "source area or source" (375-1.2(at)) is defined to include an area of soil, sediment and/or groundwater where, inter alia, free product is present;
(d) the source removal and control hierarchy (375-1.8(c)) provides the measures ranked from most preferable to least preferable. This hierarchy includes removal and/or treatment, including "all free product" as the most preferable measure.

Each of these references are based upon statutory provisions under ECL 27-1401 et seq. Specifically, "grossly contaminated media" is derived from the definition of "grossly contaminated soil" set forth at ECL 27-1405(15); the definition of interim remedial measure is the definition of "interim remedial measure" set forth at ECL 27-1405(19); and the definition of "source area or source" and the source removal and control hierarchy are derived from the requirements set forth at ECL 27-1415(5).

The use of the term "free product" in the interim remedial measures definition only provides one of many examples of the types of activities that constitute interim remedial measures. The list is illustrative and not exclusive. Accordingly, DNAPL removals, while not expressly mentioned, may constitute an interim remedial measure.

The use of the term "free product" in the "source area or source" definition also provides an illustrative list, and is not exclusive. Moreover, the definition expressly includes DNAPL as being included within this definition. Interestingly, ECL 27-1414(5) and the proposed rule also expressly list LNAPL, which is duplicative of the free product definition.

Likewise, the use of the term "free product" in the "removal and/or treatment requirement under the "source removal and control measures "hierarchy [see proposed 375-1.8(c)(1)] provides the same list of source areas or sources set forth in the definition of "source area or source." Specifically, it refers to "free product, concentrated solid or semi-solid hazardous substances; DNAPLs or LNAPLs (again duplicative of the free product definition) and grossly contaminated media".

Based upon the foregoing, it is clear that the legislature intended both LNAPL and DNAPL to be addressed similarly (as a source). Accordingly, the proposed 375-1.2(w), 375-1.2(ad); and 375-1.8(c) have been revised to omit the reference to "free product" and in place thereof use the terms "source areas" or "source(s)."

B.2.42 Comment: Definitions contained in statutes should be cross-referenced, rather than the regulations creating a different definition and thus adding confusion.

Response to B.2.42: The Department has considered this comment and determined not to make a change to the proposed rule.

B.3: Comments on Subpart 375-1.3

No comments

B.4: Comments on Subpart 375-1.4

No comments

B.5: Comments on Subpart 375-1.5

B.5.1 Comment: The general purpose provision makes it clear that the provisions under 375-1.5 are applying to the SSF, BCP and ERP. It would be helpful to indicate which program operates pursuant to order, agreement and SAC.

Response to B.5.1: The Department has considered this comment and determined not to make a change to the proposed rule. Generally, an Order is issued under the SSF, an agreement is entered into under the BCP and a SAC is entered into under the ERP.

B.5.2 Comment: We received several comment on the "notice" provision requiring the "remedial party" to provide written notice of an order, agreement or SAC to "any prospective purchaser or lessee of any interest in the remedial site has a potentially profound change to New York real estate law. Commenters indicated that New York has always been a "buyer beware" State and assuming that a purchaser has engaged in due diligence, it will discover the existence of an order, agreement or SAC. One commenter noted that this while this notice has never existed in New York law; it is similar, although not identical, to New Jersey's EPCRA law relative to the disclosure by sellers. The comments questioned why this was being included, how a non-owner would comply, and what are the ramifications of a failure to provide such notice. Further, two commenters indicated that the rule should require the standard clause from the Department's model orders and agreements relative to filing such order, agreement or SAC.

Response to B.5.2: The Department has revised the proposed 375-1.5(a) to provide different obligations depending on whether the remedial party owns the site. Proposed 375-1.5(a) has also been revised to include the suggested recording requirement. The notice requirement has been included, as noted by one commenter, in Department orders and agreements for many years. These provisions compliment similar obligations contained in ECL 27-1317; 27-1425; and 56-0511. It provides additional assurances that the prospective purchaser will be apprised of the environmental concerns at the property and its obligations, upon purchase, relative to the remedial program. This provision will be enforced in a manner consistent with the balance of the proposed regulatory provisions. In this regard, it is noted that the periodic certification will provide an additional mechanism to identify real property transfers.

B.5.3 Comment: The proposed rule provides that "[T]he order, agreement or State Assistance Contact shall be binding on each party, its successors and assignees, while in effect." One commenter inquired as to the meaning of "while in effect;" while another indicated that this obligation is onerous and inequitable.

Response to B.5.3: The Department has considered these comments and determined not to make a change to the proposed 375-1.5(b). The Department disagrees; this requirement is appropriate and equitable given the Department's interest on behalf of the public and the environment in ensuring that the remedial program, including any institutional and engineering controls employed as part of that remedial program, will be reliably maintained. The phrase "while in effect" recognizes the BCA termination provisions. (see proposed 375-3.5(b))

B.5.4 Comment: The proposed rule provides a notice provision for "emergencies." Commenters asked the Department to define "imminent threat." One commenter suggested using "imminent threat" from the present 375; while others suggested using "imminent and substantial endangerment" or "an imminent threat to public health or the environment." The proposed phrases are well-understood and have been established by the courts. For situations not constituting such an imminent concern, it was recommended that the original 15 day reporting requiring be retained. It was also noted that the Department used "imminent" and "immediate" interchangeably. Lastly, one commenter sought to have this requirement limited to new information.

Response to B.5.4: The Department has changed "imminent threat" to "immediate threat," and otherwise modified the term to be consistent with the existing definition of emergency at 375-1.3(f).

The Department declines to extend the reporting obligation to 15 days; such an extension would not serve the purpose of ensuring that timely and appropriate actions are taken, where necessary, to address the evolving environmental conditions at the site. (see Response B.2.8)

B.5.5 Comment: Numerous comments were received on the dispute resolution provision in Part 375-1.5. Comments ranged from asking for minor language changes to summarily declaring that the provision is of little value, represents a denial of due process and is inconsistent with SAPA. Commenters requested an express reference to judicial review after the Department's final agency decision is made; sought clarification of who are decision makers in the dispute resolution process and whether such decision makers will be named in future orders, agreements and SACs; sought clarification on whether the decision makers in the process change if the issue is legal rather than technical; requested an "informal dispute period" which is longer than 15 days; advocated for less discretion and more clarity relative to the language that imposes a 15 day limitation and makes reference to a "should have known" trigger date; sought an expanded dispute resolution applicable to all elements of the remedial program, including eligibility for the BCP and modification or revocation of a COC; and requested that disputes be heard before an administrative law judge rather than a "biased" manager.

Several commenters provided suggestions on alternative dispute resolution processes, for example, the Department should use the standard dispute resolution language that is used in administrative orders on consent and the agreements; the Department should make this provision optional; or the Department should use a three agency review panel (the Department, ESD and DOS). Finally, one commenter opined that because the dispute resolution process does not extend or postpone any time limits, the party subject to the dispute might actually have to bring a court action prematurely in order to obtain an extension to the deadlines or risk violating the terms of the Order. Although the Department may agree to a postponement, the regulations leave it to the Department's discretion. This ambiguity seems unworkable in terms of a dispute resolution process.

Response to B.5.5: The Department has revised proposed 375-1.5(b)(2)(iii) to expressly provide that an proceeding pursuant to CPLR Article 78 can be brought after the final agency decision is issued upon conclusion of the dispute resolution process. The Department declines the request to make further changes. The designated individual will be spelled out in future orders, agreements and SACs. The designated individual to hear disputes is <u>not</u> the Division Director. The proposed rule provides that the designated individual is a "bureau director" within the division. The Assistant Division Director hears an appeal of the Bureau Director's decision. The Assistant Division Director is the supervisor of the Bureau Director.

The Department selected this process over the present ALJ process to provide for a more straightforward, timely and efficient process. It is believed that this process will provide for a faster resolution of the issues, more satisfying and enduring solutions and reduced transaction costs. The proposed process, contrary to the comment suggesting a lack of due process, provides a fair process to resolve disputes. The Department has employed this dispute resolution process for many years for the ERP, as well as for other contractual matters. This dispute resolution process is available for all disputes occurring after the execution of the order, agreement or SAC that arise between the Department and the remedial party, except for the payment of State costs. The Department notes further that in the case of any consent order or agreement or contract entered into voluntarily by the remedial party, that very voluntariness negates any claim of a deprivation of Due Process: see *Ludlow's Sanitary Landfill Inc. v. New York State Department of Environmental Conservation*, 112 A.D.2d 8 (4th Dept., 1985).

Billing disputes are handled pursuant to a separate dispute resolution provision. (see proposed 375-1.5(b)(3)(v)) The Department declines to extend this provision to disputes, which arise prior to the

execution of the order, agreement or SAC, including but not limited to disputes involving eligibility for the BCP.

B.5.6 Comment: Various comments were received relative to the payment of State costs provision in the proposed rule. Several commenters challenged the Department's authority to recover full administrative costs and expenses. Other commenters focused on the timing and sufficiency of the supporting document that would be provided under the proposed rule in support of a billing. In this regard, comments indicated that an estimate should be provided in advance by the Department, that the rule should provide for an "itemized bill" including a break down by tasks, dates, times (down to increments not to exceed 6 minutes), and staff assignments. Further, that the billings should be done in "real time" (monthly or quarterly) rather than every couple of years. It was noted by a comment that the FOIL option is not effective given the timing and process involved. By the time one gets the FOIL response, its time to contest charges may have expired. That commenter suggested allowing the time frame to run from the receipt of the FOIL'd documents. One commenter indicated that the Department should retain the ability to waive costs, in whole or in part, for municipalities; while another commenter indicated that the Department should retain the ability to provide for payments over an extended period. One commenter indicated that a judicial challenge should be allowed following a final agency decision on any billing dispute. Lastly, one commenter inquired as to the mechanism to reimburse the New York Environmental Protection and Spill Compensation Fund ("Fund") where the Department has expended monies from the Fund.

Response to B.5.6: The Department responded to this same comment from the same commenters in our response to comments to the existing rule. In that responsiveness summary, we concisely said that our authority to recover full costs is clear: see, for example, ECL 27-1313(5)(a), 27-1313(5)(f), 27-1313(7), and SFL 97-b(6). Our view of the law is completely consistent with the legislative intent that the people should be made whole for the harm resulting from a remedial site (often referred to as "the polluter pays" principle). Any other conclusion would improperly allow public monies be used to discharge an obligation primarily owed by the remedial party. While not controlling, the Department notes that it has been consistently held that Congress intended that those responsible for problems caused by the disposal of chemical poisons bear the costs and responsibility for remedying the harmful conditions they created pursuant to CERCLA. See Official History* (March 1992) at pages II47-II48.

The Department has considered the balance of the requests and has determined not to change the proposed rule. The proposed rule is in accord with existing practice and the protocols to address any reimbursement of the Fund are appropriately handled outside of the context of this rule.

B.5.7 Comment: Various comments were received on the "force majeure" provision in 375-1.5(b)(4). Some comments indicated that the definition of "force majeure" is vague when it refers to "or the like" and suggested that this phrase be replaced with "failure to act or delay by a government agency, or any other fact or circumstance beyond the reasonable control" of the remedial party. There was a request to include additional provisions in the listed events constituting a "force majeure" event. Moreover, there was a request to expressly allow dispute resolution with respect to a determination that an event or circumstance did not constitute Force Majeure. At least one commenter stated that extensions of timetables are limited by this provision to events constituting a force majeure, and another indicated that "immediately" should be replaced with "promptly" to allow sufficient time to respond to the final determination of the dispute.

Response to B.5.7: The Department has revised 375-1.5(4) to replace "or the like" with "or any other fact or circumstance beyond the reasonable control of the remedial party." The Department has not

made the further changes, as they are not necessary. With this change, the requested laundry list of express force majeure events are not necessary as the term clearly does not, and can not, identify the full spectrum of conditions or events that would constitute such an event. The Department notes that proposed 375-1.5(b)(2), as drafted, would allow a dispute involving a Department determination that an event is not a force majeure event. Turning to the time extension comment, existing practice allows for the modification of schedules contained in Department-approved work plans without asserting a force majeure event. Such modifications are evaluated and granted where supported by the circumstances presented by the remedial party and consistent with the overall goal of implementing a remedial program timely. To the extent that an extension request is made as a result of an event that may constitute a force majeure event, and the Department denies such schedule modification, the remedial party has the additional option of asserting a force majeure event under this provision. Lastly, the Department has determined that "immediately" is an appropriate word in the interest of timely moving the remedial program to its conclusion.

B.6: Comments on Subpart 375-1.6

B.6.1 Comment: A commenter recommended that the Department discontinue using guidance documents to govern important issues in the remedial action process or identify the specific guidance documents it intends to use. Another commenter found the language relative to considering Department guidance determined, after exercise of engineering judgment, to be applicable on a case-specific basis to be confusing; and it was suggested that "guidance" be qualified with the phrase "that is generally applicable, consistently applied, and officially promulgated."

Response to B.6.1: The Department has clarified the language in proposed 375-1.6(1)(8)(ii). The Department disagrees that there is a need to limit guidance as suggested to "generally applicable, consistently applied, and officially promulgated." See also response to A.8.

B.6.2 Comment: The work plan section was suggested to be amended to provide time frames for the Department decision-making or at least "best efforts language." Further, it was recommended that the Department eliminate all "best efforts" language not expressly authorized by statute. In support of these comments, it was noted that time frames for rendering decisions on work plans and reports and issuance of the COC will expedite the remediation process, reduce the costs of remediation and accelerate the return of contaminated properties to productive reuse. Time frames can also serve as productivity measures for the Department and its employees.

Response to B.6.2: The Department will timely review and, as appropriate, approve work plans and reports. However, the Department declines to provide for specified time frames in this rule except where statutorily required. (see revised 375-3.6) Staffing and assignments don't allow us to commit in this rule to a fixed time schedules. To do so would deprive the Department of the ability to use its resources as efficiently as possible.

B.6.3 Comment: Draft Part 375-1.6(a)(4) requires the remedial party to have a qualified onsite representative present "during all field activities." Similarly, Part 375-1.6(a)(5) requires seven day notice to DEC of "all field activities" conducted under a work plan, plus all "pre-bid meetings, job progress meetings." "Field activity," and "an onsite representative" are broad terms that could extend beyond the Department's intentions without some limitation and/or definition.

Response to B.6.3: The Department has revised 375-1.6(a)(4) and (a)(5) to limit the requirement to work performed under a Department-approved work plan. Further, proposed 375-1.6(a)(4) has been revised to replace "an on-site representative present who is qualified" with the phrase "a qualified environmental professional acceptable to the Department on-site." These proposed requirements are consistent with current practice and have been standard provisions in consent orders and agreements under the remedial programs.

B.6.4 Comment: A commenter requested a modification to 375-1.6(b)(1) to recognize that an approved work plan, report or design document may be modified from time to time.

Response to B.6.4: The proposed 375-1.6(b)(1) has been revised to add "or any subsequent schedule agreed to and approved by the Department." This is consistent with the Department's approach set forth at 375-1.6(c)(4)(v).

B.6.5 Comment: Draft Part 375-1.6(b)(2) says that all reports shall include all "data generated relative to the site," and "other information obtained as part of the implementation of the work plan." As written, this seems to be calling for repetitive submission of site data and may extend beyond the remedial program (e.g. data collected at the facility).

Response to B.6.5: The Department has revised proposed 375-1.6(b)(2)(i) to limit this requirement to "environmental or health" data. The Department declines to further limit this requirement.

B.6.6 Comment: The Department received multiple comments on the final engineering report. One comment requested that the proposed rule clarify that the engineering report should include the brownfield site boundaries. Several commenters objected to the engineer making certain certifications, namely i) that it had direct responsibility for the implementation of the remedial program since the engineer is usually a consultant to the volunteer who implements the program or there could be multiple engineers, consultants and agents over the course of a project with primary responsibility; ii) that any required financial assurance mechanisms have been executed; or iii) that "the data demonstrates that remediation requirements have been or will be achieved in accordance with the time frames contained in the approved remedial program. This commenter opined that the prediction of cleanup timeframes is extremely difficult and fraught with uncertainty. It should not be the subject of an engineering certification statement. Further, that it is not even appropriate to ask a professional engineer to certify in advance that the equipment will work property, that all discharge limitations will be met, etc. Further, that the financial assurance language should be qualified by "to the extent authorized by law."

One commenter stated that the portion of the final engineering report that requires an engineer's certification regarding use restrictions, institutional and/or engineering controls and site management plan requirements should be modified to indicate that use restrictions are a kind of institutional control and that the site management plan, if there is one, is one element of engineering controls. One commenter stated the Department's review should be limited to a determination regarding whether the approved remedial plan has been implemented. Another comment indicated that there is a conflict between the timing of the final engineering report and approval of the site management report and financial assurance provisions. One commenter advanced the argument that the professional engineer requirement should be expanded to provide for dual certification by a professional engineer and professional geologist; while another commenter indicated that the employment of a non-engineer might violate New York State Education Law Section 145.

A comment was received to the effect that "remedial work plan" should be changed to "remedial action work plan." Other commenters requested that "all substantive requirements" have been met be changed to "all" requirements have been met prior to issuance of the COC.

Response to B.6.6: The final engineering report is a key document that details compliance with the work plan and achievement of the remedial action objectives for the site. Given the importance of this document in obtaining a certificate of completion, the Department believes that the engineer with responsibility for implementing that work plan sign the report. To the extent that the party who signs the certification was not primarily responsible for all aspects of the implementation of the remedial work, such party will need to be sufficiently familiar so that it can certify that the work was done in accordance with the work plan(s).

With respect to the obligation to certify that the data supports that the remedy is implemented or will be implemented in accordance with approved time frames, the Department finds it ironic that on one hand the commenter wants the Department to conclude that the remedy is implemented and working, while on the other hand the commenter doesn't want its engineer to certify this fact. The Department declines to make such a change. This provision is directly from ECL 27-1419.2 for the BCP, and is appropriate for the SSF and ERP. If a remedial party's consultant is not able to submit the required certificaton, it may be the case that it is premature for the Department to issue a certificate of completion.

Relative to the financial assurance requirements, given the relationship between the remedy and any required financial assurance, it is reasonable to have this person confirm that the requirements have been satisfied and that the Department should approve the final engineering report. However, the Department has revised 375-1.6(c)(4)(viii) to state "any required financial assurance mechanisms <u>required in accordance with 375-1.11(c)</u> have been executed."

The Department has revised proposed 375-1.6(c)(4)(iii) to delete the word "substantive." The Department has considered the balance of the comments and declines to make further change to the proposed rule as requested.

B.6.7 Comment: A comment indicated that the rule should provide that if the Department requires alterations to any plans, reports or other submissions that are prepared by a professional engineer (e.g., a preliminary remedial action plan or remedial design), a professional engineer from the Department must place his or her stamp on the revisions.

Response to B.6.7: Even though the Department may require alterations or revisions to any plans reports or other submissions to meet the goals of the remedial program, these requirements are typically performance based and do not entail all the necessary specific design calculations or considerations required to effect the requested modification(s). According to the New York State Education Law (Article 145 Sections 7209) only the licensed Professional Engineer who actually performs the professional services or work requiring the application of engineering principles and data shall seal, sign and date the alterations and so note the changes. It would therefore be a violation of the New York State Education Law for the Department to stamp those resulting revisions made under the specific direction of another party's engineer.

B.6.8 Comment: The Department received a few comments on the modification or request for revision language under work plans. One commenter indicated that this provision is flawed because there is no nexus

between the Department's request for a modification (or a disapproval notice) and the statutory significant threat standard under Title 13. Another commenter requested that the Department's notice provide sufficient detail to allow it to respond appropriately. Additionally, several comments indicated that greater flexibility should be retained relative to the time frames for modifications and revisions, or longer time frames in the rule, or multiple submissions.

Response to B.6.8: The Department has considered this comment and determined not to make a change to the proposed rule. The information provided is sufficient, the time frames are consistent with past practice, and the timeframes provide for timely implementation of the remedial program. Relative to statutory authority, the Department has ample authority for the proposed rule as proposed as is more fully discussed in response to C.0.1.

B.6.9 Comment: Qualified Environmental Professional should be defined in the regulation and a draft of the criteria be included which acknowledges that environmental professionals, particularly those that practice in the geologic sciences, have a key role in assessing, characterizing and remediating media that is impacted by legacy environmental problems.

Response to B.6.9: The Department has added a definition of Qualified Environmental Professional at 375-1.2(ak). This definition is mirrored after US EPA's definition.

B.7 Comments on Subpart 375-1.7

No comments

B.8 Comments on Subpart 375-1.8

General

B.8.1 Comment: This regulation begins: "The Department shall select a remedy. . ." In the BCP, the remedial party selects the remedy unless the site poses a significant threat. The Department "approves" the remedy selected by the remedial party.

Response to B.8.1: The Department has revised 375-1.8(f) to clarify the remedy selection process.

B.8.2 Comment: The proposed rule provides for "any written and oral comments submitted by members of the public on the applicant's proposed use. However, 27-1415(3)(i)(vi) reads: "any written and oral comments submitted by members of the public on the applicant's proposed use as part of citizen participation activities performed by the applicant pursuant to this title." The commenter asked for clarification relative to this difference.

Response to B.8.2: The proposed rule reflected a shortened version of the statutory provision and was changed slightly, and in a non-substantive manner, to make the referenced provision apply to the other subparts. The Department has revised 375-1.8(f)(9)(iii)(f) to clarify this matter while maintaining consistency between the various remedial programs covered by this rule-making.

B.8.3 Comment: The Department is commended for including the source removal requirements from Title 14 to the SSF and ERP.

Response to B.8.3: Comment noted.

B.8.4 Comment: Generally, this comment challenged the Department's authority to apply various provisions from ECL Article 27 Title 14 to ECL Article 27 Title 13. For example, source removal, which is not, but should be, a defined term. This general provision of Draft Part 375-1 impose new, minimum remedial requirements on Title 13 projects that have no basis in statute and should be limited to sources causing a significant threat. Source removal requirements should be required to be included in the work plan and subject to Department approval. The work plan should describe any such source removal and control measures and include a preference for permanence.

Response to B.8.4: See generally C.0.1 relative to the Department's authority and compliance with the NCP. The hierarchy is consistent with the i) recently enacted 27-1415(5); and ii) source removal hierarchy historically applied in the remedial programs. The importance the Department places on "source removal" is reflected in Division guidance documents (e.g. DER-10) and remedial decision documents (ROD and RAWPs). Addressing the source helps to assure that the remedy can be relied on to be protective of public health and the environment. Through this proposed rule, core remedial concepts, such as source removal, are being applied across the remedial programs. (see also response to comment B.2.4 The definition of source at 375-1.2(au) an appropriate definition.

B.8.5 Comment: The proposed rule requires "the elimination of volatilization into buildings." This is a new, undefined term. Moreover, the only limitation on this requirement is feasibility. Action should not be required for volatilization that results in indoor air concentrations below target concentrations.

Response to B.8.5: The Department has considered these comments and determined not to make a change to the proposed rule. The "elimination of volatilization into buildings" is identified as a source control measure in ECL 27-1415.5(a)(iii) and as such is not a new term. It is clear in both the statute and the proposed regulation that the intent is the mitigation of the impacts of soil vapor intrusion on buildings, of which volatilization is the mechanism, which is fully in accord with the vapor intrusion policy cited by the commentor.

B.8.6 Comment: The Department received numerous comments on draft Part 375-1.8(a) and (b); which include requirements that remedial programs "address bulk storage tanks or containment vessels," as well as provisions regarding registration and/or removal from service of all chemical and petroleum bulk storage tanks. These provisions repeat substantive requirements found elsewhere in DEC's regulatory programs and including them here creates the false impression that these are either new, or complete, regulatory requirements. Further, it creates the potential for multiple reporting at active facilities. The bulk storage requirements are inappropriate in the remedial programs, and if retained, should be limited to those circumstances where consequential amounts of hazardous waste disposal has occurred in association with such tanks or vessels. It should also be noted that Part 612.2 requires the "facility" to be registered, not the tank itself. The proposed rule should be amended to provide that it does not apply to tanks that were taken out of service or closed prior to the promulgation of 613.9 or 598.10.

Response to B.8.6: See generally C.0.1 relative to the Department's authority and compliance with the NCP. The Department's experience indicates that frequently storage tanks subject to the requirements of 6 NYCRR Parts 596 - 599 or 612 – 614 are encountered during the implementation of the remedial program. Containerized contaminants present risks at sites being addressed under the remedial programs covered by Part 375. Accordingly, it is appropriate to remove or dispose of these materials.

The concept of "addressing bulk storage tanks or containment vessels" has been a longstanding component in all of the remedial programs covered by this rule. (e.g. DER-10). Also, a similar provision is found in current Part 375-4.4(b)(7) regarding State assistance contracts to municipalities under Title 5 of the CW/CA Bond Act. Through this proposed rule, core concepts, such as addressing bulk storage tanks or containment vessels, are being applied across the remedial programs. (see also response to comment B.2.4). The inclusion of this provision does not change any regulatory requirements under the bulk storage regulations, however, it effectively puts remedial parties on notice of the referenced regulations. Lastly, it is noted that to the extent that the tanks are not otherwise subject to the regulatory requirements of 598.10 or 613.9 , this rule does not expand the regulatory framework.

B.8.7 Comment: The regulations should distinguish between materials found at the site that are a resource and those that are a contaminant or waste. The regulations require that contaminants found in drums and transformers be removed and disposed of. This requirement should be modified, so that materials that have value as a resource can be properly managed at the site, sold, recycled, reused, or otherwise used in accordance with applicable laws regulating the use of hazardous substances or petroleum. This provision sets forth a requirement to remove and dispose of other "contaminants" (defined as including hazardous wastes and petroleum) found in vessels other than tanks.

Response to B.8.7: The Department declines to make the requested distinction regarding the disposition of materials removed from the site. This level of detail is not appropriate for this regulation. However, the Department has in the past, and continues to, encourage a remedial party to manage materials encountered at a site that have value as a resource which can be sold, recycled, reused, or otherwise used in accordance with applicable laws regulating the use of hazardous substances or petroleum.

B.8.8 Comment: Much of the remedy selection section is consistent with current Part 375. However, the draft rule gives preference to a program that "achieves a complete and permanent cleanup of the site", which is inconsistent with ECL Title 13 and current Part 375. The reference to "pre-disposal conditions" is inconsistent with the statutory requirement of removal of the "significant threat."

Response to B.8.8: See response to C.8.4.

B.8.9 Comment: The Department has failed to incorporate innovative technologies into this rule-making. The 2003 BCP Act requires the Department to "consider and encourage the use of innovative technologies which will meet the remedial objectives" of Title 14. Based on this principle, a tenth element should be added to the nine remedy selection elements listed in Proposed Part 375-1.8(f). It should consist of consideration and encouragement of the use of innovative technologies which are demonstrated to be feasible and cost effective to meet the remedial action objectives of the project.

Response to B.8.9: While we do encourage the use of alternate, or innovative, remedial technologies; we believe it would be inappropriate to mandate the consideration of the same in the remedy selection process in every case, without regard to that case's unique facts. Accordingly, the Department has revised 375-1.8(a) to recognize this consideration.

B.8.10 Comment: The fourth item on the list of remedial investigation goals, which mandates "evaluation of actual and potential threats to public health and the environment" should be modified consistent with the scope of Title 13.

Response to B.8.10: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new. This phrase is a continuation of the present regulation 375-1.3(t), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.8.11 Comment: The Department has re-phrased "short term effectiveness" to "short-term impacts and effectiveness." This new term should be defined.

Response to B.8.11: The Department has considered this comment and revised the proposed rule to use "short term effectiveness" from ECL 27-1415.3(c).

B.8.12 Comment: One of the nine primary factors listed for consideration in remedy selection consists of "reduction in toxicity, mobility or volume of contamination through treatment." This factor needs to be reasonably confined or it could be interpreted to require a remedial party to implement a treatment program that is extremely costly. Where applicable, it lists a hierarchy that is more stringent than the NCP and CERCLA.

Response to B.8.12: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new. This phrase is a continuation of the present regulation 375-1.10(5), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.8.13 Comment: One of the nine primary factors listed for consideration in remedy selection is "implementability." This factor needs to be reasonably defined.

Response to B.8.13: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new. This phrase is a continuation of the present regulation 375-1.10(5), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.8.14 Comment: The required scope of the investigation of a remedial site should be consistent with the statutory requirements and with common sense. The remedial party should not be required to characterize the entire "surface and subsurface characteristics of the site", rather, it should be required to characterize those surface and subsurface characteristics that are on the portions of the site adversely impacted by the disposal of hazardous waste or presence of contamination and only to the degree necessary to select an appropriate remedy that is protective of the environment. As a practical matter, one cannot ever "fully characterize" vertically and areally every cubic millimeter of a site without entirely removing it in the process. Further, it was suggested that the requirement that all remedial program investigations identify "the sources of contamination, migration pathways and actual or potential receptors of contamination" should be revised to apply to on-site sources of contamination and "foreseeable," rather than "potential" receptors. The remedial statutes do not require remedial parties to investigate for off-site sources of contamination or the speculative potential receptors of contaminants.

Response to B.8.14: The Department has considered this comment and determined not to make a change to the proposed rule. The proposed rule is in accord with the enabling statutes. It is not possible

to produce a regulation that provides a recipe for every investigation, and the statute does not mandate such a regulation. The regulation proposed establishes a framework for site-specific decision-making, more than this cannot be done. We shall continue to produce guidance for the applicability of general principles to particular cases.

B.8.15 Comment: The draft regulations should be clarified to require that the list of work plan requirements be included in the work plan.

Response to B.8.15: The Department has considered this and determined not to make the requested change. The Department notes the rule is clear on this matter.

B.8.16 Comment: The draft regulations should require that IRMs be carried out as part of a work plan and require a final report.

Response to B.8.16: The Department has revised proposed 375-1.8(a) to identify that IRMs are to be conducted pursuant to a Department-approved work plan and that a final report is required.

B.8.17 Comment: The draft regulations should require that work plans be completed in accordance with ECL 27-1411 and not just ECL 27-1411(3). In addition, ECL 27-1415(7) and 27-1415(4) describes work plan requirements.

Response to B.8.17: The Department has revised proposed 375-3.8(b) to require compliance with the relevant provisions of the ECL.

B.8.18 Comment: The draft regulations should require that all sites be totally cleaned up rather than interpreting what is "fully protective of public health and the environment."

Response to B.8.18: The Department has determined not to make the requested change as it would be inconsistent with statutory requirements.

B.8.19 Comment: Historical data may be useful depending on how the data will be used, the age of the data and the contaminants on the site. One commenter recommended that historical data not be used to define the nature and extent of contamination at a site, as fate and transport mechanisms may significantly influence the current nature and extent of contamination.

Response to B.8.19: The Department has determined not to make the requested change. While contemporary data is required for any investigation, it is the Department's experience that historic data is useful in scoping an investigation or otherwise focusing the investigation on areas of contamination to be delineated.

Protection of Groundwater

B.8.20 Comment: The Department received many comments relative to Section 375-1.8(d). The comments ranged from an asserted inconsistency with both the NCP program goal for groundwater restoration and the State's universal classification of groundwater as GA to a recognition that under any particular site-specific circumstances, groundwater restoration may prove to be impracticable to achieve, and CERCLA and the NCP provide for recognition of such impracticability. Commenters noted that care must be taken not to de-

emphasize groundwater restoration as the goal under both federal and State law. The State's groundwater classification system, and its universal applicability, have been of great importance to protect public health and the environment. One commenter expressed again its general comment that this section inappropriatetly applies a similar hierarchy to groundwater measures as provided under ECL Title 14. Other comments focused on not dictating groundwater plume containment in all instances, that the language goes beyond evaluating alternatives, and the Department should consider whether the plume is entirely on-site, off-site, groundwater receptors, surface-water receptors, etc.

Response to B.8.20: The Department has revised 375-1.8(d) to provide clarification of the scope of this requirement. However, the rule has not been revised to limit its application to only the BCP. The Department believes that this provision is appropriate in the context of all remedial programs. (see response to comment B.2.4 regarding consistency and response to comment C.0.1 regarding the Department's authority to adopt ECL Article 27 Title 14 provisions as general requirements)

B.8.21 Comment: The Department received many diverse comments on groundwater protection. Some comments focused on the grounwater strategy and indicated that the rule should expressly include the considerations found in ECL 15-3101(3) and the draft strategy should be released for public comment at the same time as this rule. Other commenters stressed the need to clarify the Department's role with regard to the strategy. Some comments stated that the word "standards" needs to be defined. Several comments urged the Department to consider the unique groundwater contamination issues affecting sites within urban areas and sole source aquifers. Further, to consider special considerations where groundwater isn't being used, and isn't likely to be used, for drinking water. Some noted that there are some short-term and long-term strategies and approaches that have been discussed for a number of years that should be considered in conjunction with the approach to groundwater.

Response to B.8.21: The Department agrees that the Groundwater Strategy pursuant to ECL Article 15-1309 will be an important part of addressing groundwater contamination, especially "ubiquitously" contaminated groundwater. The Department has revised 375-1.8(d) to identify the factors set forth in ECL 15-3109, for consideration in evaluating groundwater remedies for this Part. When developed, the groundwater remediation strategy guidance document will be subjected to public review and comment consistent with ECL 3-0301(2)(z).

B.8.22 Comment: This section should be amended to clarify that plume stabilization does not pertain to soil gas or vapor intrusion into buildings but simply obtaining hydrologic control over contaminated groundwater.

Response to B.8.22: The Department has revised 375-1.8(d) to clarify that the plume stabilization obligations in the proposed rule only apply to groundwater.

Protection of Air, including indoor air

B.8.23 Comment: Diverse comments were received on indoor air issues. The comments ranged from the Department should include additional information regarding vapor intrusion from its draft guidance in the rule-making to it is inappropriately addressing indoor air issues. Draft Part 375-1.8(c)(3) says that "exposure to any source remaining following removal, treatment and/or containment set forth in this subsection shall be eliminated through additional measures, including but not limited to . . . the elimination of volatilization into buildings. . ." We expect that, as a matter of implementation, the Department will rely on its vapor intrusion

policy... As such, we believe the draft rule should be modified to say that these infiltrations and exposures are to be "mitigated" rather than "eliminate.

Response to B.8.23: The Department has considered this comment and determined not to make a change to the proposed rule. The vapor intrusion guidance document is just that, guidance. The process of evaluating and addressing vapor intrusion is complex and evolving. While this Department, in partnership with NYSDOH, is a leader in the vapor intrusion area, the science is fluid and needs to remain flexible and subject to change. This will allow the Department to reflect the most current science and technologies into its vapor intrusion efforts. As such, it is not appropriate for inclusion in the proposed rule. See responses to D.8.128 to D.8.132 for more discussion relative to this issue. Installation of a sub-slab depressurization system will satisfy this requirement and is consistent with the NYSDOH vapor intrusion guidance.

B.8.24 Comment: A commenter challenged the Department's authority to consider "indoor air" an environmental media that is subject to remediation under State law. (As example, draft Part 375-3.8(a) states that the goal of the remedial program is to . . .implement a remedy which shall be fully protective of public health and/or the environment including, but not limited to, ...air (including indoor air). Air within a storage vessel is an obvious exception.

Response to B.8.24: The Department has considered this comment and determined not to make a change to the proposed rule. The Department has ample authority under the ECL to consider "indoor air" as part of the remedial program and to address impacts to indoor air. (See response to comment C.O.1) The commentor mistakenly raises an issue with Section 18 of the Occupational Safety and Health Act (Act), which is not impacted by this rule's general requirement that indoor air be protective, through the reference equating air within a vessel to indoor air.

Institutional and Engineering Controls

B.8.25 Comment: The law requires that any cleanup plan using controls should include a detailed description of the controls, evaluation of their reliability and viability, and sufficient analysis that they will be effectively implemented. (ECL 27-1415). The Draft Regulations do not explicitly include these critically important requirements. The regulations should include requirements to define how the agency will evaluate the reliability and viability of a control and should require the applicant to conduct a Risk Failure Analysis of the engineering or institutional control to investigate its reliability and viability.

Response to B.8.25: The Department will include the provisions of ECL 27-1415.7 directly in 375-1.8(h) instead of by reference. However, the Department declines to include the referenced "Risk Failure Analysis."

B.8.26 Comment: The approved controls must include enforceable requirements detailing how the controls will be maintained over time, including frequency of monitoring, data collection requirements and any reporting to the Department or local governments. The enforcement should include site visits by enforcement offices.

Response to B.8.26: The proposed rule contains all of the requirements set forth at ECL 27-1415, including the requirement for a "complete" description of the controls (see proposed 375-1.8(h)(1)(i) and (ii)) and an evaluation of the reliability and viability of the long-term implementation, maintenance, monitoring, and enforcement of the proposed controls (see proposed 375-1.8(h)(1)(iii)). The

Department agrees that it is important that a reliable program be in place to identify, employ and enforce restrictions over time. Over the last decade, the Department has focused increased attention on understanding and overcoming the complexities and challenges associated with the use of IC/ECs. In recent years, this has led the Department to make significant improvements in our approach to IC/ECs. These improvements have been targeted at the full life cycle of the controls, from identification, evaluation, and selection to implementation, monitoring and enforcement. These changes, coupled with the 2003 and 2004 statutory amendments, have enhanced the reliability and durability of ICs. These changes include the use of environmental easements (rather than deed restrictions), periodic certifications; coordination with local municipalities; long term monitoring of the site; and an institutional controls registry. Further, the Department has instituted a program whereby notices are sent to the remedial party and/or owner sufficiently in advance of the periodic certification. This notice advises the party of the upcoming certification requirements, the controls in place at the site; and Department contacts relative to questions.

D.8.27 Comment: One commenter noted that the US EPA evaluates IC components along with, and just like, any other remedial components. The commenter stated that it was unclear how the proposed regulations would separate cost considerations with respect to institutional and engineering controls that would be performed during the FS from further refinement of cost considerations after the remedy has been selected. Some IC cost information may be unavailable as well. For example, the cost to a given municipality of passing groundwater restrictions or changing zoning would be expected to vary considerably, may not be quantifiable even by municipalities, and may also depend on the degree of controversy of any given site.

Response to D.8.27: Institutional controls (ICs) are often elements of remedial alternatives because they simultaneously influence and supplement the physical component of the remedy to be implemented. ICs will be evaluated to the same extent as other remedial components. The Department agrees that some cost information may be difficult to calculate precisely, however, this is true of other costs as well. The Department expects to implement active remedial measures (e.g. source removal, groundwater remedies; plume stabilization activities) prior to imposing ICs. Conversely, the Department does not expect that ICs would generally constitute the entire remedy. Additionally, IC implementation limitations may lead to the reevaluation and adjustment of the remedial components.

The proposed rule requires that ICs be implemented in series or layered. Layering, which is considered to be the most effective means of implementing ICs, means using different types of ICs at the same time to enhance the protectiveness of the remedy. For example, to restrict land use, the Department includes requirements in its commitment documents; obtains an easement, shares information with the local governments; and provides information to the public on its website (an IC registry). Additionally, the Department has partnered with the US EPA on a one-call pilot strategy. One call systems act as liaisons between excavators and organizations who own underground infrastructure (e.g. utility lines). (see www.epa.gov/superfund/action/ic/onecall/ny.htm) The Department continues to explore the use of New York's one call systems to prevent activities (e.g. excavation, grading, well drilling) which are inconsistent with the ICs at a site.

B.8.28 Comment: Draft 375 mentions engineering controls but does not go into great depth in regards to establishing systematic performance standards as it relates to them. The state of California and in particular, the City of Los Angeles after decades of building on former oil fields, wetlands, and brownfields, has developed a sophisticated and comprehensive approach to vapor intrusion mitigation utilizing engineering controls. With vapor intrusion such a big issue, it may be prudent to consider a similar approach in New York.

Response to B.2.28: The Department will consider issuing guidance in accordance with ECL 3-0301(2)(z) on evaluating ICs, including the evaluation of the effectiveness, reliability and viability over the long-term. The California experience can be considered in that context.

B.8.29 Comment: Since the long-term effectiveness of site controls is critically important in protecting the health of nearby residents, the regulations should strengthen citizen participation requirements. The Brownfield law includes a citizen participation goal of "full, timely and accessible disclosure and sharing of information by the Department." The regulations should include a public notice and public comment opportunity on the proposed site control, the results of the control's Risk Failure Analysis, and the proposed control maintenance requirements.

Response to B.8.29: The Department has considered this comment and determined not to make a change to the proposed rule. The control(s) proposed for the site, coupled with the analysis required by the proposed 375-1.8(h), will be included as part of the remedy selection document (PRAP/ROD for the SSF and ERP; Remedial Action Work Plan for the BCP). The remedy selection document is subjected to a public comment period. Additionally, in the BCP, there are citizen participation points upon receipt of the final engineering report. Specifically, there is a fact sheet including the description of any controls sent to the site contact list before the Department approves a final engineering report and within10 days of issuing a certificate of completion. (see ECL 27-1417(3)(g) and (h); proposed 375-3.10(b)(1)).

B.8.30 Comment: The Department should not limit its right of access to inspect an easement to 10 days and the right of access should be in the easement.

Response to B.8.30: The Department has revised 375-1.8(h)(2)(ii) to delete the "10 day" notice and provide in lieu thereof "reasonable notice." Moreover, the right to access is clearly spelled out in the model environmental easement.

B.8.31 Comment: The Department should propose criteria for when it intends to require financial assurances for institutional or engineering controls (e.g., non-routine technology, longer than usual process duration, unusually high cost, reasonable concern about the financial viability of the remedial party) and how the amount of the financial assurance will be calculated. If a party reneges on their OM&M responsibilities you can pull the COC and enforce the OM&M requirement. If costs end up being different than predicted, does the budget have to be amended? There are no provisions in either Title 13 or existing Part 375 imposing financial assurance requirements.

Response to B.8.31: The 2003 statutory amendments (Chapter 1 of the laws of 2003) included new and significant requirements providing the Department the discretion to require financial assurance where institutional or engineering controls are included as a component of a remedy. (see ECL 27-1415(7)(v), 27-1318(v)) However, the ECL does not require financial assurance every time a control is employed, nor does the ECL specify under what circumstances such assurances would be required. While it is not possible to conceive of every possible scenario with sufficient accuracy to reduce the concept to a rule, the Department has amended proposed 375-1.8(h)(1)(v) to provide for a list of typical factors that will be considered. The list is not exclusive but rather illustrative of the considerations.

B.8.32 Comment: The Department is applauded for allowing for the release of portions of the financial assurance requirement as a remedial program proceeds to completion. As a practical matter, however, the release provision should be modified to specify that the money or other financial instruments associated with the released financial assurance shall be returned to the remedial party with the notification of release.

Response to B.8.32: The Department has revised the proposed 375-1.11(c)(6) to reflect that the Department will take such actions to release or modify the financial assurance as is necessary. This would include returning to the remedial party such released financial assurance, if applicable, with the notice.

B.8.33 Comment: The regulations should require performance bonds whenever institutional controls are employed.

Response to B.8.33: As discussed in Responses to B.8.25-B.8.28 and B.8.31 the Department will analyze the use of institutional controls as part of the remedy and has the ability to require financial assurance to further guarantee the long term effectiveness of the remedy. Performance bonds are one of the alternatives identified by the ECL and these regulations, should financial assurance be deemed necessary by the Department.

B.8.34 Comment: The definition of financial assurance should be qualified to add "as required by applicable law" after "as determined to be adequate by the Department." This will reflect that financial assurance has limited applicability to the remedial programs consistent with statutory authority.

Response to B.8.33: The Department declines to further revise the definition relative to the request to add the phrase "as required by applicable law." It is clear that the Department can only require financial assurance where authorized by statute.

B.8.34 Comment: The proposed 375-1.8(h)(1)(iii)(a) requires a detailed written estimate in current dollars for the cost of institutional or engineering controls, and where required under (h)(v), financial assurance in accordance with §375-1.11(c). The costs of implementing institutional controls, in particular environmental easements, that result in a burden on local municipalities to track and monitor such controls indefinitely must be part of the analysis. This subsection also requires the remedial party to estimate the amount of financial assurance for the Department's consideration. The estimate should be cross-referenced to the cost estimate for the selected remedy in the Record of Decision since the Department will have already calculated what these costs should be, and the remedial parties' calculations of these costs may differ from the Department's. Provision could be made for the remedial parties to submit information in support of a request to reduce the financial assurance amount based upon changed circumstances since the ROD or further refinement of costs. Financial assurance should be considered for other remedial work in addition to institutional or engineering controls. The second sentence, for example, could be amended as follows: "If the Department requires posting of financial assurance *to ensure that remedial action is implemented or* as a condition of accepting institutional or engineering controls...."

Response to B.8.34: The Department has considered these comments and determined not to make a change to the proposed rule. The ECL requires an analysis of the long term costs of such controls. While it is difficult to measure these costs, such costs are nonetheless important and, in some instances, may be significant and a cost estimate of institutional and engineering controls is required for purposes of a true evaluation of alternatives. Accordingly, the rule requires parties to carefully consider, evaluate

and report this information. The Department will not approve a remedy that includes institutional and/or engineering controls unless this statutory and regulatory requirement is met. ()

B.8.35 Comment: The draft regulation gives the Department the discretion to require, as a condition to accepting such controls, that "the remedial party post financial assurance to contain, mitigate, and remediate any impact resulting from the failure of such institutional or engineering controls." The Department should revise the wording of draft regulation 375-1.11(c) to conform to that of the BCP law [ECL 27-1415.7(v)], by deleting the reference to "any impact resulting from the failure of" IC/ECs.

Response to B.8.35: The proposed 375-1.11(c) has been revised to delete the phrase "any impact resulting from the failure of." This proposed text extended beyond the scope of the statutory language.

B.8.36 Comment: Part 375-1.8(h)(3)(ii)*(b)(3)* requires that annual certifications for institutional/engineering controls certify that "nothing has occurred that would impair the ability of such control to protect public health and the environment," while (iv) states that if such certification cannot be provided due to the failure of a control, the owner needs to notify the DEC in writing, and provide a corrective workplan. As written, this approach seems to provide a once-a-year opportunity to address control impairments. Instead, the annual certification should be the process for the identification of temporary upsets and their remedy. The annual certification requirement should not be a self certification.

Response to B.8.36: 375-1.8(h)(3)(v) has been added to identify the site management plan as the means by which temporary upsets will be reported. This will allow the impact of and response to any upset to be evaluated and responded to as appropriate for site conditions However, the Department expects to conduct inspections at sites as needed, as well as to work with local municipalities regarding permitting activities at these sites. Accordingly, the Department is not relying on "self certification" as a means to implement the long term enforcement of controls.

B.8.37 Comment: Do periodic reporting obligations transfer to subsequent owners.

Response to B.8.37: Yes. ECL 27-1415(7)(b) requires the "owner of a brownfield site" to periodically report on controls and restrictions at the site. The draft rule; as well as the order, agreement or SAC; will also obligate the remedial party to submit the report. It is anticipated that the remedial party and the owner will coordinate to ensure a comprehensive, complete and timely submission.

B.8.38 Comment: It was recommended that Section 375-1.8(h)(1)(vi) be modified to provide that any engineering control must be used in conjunction with institutional controls *where ICs are necessary* to ensure the continued integrity of any such *engineering* controls. The NCP provides that ICs should be evaluated on a site-specific basis and engineering controls are preferred over ICs. The above suggested language changes would account for situations where ICs would not be necessary to ensure the continued effectiveness of engineering controls and also would be consistent with the NCP's preference of engineering controls over ICs.

Response to B.8.38: The Department has considered this comment and determined not to make a change to the proposed rule. The law requires that any engineering control must be used in conjunction with institutional controls to ensure the continued integrity of such engineering control. [see ECL 27-1318(a)(vi); 27-1415(7)(vi)].

B.8.39 Comment: It is unclear what is meant by all ICs and engineering controls must be contained in an easement. Many remedial components, for example, soil vapor extraction, may be utilized for several years

and then no longer be necessary leaving the ultimate use of such site unrestricted. Perhaps this provision could require that use restrictions would be contained in an environmental easement that would ensure that activities on the property would not interfere with remedy components, including institutional controls, engineering controls and site management requirements.

Response to B.8.39: All IC/EC and associated site management plans, as well as use restrictions associated with a protective remedy must be set forth in an environmental easement. Procedures for modifying or extinguishing an easement are provided in ECL 71-3605.5 to the extent that any, or all, of these controls and restrictions should no longer become necessary.

Land Use

B.8.40 Comment: The draft regulations state that "for purposes of determining the appropriate land use category, the applicant will consider the nature of the development and the activities which are occurring, or may occur at the site: *(a) on the ground level of any structure*; (b) on the surrounding land; or (c) in the subsurface to a depth of 15 feet below the site" (*draft* 375-3.8(e)(2)(iv)). Many buildings have mixed uses, for example a commercial use on the ground floor and residential uses on the upper levels. An entire site's current and future use should be considered when determining the appropriate land use category, not just activities occurring "on the ground level of any structure."

Response to B.8.40: The Department will evaluate he potential for exposure to soil and other environmental media in making these determinations. The types of commercial uses cited by the commentors are consistent with those evaluated by the TSD, which included an evaluation of soil contact by children in commercial settings therefore the exposures of concerns raised by the comment would be addressed.

B.8.41 Comment: The land use categories listed in Section 375-1.8(g) (unrestricted, restricted-residential, commercial and industrial) are very prescriptive and the draft regulations do not include guidance on determining the category that a site will fall under if the site is identified as containing mixed land use. How will sites that include mixed land use be addressed? In particular, on what basis will the determination be made as to which SCOs will be applied at such sites?

Response to B.8.41: The Department has revised the proposed rule by moving 375-3.8(e)(2)(iv), which provides for consideration for determining the land use, to 375-1.8(g)(4). See also response to comment B.8.40.

B.8.42 Comment: Some commenters agreed with the Department's approach to allowing a cleanup where the proposed use is a non-conforming use. Other commenters urged the Department not to allow a non-conforming use and that the Department should not allow for a conditional approval to a remedy for inconsistent uses. Further, the Department was requested to modify the rule so that a less restrictive use than allowed under zoning would be prohibited (e.g. a cleanup plan based upon a residential or unrestricted use where zoning only allows commercial uses).

Response to B.8.42: The Department has revised proposed 375-1.8(f)(9) and 375-1.8(g)(1) to clarify that it will approve the highest use that is consistent with local zoning and that the site can be used for any use not inconsistent with the use of the cleanup (e.g. a site cleaned up to residential use can also be used for commercial and industrial purposes). This is consistent with the statutory intent to encourage,

although not mandate, permanent and complete cleanups. In this regard, having sites cleaned up to higher uses is positive and is encouraged by the statute (2% additional tax credits for Track 1). The following table shows the future uses that would be allowed based upon the use of the site which is identified by the remedy.

375-1.8(e) Use of Site	Any use	Single Family Residential	Restricted Residential	Commercial	Industrial
Unrestricted	√	√	√	√	√
Resisdential		√	√	√	√
Restricted Residential			√	√	√
Commercial				√	√
Industrial					√

B.8.43 Comment: One commenters expressed concern with the manner in which land use was added as a ninth criterion of the remedy evaluation criteria, especially since the NCP does not utilize this criterion. Further, the use of the term "feasible" is unclear in connection with the consideration of land use as applied to a State superfund site. Although the inclusion of land use as an evaluation criterion incorporates many of the types of information EPA would use in determining the reasonably anticipated future land use of a site, it raises this information to the level of requirements that must be incorporated in the analysis of remedial alternatives for a Site, which could potentially conflict with the NCP remedy selection process.

Response to B.8.43: The Department has considered this comment and declines to make a change.

B.8.44 Comment: The remedy selection land use criteria here are slightly different than the Title 14 land use criteria. The phrase after the words "land use"; namely "provided the Department determines that there is reasonable certainty associated with such use" is unnecessary extra language given that the factors the Department will consider all listed in subparagraphs (i) - (iii). Given that this phrase does not appear in the statute, it should be deleted.

Response to B.8.44: The Department has considered the comment and determined not to make any changes.

B.8.45 Comment: Commenters advocated for and against the restricted-residential SCOs. Other commenters stated that they were confused by the examples. The examples listed include an apartment complex, townhouse development, mixed-use high-rise development or condominium development. All of these examples may <u>not</u> have common ownership or a single owner. The regulations should provide for a site-by-site assessment for all types of housing. The proposed rule should not categorically preclude single family housing on "restricted-residential use" sites, especially when highly similar use groups are allowed, such as townhouses or condominiums. Other commenters stated that the "restricted residential" column should be omitted. This category would allow higher levels of contamination to remain at residential sites as long as vegetable gardens are not planted. Utility substations and service centers be specifically included in the definition of allowable industrial uses.

Response to B.8.45: The Department has retained the "restricted residential category." Additionally, the Department has added 375-1.8(g)(3)(i) to provide for a residential use category. This category provides a use which would allow single family residential use. All of land use descriptions have also been revised to omit the examples of allowable uses provided under the various land use categories, rather if determined appropriate examples can be provided in guidance. The Department notes that, contrary to the comments, the restricted residential column is appropriate, predictable, enforceable, and not inconsistent with the ECL. Moreover, the concept is one that has been employed in the Division's remedial programs for a number of years. It is noted that the residential use category which will allow single family housing is a result of the modification to Track 1 due to the farming exposure pathway that was not considered in developing Track 1 initially. The residential use cleanups are expected to have very limited institutional controls: consisting of the restriction on farms and groundwater use.

B.8.46 Comment: Under the unrestricted use category, the approach in the draft regulations assumes that the primary receptors are residential adults and children living in a single family dwelling without any imposed restrictions. Since the receptors (e.g., residential adults and children) identified in the restricted-residential and the unrestricted residential land use categories have similar exposures and the only difference between the two exposures is the ingestion of home grown vegetables pathway, a commentor recommended that NYSDEC combine the two categories and address exposure to contamination under the unrestricted land use category. In addition, considering the type of activities children of a susceptible age may be engaged in at a site identified as restricted-residential, it may be appropriate to address these receptors under the unrestricted land use category to protect sensitive individuals within a population. Another possible approach would be to address residential receptors (e.g., single home, townhouse developments, mixed use high rise developments, condominium complexes) under the unrestricted use category and all other exposures (e.g. active recreational uses, etc.) under the restricted-residential land use category.

Response to B.8.46: See Response B.8.45.

B.8.47 Comment: This commenter applauded the Department's recognition that different types of residential use (e.g., high rise vs. single family) and recreational use result in different exposure patterns and therefore justify different target cleanup levels. However, the commenter expressed concern that the actual use of a recreational area (active vs passive) may in some circumstances be difficult to predict and enforce.

Response to B.8.47: The regulation provides a consistent definition for the identified use. The Department believes this increases the predictability in the long term. See Response to comment B.8.26, B.8.27 and B.8.29 regarding the use and enforcement of land use controls.

B.8.48 Comment: The land use considerations are based on ECL Title 14 provisions, but are applied to ECL Title 13 provisions as well. As part of the land use determination, the draft rule reflects the extremely broad definition of "environmental justice" employed in ECL 27-1415, meaning "disproportionate burden on the community in which the site is located," or disproportionate concentration of commercial or industrial uses in a "historically mixed use or residential community."

Response to B.8.48: Through this proposed rule, core concepts, such as the land use considerations, are being applied across the remedial programs. (see also response to comment B.2.4)

B.8.49 Comment: The definition of "unrestricted use" (no use of restrictions) is inconsistent with draft 375-3.8(e)(1)(i)(ii) which allows use of long-term controls to address groundwater in certain instances. Note further that this definition would seem to preclude use of vapor intrusion abatement program at unrestricted use site.

Response to B.8.49: This provision is consistent with the statute and therefore no change is being made. It is noted that an easement will be required to address the limited exception set forth at ECL 27-1415(4). See response to B.2.36 regarding the implication of a sub-slab depressurization system.

B.8.49 Comment: One commenter stated that Track 1 (unrestricted use) should be based on risk assessment determinations of human exposure and not the mere absence of land use controls. The commenter also stated that it is not clear why farms are to be excluded from land use considerations under Section 375-1.8**(g)**. What constitutes farming is not defined in the proposed regulations, and there are many different farm uses that could occur - dairy pasture, crop farming, stabling of horses, each of which would have different uptake and exposure scenarios. It was noted that EPA has developed exposure assumptions for farms that are similar to unrestricted use scenarios.

Response to B.8.49: It appears that the commenter is mistaken. Unrestricted use is derived from ECL27-1415.4, which states "the remedial program shall achieve a cleanup level that will allow the site to be used for any purpose without restriction and without reliance on the long-term employment of institutional or engineering controls, and shall achieve contaminant-specific remedial action objectives for soil which conform with those contained in the generic table of contaminant-specific remedial action objectives for unrestricted use." Further, the SCOs are based upon risk and exposure assessments detailed in the Technical Support document. Relative to the comment on farms, the proposed rule has been revised so that Track 1accounts for exposures from the farm pathway.

B.8.50 Comment: Under "restricted-residential use" single family housing is prohibited. This commenter stressed the need for soil cleanup objectives for a single family residential scenario.

Response to B.8.50: As proposed, the regulation permitted single family residences on sites which meet "unrestricted" levels" under Track 1 or based upon a site specific cleanup under Track 4. Additionally, the Department has revised the rule to add a "residential use" column to allow for single family development in Track 2. (See also Response B.8.45)

B.8.51 Comment: DEC should include "consultation with elected officials and/or agencies of the municipality" in its list of enumerated "consideration" factors. Further, the DEC should not only consider, but should defer to, formally adopted local land use plans and zoning maps.

Response to B.8.51: The Department will consider information submitted by a municipality relative to the determination of an appropriate cleanup based upon the site's use. Further, while the ultimate use of the site is a local decision, the determination of the cleanup required to allow that use to proceed is for the Department to make; therefore, the Department will not delegate that remedial decision to the local municipality.

B.9 Comments on Subpart 375-1.9

B.9.1 Comment: Several commenters indicated that the issuance of COCs is limited to ECL 27-1401 and that it was unclear if the Department may issue COCs under the other remedial programs. Thus, the commenters

suggested that it might be more appropriate to refer to no further action decision documents and then refer to the particular document within the appropriate subpart. Tacking the other way, a commenter indicated that there is no statutory provision for "no further action" determinations under Title 14 COC provisions, in part due to the fact that the COC establishes eligibility for brownfield remediation/redevelopment tax credits. Therefore, the commenter suggested that if the Department wants to include the no further action provision in rule, it should be made separate and distinct from the COC criteria. Several commenters requested that the Department issue the COC timely or have it "issued" as of the date of approval of the final engineering report noting that the recipient of the certificate of completion should not be deprived of the benefits of the certificate, including liability limitations and brownfield tax credits, merely because its receipt of the certificate is delayed.

Response to B.9.1: The Department clearly has the authority to issue completion letters in the SSF and ERP. We are convinced that the statutory authority to oversee remediation conducted pursuant to an order or contract necessarily includes by implication the authority to acknowledge that remediation has been completed. This is so despite no express statutory authority, which is not required.

The Department has revised the proposed 375-1.9 to omit the reference to a "no further action" document. The "no further action" document was envisioned as the document that proposes, upon completion of a remedial investigation, that no remediation is required. The Department recognizes that in order for it to make a determination that no further action is warranted, the party is obligated to perform an alternatives analysis or feasibility study (as appropriate). Further, to the extent that an IRM was performed during the investigation phase, a final report, meeting the requirements of a final engineering report, will be submitted. For this reason, there is no need to have a separate document for "no further action." The Department has also revised proposed 375-1.9(a) to reflect that the "issuance date" shall be the date of the Department's written approval of the final engineering report.

B.9.2 Comment: The statute precludes issuance of a COC to any party subject to an outstanding claim under section 12 of the Navigation Law. However, this restriction is not included in the draft rule.

Response to B.9.2: The Department has revised 375-3.9 to provide for a new subdivision 375-3.9(a), setting forth this statutory restriction in relation to the BCP. The Department has not made a similar restriction applicable to the SSF or ERP.

B.9.3 Comment: Many comments focused on the modification or revocation of a COC. Some commenters requested that the Department distinguish between factors that justify modification and factors that justify revocation. Most asked that examples of "good cause" be added, and one commenter expressly stated that good cause should not include a transfer of title. Numerous comments were received indicating that revocation of a COC is a drastic measure and should be used as a last resort and reserved for (1) culpable conduct (negligence, gross negligence, fraud, recklessness, intentional misconduct) that causes a release, threatened release, or human, environmental or natural resource exposure to hazardous substances; or (2) a showing of financial incapacity to perform, which causes a release, threatened release, or human, environmental or natural resource exposure to hazardous substances. One comment requested a time limit for reopening COCs after which COCs cannot be unilaterally reopened. This same commenter said that the Department should be required to follow existing procedures and rationale akin to that set forth in 6 NYCRR 621.14.

A cure period was requested prior to any modification or revocation. Clarification was requested by one comment relative to the timing of the five days (after which the notice of modification or revocation becomes effective), as well as the timing of the right to cure. This commenter requested that the notice be sent first class

mail given the importance of the document. In addition, because there are instances where division of the site and conveyance of the rights under a certificate to successors will divide a site among different certificate holders, the notice provision should be revised to provide for the instance in which notice will be provided to more than one certificate holder for a particular site. Other commenters suggested that the Department define "misrepresentation" (intentionally neglecting industry accepted sampling protocol), “material fact," and “other factors.”

One commenter indicated that Subsection (c)(5) requires that engineering and institutional controls be maintained or the certificate of completion can be revoked. It was suggested that this subsection include *and compliance with the terms of an environmental easement* after the words “remedial program,” to ensure that the engineering and institutional controls are, in fact, maintained. This commenter also suggested that the Department delete the word “intentional” from subsection (c)(v) since intent may be difficult to establish and any violation of the terms of the environmental easement may impact the effectiveness of the remedy whether “intentional” or not, and so any violation of the easement should be potential grounds for revocation of the certificate of completion.

Response to B.9.3: The Department has not revised the proposed 375-1.9 to provide examples of good cause. It is noted that, despite extensive comments on this point, no workable proposals have been proposed. Further, any attempt at an enumeration contains the potential for implicitly excluding what is omitted from enumeration.

The Department does not believe the rule should distinguish between the circumstances that will result in a modification or a revocation of the COC. The difference may depend upon the site specific facts, including but not limited to: the gravity of the allegations indicating that a modification or revocation is warranted, the remedial party’s history, and the ability to timely address the concerns raised. The Department declines to set a time frame after which a COC could not be modified or revoked. A cure period is already provided in the draft rule at 375-2.9, 375-3.9 and 375-4.9.

The Department has revised proposed 375-1.9(e)(2)(ii) to delete the effective date language. In its place, the Department has added a new 375-1.11(e), which addresses when a document is deemed “mailed,” “received,” and “submitted.” This provides clarity as to various obligations, which have set time frames within this rule.

The Department believes that the rule is sufficiently clear relative to the timing of the right to cure in that the rules states that “the certificate holder may seek relief from the notice as set forth in sections 375-2.9, 375-3.9 and 375-4.9.” (see 375-1.9(e)(3)) The respective subparts provide the 30-day “clock” on the right to cure or to seek dispute resolution. The Department has reviewed the request to change the requirement to “first class mail” and to define “misrepresentation,” and “material fact,” and has declined to make these changes. The comment relative to “other factors” is misplaced in that nowhere in Section 375-1.9 is there a reference to such phrase.

The proposed 375-1.9(c)(5) has been revised to include *and the environmental easement for the site* after the words “remedial program.” However, the Department has not further revised the rule to delete the word “intentional.” This language, including the word “intentional” mirrors ECL 71-3605(6), which expressly states that the COC may be revoked based upon a party “intentionally” violating an environmental easement. While the COC provision applies to the SSF and ERP here, as well as the

BCP, the Department intends to provide for a consistent standard for modification or revocation of COCs in all of its remedial programs under this Part.

B.9.4 Comment: This comment indicated that neither remedial parties nor the Department have any control over the amount of time that County Clerks or the New York City Register take to record an instrument. Adopting a regulation that requires that notices of COCs be recorded within 30 days after they are issued appears unworkable because the Department's regulations are not binding on County Clerks or the New York City Register. The Department should revise Sections 375-1.9(d) and 375-1.9(f) to expressly require that a "remedial party" file, rather than record, a notice of COC with the appropriate recording officer for the county in which the remedial party's site is located no later than 30 days after the "remedial party" receives the COC for the site from the Department.

Response to B.9.4: The Department has revised the proposed 375-1.9(d)(2) to recognize that Real Property Law Section 317, which provides that an instrument is deemed recorded when its delivered to the recording officer.

B.9.5 Comment: Several commenters discussed the recent case law relative to contribution protection and contribution rights. A fundamental purpose of the New York Brownfield Act of 2003 is to provide incentives to the cleanup and redevelopment of brownfields. These incentives include the liability relief and contribution rights of remedial parties as clarified by the Legislature in the Act.
Subsequent to the enacted of the Brownfield Act, however, the U.S. Supreme Court issued a decision in Cooper Industries, Inc. v. Aviall Services, Inc., 112 S. Ct. 577 (Department. 13, 2004), holding that CERCLA section 113(f) precludes a party from filing an action for contribution unless a civil action under CERCLA section 106 or 107 has been commenced against the party or the party has resolved its liability to the state or federal government in an administrative or judicially approved settlement. In so doing, the Court created real limits to contribution rights of parties that enter into voluntary cleanup programs, such as the BCP, and it created significant uncertainty regarding the rights of remediating parties to obtain contribution rights and protection. This uncertainty has a negative affect on potential entrants to the BCP as described below. The Department should clarify the contribution rights and protection of a party entering into an order, agreement or State assistance contract pursuant to Part 375.

Response to B.9.5: The Department is aware of the Aviall decision and has taken steps to make its position clear to the courts. One such step has been to file papers in support of the contribution rights post-Aviall. One such example is the amicus brief New York filed in support of Plaintiff's contribution claim post-Aviall in SENECA MEADOWS, INC. v. ECI LIQUIDATING, INC., et al., pending in the United States District Court, Western District of New York (95-CV-6400L). This amicus brief is available on the Department's website at http://www.Department.state.ny.us/website/der/bcp/amicusbrief.pdf. Another step the Department has taken is to amend its model Order on Consent, similar to amendments made by the USEPA, and model BCA. The revised instruments address recent decision law in this area and are intended to preserve and protect the contribution rights of parties. The Department has also revised 375-1.5 to include a new subdivision (5) providing for a resolution of liability similar to the language used in the model order on consent.

B.9.6 Comment: A commenter noted that the rule should be revised to set out the specific duties of a party to whom a COC has been transferred. Presently, those duties are scattered throughout several sections of the proposed regulations. It seems that, if specified in the notice of change in use that a remedial party files with

the Department, a party to whom a COC is transferred becomes responsible for the operation and maintenance of any required engineering controls and compliance with all required institutional controls. If that is indeed the Department's intent, it should be made manifest and set out in proposed Section 375-1.9(f)(3). Further, it should be made clear that a notice of transfer has to be filed with the county clerk.

Response to B.9.6: The Department has added 375-1.9(g) to expressly state that, in addition to the remedial party, any party to whom a COC is transferred shall be responsible for the operation and maintenance of any required engineering controls and compliance with all required institutional controls as a condition of the transfer. The Department will make a "notice of transfer" form available on its website. Such notice will be required to be filed with the county clerk.

B.9.7 Comment: The COCs do not address the potential future situation in which the Department may want to use a "licensed professional" as a surrogate for Department personnel, subject to audit. While the Department does not currently contemplate delegating such authority to a "licensed professional," this feature is used in other States and may be advantageous if the burden on existing Department resources contributes to excessive delays in program implementation.

Response to B.9.7: The Department has considered this comment and determined not to make a change to the proposed rule. The commenter is correct that the Department does not intend to adopt an LSP program. To the extent that such a program is implemented in the future, it would be a regulatory program requiring changes to the rule.

B.10 Comments on Subpart 375-1.10

B.10.1 Comment: The law requires the Department to prepare a Citizen Participation Handbook to provide guidance in the design and implementation of meaningful Citizen Participation Plans by brownfield site owners. The regulations make no mention of this Handbook. In January 2006, the Department rescinded the Superfund Citizen Participation Handbook—a valuable document detailing how site owners and the Department can best involve people that were developed with input from community and environmental leaders in the 1990s. The Citizen Participation Handbook for Superfund sites is an important, publicly reviewed policy document that should be reinstated and expanded to include Brownfield and Environmental Restoration sites.

Response to B.10.1: The Department agrees that the Citizen Participation Handbook is a valuable resource and guide. Contrary to the commenter's statement, the Department did not rescind that handbook in January 2006. Rather, the Department rescinded TAGM 4023, issued on February 27, 1989. That TAGM consisted of a three-line memo. The first line recognizes the importance of citizen participation; the second refers readers to the New York State Inactive Hazardous Waste Citizen Participation Plan (published in 1988), a document which was superceded 8 years ago by the current edition of the plan; and the third refers any questions to an individual who is no longer in the employ of the Department – at a phone number no longer maintained by the Department. This TAGM was rescinded because it was outdated and so full of inaccuracies as not to be of any value. The rescission didn't affect the use of the current version of the handbook (i.e. New York State Inactive Hazardous Waste Citizen Participation Plan, published 1998). The Department is also working on similar guidebooks for the BCP and ERP.

B.10.2 Comment: People living near Superfund or brownfield contaminated sites have the right to be actively engaged in the cleanup and land use decisions that affect their health and their community, and to have a

transparent process. This is especially true for vapor intrusion concerns. The Department and site owners are required to inform and involve the public before making final decisions on the scope of a site investigation, standards and technology to clean up polluted soil and water at a site, and future land use and site redevelopment. This should include public and community presentations and other avenues. Public participation goals were explicitly included in the Brownfield Law and current Superfund Part 375 regulations to guide the Department and site owners on providing meaningful public involvement. In the Draft Regulations, the Department removed the goals from the Superfund section and neglected to include the goals from the Brownfield law. Important public participation goals should be included in the Regulations for Superfund, Brownfield and Environmental Restoration sites. Several commenters stated that a public library as the repository had not worked, and if a library is to be used, there should be controls in place to validate that information is in the repository. There was also a request for a community advisory panel at sites with vapor intrusion concerns.

Response to B.10.2: The proposed citizen participation activities in 375-1.10, 375.2.10, 375-3.10 and 375-4.10 are accordant with the relevant ECL requirements and current Part 375.1.5. These provisions provide for timely and meaningful stakeholder involvement, which is an integral part of cleanup planning and implementation that occurs early and is sustained throughout all stages of site work. This policy is based on the recognition that stakeholders should have a say in the cleanup decision-making process and that robust stakeholder involvement will improve the quality and acceptability of the cleanup. Our commitment to citizen participation is borne out at sites throughout the State. At many sites, the program exceeds the mandatory basic requirements for public participation by providing more frequent information, activities earlier in the process, and specially developed opportunities for input.

Notwithstanding the foregoing, proposed 375-1.10 has been revised to incorporate the current 375-1.5(a) language (i.e. general language about the goals of citizen participation, including facilitating two-way communication, early involvement, etc). The Department has also revised the proposed 375-2.10 to add a new subparagraph providing for the fact sheet notice prior to finalization of an remedial investigation work plan, which provision is in current 375-1.5(b)(4) and was omitted from the proposed rule.

These citizen participation provisions provide significant and sufficient opportunities for community involvement, and are intended to represent the minimum acceptable requirements. Additional citizen participation activities can be included upon site-specific considerations. The Department considers libraries as document repositories to be ideal since they are open at hours to serve the community, are generally accessible and designed to provide adequate space for document review, however the need to maintain these, as any, repository location should be identified as a priority by the CP plan for the site.

B.10.3 Comment: Several commenters recommended that the remedial party be given guidelines to follow in developing site contact lists since they were able to develop a comprehensive site contact list that was much broader than the list developed by the applicant. Developing an inclusive list of site contacts is an important step in informing and involving the interested public. The Draft Regulations do not include some key constituencies in the Site Contact List. Adjacent property owners, concerned environmental and community groups, and media representatives should be included in every Site Contact List. Additionally, in New York City, the applicable Community Board should be on the Site Contact List

Response to B.10.3: The proposed 375-1.10(b)(1) provides that a citizen participation plan, including *inter alia* a “site contact list,” is to be provided to the Department within 20 days of the effective date of

the order, agreement or State assistance contract. "Site contact list" is defined at the proposed 375-1.2(as). This definition was the same as provided in ECL 27-1405(3), but has been revised in response to these and similar comments to include adjacent property owners. Moreover, the definition includes "government agencies (which can include community boards in New York City) and "any person who has requested to be placed on the site contact list" (which can include concerned environmental and community groups and media representatives). The site contact list can and should expand to respond to the need rather than represent a one-time static list.

B.10.4 Comment: The Superfund law requires the Department to provide the public with an annual statewide registry of Superfund sites in its regional offices, county offices or on its website. (ECL 27-1305). The law requires the Department to set up a database listing of all brownfield sites, with site status activities and any site environmental easements (such as deed restrictions). The law notes it shall be available electronically. The Department currently provides the Superfund Registry on its website, and has rescinded the publication of the 9 Volume Registry Reports. Some people do not use the internet, and need paper copies of government reports, including important descriptions of Superfund and brownfield sites in their town or county. The Department should publish the annual Superfund Registry and Brownfield Sites Database List and make it available in county offices and the Department regional offices to provide full and accessible public information sharing. Additionally, a comment requested that all site related citizen participation notices, fact sheets and related information be made available on the Department's website.

Response to B.10.4: The Department has considered this comment and determined not to make a change to the proposed rule. The Department has expended considerable efforts to make its databases user friendly and available over the internet. Providing the information over the internet allows for the most timely and broadest distribution of site information. Further, the repository is often maintained at a local library, which offers internet access and assistance. While significant information is available on the Department website, the notices, fact sheets and related information is too voluminous to be posted on its website, which is precisely why a document repository is set up. It is not envisioned that this detailed information will be available on the website in the near term.

B.10.5 Comment: The Department used to place bright yellow "Hazardous Waste Site" with the Department toll-free number at sites. Signs are still needed but they are no longer posted at many Superfund sites. Hundreds of brownfield sites also need to be clearly posted with signs to advise the community of any known or suspected contamination at the site. The sign can also announce that the site is in the state Brownfield program, and let people know how to get on the Site Contact List. Additionally, signs should be used post-remediation at commercial and industrial sites.

Response to B.10.5: The Department has considered this comment and determined not to make a change to the proposed rule. The Department encourages parties to post signs at sites under its remedial programs. However, there are significant opportunities for interested parties to learn of the status of the remedial program as well as contact information without resorting to a mandate for signs.

B.10.6 Comment: The Department received comments indicating that sites should be fenced.

Response to B.10.6: The Department has considered this comment and determined not to make a change to the proposed rule. Health and safety plans are in place which ensure the protection of workers on the site as well as the community. Further, where a fence is appropriate to protect public health, such protections will be required.

B.10.8 Comment: This section states that all remedial plans shall include citizen participation plans that include "public notice with a prescribed comment period at select milestones, with meetings and informational sessions." This seems to be an open-ended requirement for citizen participation. Instead, this section should make reference to the specific requirements for citizen participation set forth in 375-2 and 375-3 regarding State Superfund and brownfield programs, respectively.

> Response to B.10.8: The Department has considered this comment and determined not to revise the proposed 375-1.10. There are significant citizen participation activities undertaken in the remedial programs. However, it is not “open ended.”

B.10.9 Comment: This paragraph provides for extensions of comment periods upon request, even though this section includes specific requirements for public comment periods. Any such provisions should be set forth in the citizen participation sections of sections of 375-2 and 375-3. One commenter advocated that the Department should not extend comment periods, especially since the BCP statute specifies that there shall be a thirty-day comment period on applications to enter the BCP, a thirty-day public comment period before the Department finalizes a remedial investigation work plan and a forty-five day public comment period before the Department finalizes a proposed remedial work plan. However, the commenter noted that it would understandable if the extension were for a *deminimis* period, such as five days, but not when the extension has the effect of extending the statute's specified comment period by either 67% or 100%.

> Response to B.10.9: The Department has considered this comment and declines to make any changes. The language is appropriate and the extension provision applies to all the remedial programs and operates regardless of the specified time frame. This provision is in accord with the enabling statute. While the statute provides for a 30-day comment period under the BCP, it does not preclude the possibility of a longer period. The Department will also be mindful of the legislative intent to expeditiously address the environmental issues in considering any request for an extension. As the commenter indicates, the extension may be short in order to accommodate both the interests of the public and the remedial party.

B.10.10 Comment: The Department received many expressions regarding citizen participation relative to IRMs. One group urged the Department to forgo citizen participation activities since IRMs are short-term actions designed to address eliminate more immediate risks posed by contamination and the permanent remedy will be subject to citizen participation. Alternatively, this group argued that the Department should not require citizen participation for time-critical IRMs. For non-time critical IRMs, the use of fact sheets might be an acceptable mechanism for conveying information without unduly delaying the progress of the IRM. The other group urged the Department to require citizen participation activities for all non-emergency interim remedial measures, and ensure the public is notified of any emergency interim remedial measures.

> Response to B.10.10: In response to these comments, the proposed 375.1.10 has been revised to provide that the Department will require a 30 day comment period in the event the scope of the IRM is likely to represent the remedy or a significant portion of the remedy. This represents the minimal requirements. The Department declines to expand the required citizen participation activities beyond this provision, however, additional activities may be conducted (e.g. fact sheets) based upon site-specific considerations.

B.10.11 Comment: The Department should mandate multi-lingual citizen participation.

Response to B.10.11: The Department has considered this comment and determined not to make a change to the proposed rule. The Department reaffirms that written information on projects is, and will be, disseminated throughout the remedial process. Such information is, and will continue to be, presented in an easy-to-read, understandable format, using plain language and, when appropriate, public notice materials shall be translated into languages other than English for comprehension by non-English speaking stakeholders.

B.10.12 Comment: The requirement that "[a]ll citizen participation plans and fact sheets" be reviewed and approved by the Department should be clarified to state that the requirement does not impact the right of a remedial party or site owner to issue other updates, newsletters or other publications or to have its own website for access by interested parties. A remedial party's personal or corporate communications are separate from communications specifically required by the citizen participation plan and should not be subject to Department review.

Response to B.10.12: The Department has revised 375-1.10(e) to limit this requirement to those plans and fact sheets "required by the Department."

B.10.13 Comment: Public health assessments must be mandated in Part 375 to require that public health is considered as paramount as economic and environmental revitalization.

Response to B.10.13: The Department declines to modify the rule to address this comment. However, it is noted that the statute already provides that the principle function of the DOH is to assess health risks in connection with sites. [see PHL Section 1389-b.1(a)] The statute contemplates, if not commands, a consultation process, and that mandate does not require a special rulemaking for implementation. As an administrative practice, the Department regularly consults with the DOH on site-related remedial matters, as well as on a generic basis. We value the institutional expertise of the DOH and recognize the need for its input across the spectrum of activities in administering the remedial programs addressed by this rule.

B.11 Comments on Subpart 375-1.11

B.11.1 Comment: Several comments were received relative to the prohibitions in this section. Two commenters asked why the Department deleted the majority of the Superfund Program prohibitions presently set forth at 375-1.2. One commenter requested that the general prohibitions be more limited in the context of the SSF.

Response to B.11.1: The two comments are misguided in that the Department has not omitted the SSF prohibitions. They are reorganized, with several prohibitions set forth at 375-1.11(b) and the balance of the existing prohibitions set forth at 375-2.11(a). Turning to the request to limit the prohibitions, the Department rejects this request. This aspect of the proposed regulation is a continuation of the present regulation, which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

B.11.2 Comment: This proposed rule requires that all workplans, reports (including all attachments and appendices) submitted by a "remedial party" must be in both print and electronic format. That provision should specify what type of electronic format shall be used in order to give the regulated community the opportunity to provide the Department with input on whether the formats are feasible. In addition, in order to minimize

unnecessary paperwork, the provision should authorize the Department to waive the requirement to submit printed documents when electronic submittals are sufficient.

> Response to B.11.2: The Department has considered this comment and determined not to make a change to the proposed rule. This DER has taken major steps to increase the use of electronic documents. While data submission, viewing, and searching tools are undergoing constant development; electronic submittals should expedite review timeframes, facilitate the release of information to the public, and provide for enhanced long-term record keeping. The format of the submissions will be addressed in guidance.

B.11.3 Comment: Numerous comments were received relative to the financial assurance provisions in this section. Several commenters wanted the Department to clarify the circumstances when the Department intends to impose such a requirement; to add an option of meeting financial assurance requirements through a corporate financial test and guarantee should be provided as well (e.g. the state's RCRA regulation allows for affected parties to demonstrate their ability to meet this requirement through financial capability tests (see 6 NYCRR Part 373-2.8(d)(5)). Further, additional specificity was requested to provide meaningful guidance on the assumptions that must be made and the methodology that must be used in estimating the amount of financial assurance required. Specifying that the estimates must be made by professional engineers or qualified insurance professionals is unhelpful when the regulation does not provide guidance on the protocols that the Department expects these professionals to follow when preparing financial assurance estimates. At least one municipality indicated that municipalities should be exempt from this requirement. One commenter opined that CPI is an inappropriate adjustment factor. Rather than CPI, the Department should apply something that considered the cost for environmental remediation work. A discount rate, such as is used under CERLCA, is more appropriate.

> Response to B.11.3: See response to comment B.8.23 relative to when financial assurance might be required. The Department has revised 375-1.11(c)(2)(v) to add the financial capability tests presently set forth at 373-2.8(d)(5). The Department believes that this rule provides a reasonable framework for the site-specific decision-making relative to financial assurance. Further, the rule's use of the CPI is appropriate.

B.11.4 Comment: Numerous parties commented on the change of use provision. The Department was urged to apply "change of use" rules to transfers of title only to the most limited extent required by the BCP law. If DEC elects to carry over any of the BCP "change of use" provisions to the ERP [§375-4.2(b)], it should eliminate transfers of title from the "change of use" definition and written notification requirement. Further, it was expressed that the nature of transactions oftentimes does not allow for 60-days of written notice prior to a change in ownership. Therefore, it was suggested that only a change in ownership require written notice within 60 days of the change on a form to be developed by the Department. One commenter requested that we reaffirm that change of ownership will not result in the modification or revocation of the COC or reopening of the liability benefits.

> Response to B.11.4: The proposed 375-1.11(d)(3) has been revised to provide a better balance between the needs of the Department and the realities of real estate transactions. The revised rule provides for notice to the Department on a Department-approved form consistent with the statutory requirements, but allows for less information regarding the prospective owner. Dovetailing with the requirements proposed in 375-1.5(a), there is a requirement to provide information relative to the remedial program to the prospective owner. Further, within a short time frame of the sale, there is an requirement to provide

notice to the Department relative to the new party and its representatives. And, there is the requirement for periodic certifications that will require the reporting of the new owner information. As to the stated concern that the Department will modify or revoke the COC or reopen the liability protections as a result of the change of ownership, the Department's stated goal is to work with parties to ensure that they are in compliance with the requirements of the remedial program and that the protection of public health and the environment is being secured. In this context, it is unlikely that the Department would seek to modify or vacate a COC or reopen liability protections solely as a result of a transfer of ownership, where such new owner commits to comply with the terms and conditions of the remedial program.

B.11.5 Comment: The Department proposes to enact §375-1.11(d) which will delete the existing regulatory requirement found at 375-1.6(b); that before a substantial change in use is made at an inactive hazardous waste disposal site that notice be given to the county clerk, the town clerk and adjacent property owners as well as those listed.

Response to B.11.5: The Department has considered this comment and determined not to make a change to the proposed rule. The change of use provision is mirrored after the legislature's most recent codification relative to "change of use." The change of use provisions is more robust than under the current Part 375. Further, the proposed provisions are coupled with enhanced coordination between the local municipality and the Department (see ECL 71-3601 et seq.) as well as new requirements (e.g. periodic certifications, financial assurance) collectively ensure appropriate safeguards for proposed changes.

B.12 Comments on Subpart 375-1.12

B.12.1 Comment: The Department received extensive comments on the permit waiver provisions. The comments included those from asserting: that the Department does not identify and may not have any statutory authority for this provision, especially where the permit is issued by the Department pursuant to a federal delegation; that such authority may unduly infringe on the authority of local jurisdictions; that the provisions seems broad enough to allow the Department to exempt a remedial party from obtaining, among other things, street opening (and closure) permits and building permits, even if unrelated to investigative and/or remedial activities; that if an exemption from local permitting is necessary to perform investigative or remedial work, it is essential that the Department provide written notice of the exemption to the municipality and/or the local permitting agency, explaining the reasons for, and duration of, the exemption; and that the regulations should also require a remedial party who is granted an exemption to immediately apply for the proper local permits, even if the work is complete, so that the municipality can keep a record of the work that is being performed. Another group asserted that the provision backtracks from existing regulatory provisions; that it poorly incorporates the statutory authority into the rulemaking; that it is unclear what additional public benefit would be derived from subjecting brownfield projects to additional State or local permitting processes; and noting that the criteria for requiring state and local permits set forth in this draft section have no statutory basis in either Title 13 or Title 14; that assistance should be provided if a waiver isn't provided. While yet another commenter insisted that the provision is an expansion of present practice and allows parties to avoid the permit-based environmental justice policy (e.g. documentation requirements, outreach requirements, additional comment opportunities, and technical assistance).

Response to B.12.1: The Department has express statutory authority to waive State and local permits and authorizations. (see ECL 27-1313(10); 27-1429 and 56-0513) The Department's administrative

practice has been to require the remedial party to seek such sister State or local agency permits or authorizations. Upon a showing that such a permit cannot be timely obtained, the Department has considered waiving the sister State or local permit or authorization. This practice is set forth at the proposed 375-1.12. This strikes an appropriate balance between the needs of the sister State and local agencies to administer their respective permitting and authorization processes with the needs of this Department to timely effectuate a cleanup of contaminated sites.

This is as noted in the Official History (March 1992) at pages II38-II39. Further, This comment is not pertinent to anything new. The proposed regulation 375-1.12, (a), (b), (c), is, in part, a continuation of the present regulation 375-1.7, which has been the law since it was adopted in 1992; we considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now. Moreover we are gratified to note that, subsequent to 1992, the principle underlying our rationale has been upheld: see *Town of Moreau v. New York State Department of Environmental Conservation*, 178 Misc.2d 56 (Sup. Ct., Albany Co., 1998).

The Department is mindful that it is the unmistakable legislative intent to preempt entirely local control over remedial programs conducted pursuant to the SSF, BCP or ERP. It could not have been the legislative intent to create such a comprehensive administrative scheme to address contaminated sites, and yet to allow a dissenting municipality to delay or completely frustrate the execution of the scheme by withholding a permit. Although we certainly expect to work with local governments as necessary and will take into account the legitimate concerns of local governments in the development and implementation of remedial programs, it was not meant to create a rule whereby this Department would be obliged to condition a local permit on substantive compliance with the technical requirements of the local permitting program. The Department routinely assists remedial parties in fulfilling its obligations (e.g. access, permits). This will continue without the necessity of a requirement in this proposed rule. This provision only applies to remedial programs under this rule.

Turning to the environmental justice concern, as noted by this commenter, this rule provides for elaborate documentation requirements, significant outreach requirements, comment opportunities, and, if the site is a significant threat, technical assistance. The Department agrees that these citizen participation activities are without regard to demographics or income levels, but are available to all citizens throughout the State. Commissioner's Policy #29 was issued to heighten the aware ness of the need for enhanced outreach and education in environmental justice areas. This rule incorporates those recommendations Statewide.

B.12.2 Comment: We question why provisions of the bulk storage requirements are included in Part 375. This section proposes to regulate all tanks regardless of size or contents and regardless if they were properly closed in accordance with the requirements in effect prior to the promulgation of 612-614 and 596-599. The Department does not have the authority to require a new owner who does not use an old tank on property that was closed in accordance with the requirements of the time to register or close the tank since the new owner would not be an owner or operator of that tank.

Response to B.12.2: See responses to B.8.6.

PART C – COMMENTS ON PART 375-2
STATE SUPERFUND PROGRAM

C:0 General comments on Subpart 375-2

C.0.1 Comment: Several comments voiced a concern that the Department is misapplying Title 14 statutory provisions to the State Superfund Program. In large part, this concern is based on the Department's proposal to adopt general program provisions that would be applicable to all three remedial programs covered in this draft rule. In doing so, the commenters submit the draft regulations fail to reflect basic statutory parameters set forth in ECL Article 27, Title 13 establishing the state superfund program, including the "significant threat" threshold for compelling site cleanup by potentially responsible parties. The commenters focused on various remedial key components, e.g. source removal, plume stabilization, and bulk storage obligations. Further, it is suggested that these revisions are not legally justified and meld programs with different statutory authority in an impermissible manner. And one commenter indicated that these revisions are not necessary.

Response to C.0.1: The Department restates here today what it said in 1991 in response to the same or similar comments on the existing regulation. The Department disagrees with the commenters. The Legislature gave to this Department the responsibility of administering the SSF, BCP and ERP. The Legislature gave the Department broad authority within which to operate. Especially for the SSF and ERP, the Legislature left it to the Department's professional judgment and discretion to articulate the manner in which the programs key concepts were developed. We have the responsibility of carrying out the environmental policy of the State [ECL 3-0301], and that policy specifically recognizes the State's responsibility as trustee of the environment for future generations [ECL 1-0101.2]. ECL Article 27, Title 13 is designed to further that policy. The Department's mission in administering that program includes the prevention of foreseeable future injury to the environment, which, contrary to what some of the commenters suggest, includes the removal of sources and plume stabilization as part of a remedial program – even if such sources or plumes are not presenting a significant threat.
Further, a discussion of the various statutory provisions defining when we may act, and what we may do when we can act further illuminates the authority of the Department to include the provisions. ECL 27-1313(3)(a) establishes the threshold for our jurisdiction to order remediation: the existence of a "significant threat to the environment" posed by hazardous waste disposed at a "site." Though some threat may exist, if it does not rise to the level of a "significant threat," we may not act. Upon that threshold being satisfied, however, ECL 27-1301(3) effectively provides that the remediation that may then be ordered can encompass all threats.

The Department has never taken this responsibility lightly and has gone about its business in this area with the goal of environmental remediation ever present in mind. The programs implemented reflects a deliberate, reasoned, and reasonable attempt on the part of the Department to protect public health, safety, and welfare and the environment from the threats posed by uncontrolled contamination within the bounds of its legal authority and resources. In administering the SSF, the Department has steadfastly required sources and plumes to be considered, and as appropriate, addressed. In fact, the Legislature thought so highly of some of the Department's approach to developing and implementing the SSF, including source removal and plume stabilization, that it placed them in ECL Article 27, Title 14 itself.

Relative to the SSF, the mission of the SSF is to ensure that inactive hazardous waste disposal sites are effectively dealt with consistent with the authority to this Department by law. The legal authority for the

SSF is found not only in Article 27, Title 13 of the ECL, but in other provision of that law as well; and the totality of that authority is used to provide the legal basis for a given component of the Department's program as well as for action taken pertaining to a particular site. Therefore, the Department has not only the authority but also the responsibility, in carrying out its duties, to use all the powers it has to effectuate the policies and mandates of this State. To ensure that it faithfully executes its responsibilities set out in ECL 27-1313 by promoting protection of the public health and welfare and the protection of the environment, it is understandably appropriate to address sources of contamination and plumes. The test is whether the Department's regulations have the requisite statutory authority and whether the authority is exercised in a reasonable *manner,* keeping in mind that regulations of this nature--intended to promote the public good--are to be liberally construed? In other words, the key question is whether our articulation of program requirements and how they are used in the context of implementing the State's Inactive Hazardous Waste Disposal Site Remedial Program is reasonable, in view of the legislative objectives sought to be attained. We believe the source removal and plume stabilization as used in the State program's implementation are reasonable, commonsensical, and statutorily authorized.

These provisions do not purport to give us discretion beyond that which the statute provides the Department. It is clear that the Department may order the development and implementation of a "program" [ECL 27-1313.3.a], and it is equally clear that such a "program" may properly consist of "activities undertaken to eliminate, remove, abate, control or monitor health ... hazards or potential hazards" in connection with the "site" [ECL 27-1301.3]. Incorporating these time-honored provisions into this rule is consistent with the cited authority and the statutory mandate.

We see no inconsistency with the NCP. The unambiguous legislative intent of the statute which the NCP implements is to allow for more stringent State programs. [See CERCLA §§114(a) and 302(d)] We believe a program that achieves a higher degree of protection than the remedy which would have been selected under the NCP will necessarily be consistent, although perhaps more elaborate.

C.0.2 Comment: The Department should include its statutory authority pursuant to ECL 27-1307 to require any person to provide a description of current and past waste disposal activities in this regulation.

Response to C.0.2: The Department declines to revise the rule since this provision does not need to be set out. The statutory provision affords sufficient instruction and direction to the regulated community.

C.0.3 Comment: It appears that the Department has deleted large sections of the former regulations without a clear reason or statutory authority.

Response to C.0.3: With the exception of the hearing process, the Department has not deleted "large sections" of the former rule. While the rule is reordered and reorganized, one should be able to locate the familiar provisions of existing 375 within the context of this rule.

C:1 Comments on Subpart 375-2.1

No comments

C:2 Comments on Subpart 375-2.2

C.2.1 Comment: It is unclear why the Title 13 implementation rule would use the term "contaminant," "contaminated," and "contamination"when statute specifically refers to the broadened definition of "hazardous wastes." Since Title 13 applies to hazardous wastes, why not use that term. It would apply Title 13 cleanup liability to materials that may not constitute either a hazardous waste or a significant threat to the environment, two key applicability thresholds of the State Superfund Program.

Response to C.2.1: See response to comment B.2.4.

C.2.2 Comment: The definition of contamination includes a specific reference to "indoor air," but precludes any specific reference to "sediment."

Response to C.2.2: See response to comment B.2.5.

C.2.3 Comment: Several comments focused on the this definition of "cost." On indicated that it should only include the Title 13 reference to "reasonable expenses." Another commenter indicated that this definition reads as though it was meant to be in the Bond Act Subpart 4 regulations. The "Cost" definition in Subpart 4 cross-references this definition, therefore this definition does clearly apply in the Bond Act program with the exception noted there; however, it is unclear how the concept of a state assistance contract applied in Title 13. One commenter stated that the old Part 375 definition seemed perfectly reasonable, with the exception that the Department has added appropriate offset provisions if funds have been obtained from other sources to perform some of the cleanup work.

Response to C.2.3: See response to comment B.5.6. Relative to the reference to a State assistance contract, that is in relation to funding for municipalities in accordance with 375-2.3. It is not related to funding to municipalities under the ERP in accordance with 375.-4.

C.2.4 Comment: The current Part 375 should follow CERCLA for purposes of depicting generator liability. Specifically, it presently states that "any person who generated any hazardous waste disposed at the site." This should be revised to follow CERCLA, specifically, it should read "any party who by contract, arrangement, or otherwise arranged for disposal or treatment, or arranged for the transport or for transport for disposal, treatment of [hazardous waste' owned or possessed by such person whose…." CERCLA should be spelled out.

Response to C.2.4: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new: proposed regulation § 375-2.2(g), (1)-(7), is no more than the continuation of present reg § 375-1.3(u), (1)-(7), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

C.2.5 Comment: The current Part 375 does not include CERCLA liability standards as the basis for determining "responsible parties" under Title 13.

Response to C.2.5: The Department agrees that the current Part 375 does not include CERCLA liability standards as a basis for defining "responsible parties". However, ECL 27-1313(4) expressly states that the Department "shall determine which persons are responsible pursuant to "...applicable principles of statutory or common law liability." CERCLA is a statutory liability framework which is relevant and appropriate to the determination of remedial liability. Further, while not controlling, the liability exemptions, defenses and limitations set forth at ECL 27-1323 are mirrored after CERCLA. It is appropriate to provide that the

liability would also flow, in addition to the other stated basis of liability, from the same law from which the exemptions, defenses and limitations were crafted.

C.2.6 Comment: The "change of use" definition should qualify the increase direct exposure by adding "significantly" in front of the phrase as provided by ECL 27-1317.

Response to C.2.6: This comment is not pertinent to anything new. The proposed regulation 375-2.2(a) is no more than the continuation of the present regulation 375-1.3(v), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

C.2.7 Comment: The definition of "feasibility study" should state "all available and technically feasible" alternatives or remedial action alternatives, as appropriate.

Response to C.2.7: The Department has considered this comment and determined not to make a change to the proposed rule.

C.2.8 Comment: The term "public benefit corporation" needs to be defined here and under 375-4.2.

Response to C.2.8: The Department has considered this comment and determined a definition is not warranted for this term in subpart 375-2 nor in 375-4. First, this comment is not pertinent to anything new, the proposed regulation 375-2.2(f) is no more than the continuation of the present regulation 375-1.3(o), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now. Second, our construction of the statute is that in using "public benefit corporation" in the definition of "municipality" at ECL 52-0101.15 as the Legislature intended to refer to the definition of "public benefit corporation" at General Construction Law 66.4; but we are not persuaded that it need be reiterated in the proposed regulaton.

C.2.9 Comment: The Department has eliminated a number of key definitions, including interim remedial measures, waste and others. Unless these definitions all appear in Subpart 1, or there is a clear reason they should be eliminated, the Department should consider putting all existing definitions back into these regulations.

Response to C.2.9: "Interim remedial measure" is defined at 375-1.2(ab). The proposed 375-1.2 has also been revised to add "waste" at 375-1.2(aw). The Department believes that all of the applicable and relevant definitions are set forth in this rule.

C:3 Comments on Subpart 375-2.3

C.3.1 Comment: The Department received various comments concerning the use of State money pursuant to ECL 27-1313(5)(g) to assist municipalities with sites they own or operated. There were some comments on the eligibility for grants, specifically, whether the State had changed the statutory criteria in this rule. A few comments related to expenses and costs, indicating that responsible parties are only liable for "reasonable expenses" incurred by the State, as compared to "all costs"; and that eligible costs should be those incurred consistent with the NCP and, conversely, ineligible costs should be those incurred inconsistent with the NCP. Several comments expressed concern with the indemnification language in the proposed rule, especially with the provision to indemnify the State. Further, the requirement for municipalities to assist the Department in "compelling responsible parties to

contribute to the costs" raised concerns as a new provision. A municipality commenter requested that the requirement to assist the State to develop "evidence or legal argument" in order to recover costs should include the following exception: "except that nothing in this section shall require the municipality to waive, in whole or in part, the attorney-client, attorney work product, or deliberative process privilege." One commenter indicated that this subsection could be confusing in light of Subpart 4.

Response to C.3.1: The proposed 375-2.3(c)(1) states that a municipality may be eligible for a grant if its liability arises out of either ownership or operation of the site at any time (provided, of course, that it did not deliberately assume liability which might have avoided by inaction). The "reasonable cost" concern is discussed in the response to B.5.6. The Department declines to limit "eligible costs" to those incurred consistent with the NCP. While this will generally be true, retaining flexibility to evaluate costs will ensure the Department's ability to fulfill the legislative intent. This is consistent with the statute and existing 375-3.2.

Turning to the indemnification language, the commenter is mistaken that this is a new provision. This comment is not pertinent to anything new. The proposed regulation is no more than the continuation of the present regulation 375-3.2(4) and (5), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now. Contrary to another commenter's statement, this provision does not require the municipality to indemnify the State nor does it preclude eligibility if a municipality does not have insurance from which to seek indemnification. Further, this provision only requires that a municipality "make all reasonable efforts to obtain indemnification from insurers." Similarly, the commenter is also mistaken that the requirement to assist the Department in the recovery of costs is new. (see existing 375-3.2(4) and (5)) This requirement is a fair and appropriate *quid pro quo* for State assistance and advances the Legislative intent of having responsible parties pay for cleanups.

The Department also considered the municipal commenter's request to limit the obligation to assist the State in the cost recovery process and declines to make the requested change. Much like the indemnification provision, this provision, as drafted, advances the State's legitimate efforts to recovery its costs from responsible parties.

The Department has considered the request to add additional language distinguishing this grants program from the ERP set forth at 375-4 and determined that the proposed rule is sufficiently clear so as not to warrant additional explanation.

C:4 Comments on Subpart 375-2.4

No comments

C:5 Comments on Subpart 375-2.5

C.5.1 Comment: Seeking to clarify the Department's asserted broad authority under the SSF, one commenter, noting that the words "require" and "order" have very different legal interpretations, suggested that the Department clarify that it has authority to enter into a consent agreement or any other kind of settlement with a responsible party that may not be an "order". Attempting to have the Department recognize the "volunteerism" of an Order

on Consent, one comment indicated that the Department should refer to the responsible party as the "potential" or "alleged" responsible party when such party consents to enter into an administrative order.

Response to C.5.1: The proposed rule clearly provides in paragraph 375-2.5(a)(1) that the Department can issue an Order on consent or alternatively commence a hearing to issue an Order pursuant to ECL 27-1313(3)(a) directing a responsible party to develop and implement an inactive hazardous waste disposal site remedial program. The Department declines to change the language to "potential" or "alleged" responsible party for an Order on Consent.

C.5.2 Comment: Similar to the indemnification provisions addressed under C.3 supra, the Department received many comments on the requirement to indemnify the State. Commenters indicated that this provision is based on, and limited to, ECL 27-1409.4; that inclusion of this provision is standard practice of the Department in negotiating settlements; and that this provision does not belong in the rule. Other comments requested that the qualifier "pursuant to the remedial program" be omitted to ensure that there is no dispute over whether the State's gross negligence is "pursuant to" the remedial program.

Response to C.5.2: The Department has considered this comment and determined not to make a change to the proposed rule. ECL 27-1313(1)(b) provides the State with immunity from liability and action with respect to any act or omission done in the discharge of the Department's responsibilities under ECL 27-1301 et seq. This requirement, which has been a longstanding provision included in Administrative Orders on Consent under the SSF as well as agreements under the VCP and now the BCP, is consistent with, and furthers, the legislative protections afforded by ECL 27-1313(1)(b).

C.5.3 Comment: In consent orders and voluntary cleanup agreements entered into under the SSF, it has been the practice of the Department to allow parties to opt out. This provision should include situations when there are at an impasse in technical discussions.

Response to C.5.3: The Commenter misunderstands the current and past practice under the SSF. The only opportunity to "opt-out" of an Order under the SSF arises after the Record of Decision is issued. At that point, the remedial party can elect to implement the remedy under the Order or opt-out of the Order. This provision, a one time opt-out election, was added in 1999 or 2000 when the Department switched from Orders limited to a particular phase or scope of work (e.g. RI/FS, RD/RA or Site management) to a consolidated Order covering all phases and scopes. The consolidated model Order provided this limited opt-out provision to ensure that the remedial parties were not signing onto a full commitment in advance of the ROD. This provision does not extend to disagreements over work plans. Accordingly, the Department has not revised the proposed rule.

C.5.4 Comment: The Department received numerous comments on the hearing process. One commenter indicated that the Department is required by statute to include a hearing process. A related comment requested that the Department specify that in addition to the requirement of notice and opportunity for hearing, that the Department shall bear the burden of proof on all issues of material fact in the administrative hearing. Another commenter noted that although the existing regulations include the bar on third party practice (§ 375-2.1(b)(1)(iii)), it is worth noting that the statutory provisions in Article 27, Title 13 make reference to applicable principles of statutory and common law liability. Nothing in the applicable enforcement hearing regulations (Part 622) specifically bars third party practice. To the extent that the right to "raise any statutory or common law defense", as established in ECL § 27-1313, includes the right to assert affirmative defenses and bring cross claims or counterclaims, the proposed

regulations attempt to diminish the right set forth in the statute. This raises the question of how one establishes an affirmative defense that the hazardous waste was disposed of by another party if the RP does not have the right to bring in that other party.

Response to C.5.4: The Department rejects the idea that the proposed regulation should prescribe a specific and unique hearing process. The requirement of ECL 27-1315.1, that procedures be included, is satisfied by the incorporation of the familiar procedures of Part 622. The hearing procedures at present regulation 375-2.1, (a), (b), (c), (d), which has been the law since it was adopted in 1992, are omitted in their entirety based on our post-1992 experience. We have concluded that no worthwhile purpose is accomplished by having unique enforcement hearing procedures applicable only to the inactive hazardous waste disposal site remediation program, since pursuant to the present uniform enforcement hearing procedures regulation 622.1(a)(5), that regulation is applicable to the remediation program, except to the extent superseded by this Part. We have simply eliminated the previous supersession; see proposed regulation 375-2.5(a)(1).

However, it is important to note again from the Official History (March 1992) at pages II45-II46, that a responsible party against which the Department opts to proceed is not a "Defendant" in a court: it is a "respondent" before an administrative tribunal. The distinction is more than semantic. Of course, we recognize that a respondent may assert any defense as though in court (ECL 27-1313.4), but it is the well-settled law of this State that Due Process simply does not require that an administrative tribunal follow all the procedures followed by a court. [see, for example, CBS Inc. v. State Human Rights Appeal Board, 54 NY2d 921, 445 NYS2d 135 (1981), and see also Bio-Tech Mills Inc. v. Williams, 105 AD2d 301, at 305, 484 NYS2d 292, at 295 (3rd Dept, 1985), aff'd mem., 65 NY2d 885, 493 NYS2d 307 (1985)] There are many procedural rules applicable to an administrative proceeding. It is not the Department's intention to list each and every rule that would be applicable to an administrative hearing.

Similarly, the Department stated in the Official History that it believes that the principle of joint and several liability is fully applicable to the SSF; and that, for purposes of expediting remediation, it would not be an efficient use of our resources to be required to bring all responsible parties into a hearing or to allow others either to join into the proceeding voluntarily or be dragged involuntarily. Further that the Department may proceed against all responsible parties, though, in a proper case and in the exercise of our prosecutorial discretion, we may proceed against only one or more of the responsible parties. Additionally, a Department decision to target one responsible party does not prevent that responsible party from seeking contribution from the other responsible parties by means of separate civil actions.

C:6 Comments on Subpart 375-2.6

No comments

C:7 Comments on Subpart 375-2.7

C.7.1 Comment: The Brownfield/Superfund Reform Act included a number of provisions which relied on the existing 375-1.4 definition of the "significant threat" concept. Nowhere in the Title 13 or 14 statutory provisions was the Department provided with authority to revise the existing significant threat regulations.

Response to C.7.1: Clearly the Department has the authority pursuant to promulgate regulations to implement the statutory programs it is charged with managing. [see generally, ECL 3-0301(2)(a) and (m);

ECL 27-1315; 27-1415(6); SAPA 301(3)]. Revising the existing rules does not require a legislative mandate, it is a matter squarely within the purview of the Department. We believe this comment poses the issue backwards: the important factor is that nowhere in the amendments to the statute is there any explicit or implicit limitation on our authority to revise the substance of present regulation 375-1.4. We note that in a similar context the Court of Appeals has held that the reenactment of statutory authority for a regulation does not have the effect of freezing past interpretations of the statute so as to preclude the exercise of an agency's rule-making power to change such interpretations: see *National Elevator Industry Inc. v. New York State Tax Commission*, 49 N.Y.2d 538 (1980).

C.7.2 Comment: Much of draft Part 375-2.7 defining "significant threat" is consistent with the existing Part 375.

Response to C.7.2: Comment noted.

C.7.3 Comment: It appears that the word **under** was left out of the following: "In making a finding **under** ECL 27-1313.3.b(iii) that…."

Response to C.7.3 Comment noted. The Department has revised proposed 375-2.7(a)(7) to include the work "under."

C.7.4 Comment: The reference to "contaminants" should be replaced with "hazardous wastes."

Response to C.7.4 See response to comment B.2.4.

C.7.5 Comment: The Department eliminated the reference to "inconsequential amount" of hazardous wastes. We recommend that it be restored.

Response to C.7.5: The Department has considered this comment and determined not to make a change to the proposed rule. While the Department has deleted the reference to "inconsequential amount;" as drafted the proposed rule does not affect a substantive change.

C.7.6 Comment: Several commenters urged the Department not to change the existing Part 375 -1.4(vi); which in part defines "significant threat" as instances where a site is near private residences, recreational facilities, or other listed categories of sites, and where the NYSDOH or ATSDR has determined that the presence of hazardous wastes on such sites pose a significantly increased risk to public health. Under the proposed Part 375-2.7(a)(1)(vi), the DEC commissioner would be allowed to make these public health determinations based on the proximity of wastes to these categories of land use, without any determination of public health risk by state or federal health officials. We do not believe that the Department has the required expertise to make these public health risk determinations, and recommend that the existing Part 375 provisions be carried over into the revised final rule. The proposed regulations would substantially change this criterion, even though there has been no change in the law to justify such a change.

Response to C.7.6: The Department has considered this comment and revised the proposed 375.2.7(a)(1)(vi) to clarify that a determination by the NYSDOH is required to satisfy this factor. The Department has not changed the proposed rule further, specifically, it has not added back the reference to ATSDR. This provision represents the Department's experience over the last two decades, where the Department has not sought or relied upon a determination by the ATSDR in ascertaining whether there is

"a significant adverse impact to public health." Rather, the Department has worked in partnership with the NYSDOH to assess this factor. While the proposed rule does not preclude reliance upon an ATSDR determination, it appropriately emphasizes the NYSDOH's role rather than its federal counterpart.

C.7.7 Comment: The Department has changed "public health and the environment" to "public health and/or the environment." This change is unacceptable.

Response to C.7.7: See response to comment D.8.86 .

C.7.8 Comment: The phrase "areas of critical environmental concern" is undefined. DER-10 refers to "Significant Habitat." We suggest the Department use a defined term to eliminate ambiguity and vagueness. The term "aquifer" should state "aquifer used as a source for drinking water."

Response to C.7.8: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new. The proposed regulation 375-2.7(a)(3)(x) is no more than the continuation of the present regulation, which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

C.7.9 Comment: We commend the Department for adding the presence of contaminants in "navigable waters", "sediments" and "soil vapor" in making a significant threat determination.

Response to C.7.9: Comment noted.

C.7.10 Comment: A commenter reiterated its same or similar comment submitted in 1991 on the existing rule, stating that disregarding cleanups that have been done prior to site classification is not only arbitrary and capricious but also inconsistent with the NCP. EPA will take into account remedial actions implemented after a Preliminary Assessment/Site Inspection has been performed but before the HRS is calculated. If an IRM has eliminated the condition that gave rise to the Department jurisdiction over the site, the Department should be pleased it has done so, devote it resources to other sites that require attention, and take satisfaction in the fact that another site has cleared the SSF.

Response to C.7.10: The Department has considered this comment and determined not to make a change to the proposed 375-2.7(b)(8). This comment is not pertinent to anything new. Proposed regulation § 375-2.7(b)(8) is no more than a continuation of present regulation 375-1.11(b), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained at length then, and our experience since then has given no reason to revisit it now.

C.7.11 Comment: Comments were received stating that parties should be able to delist portions of properties as they are remediated.

Response to C.7.11: The Department has a longstanding practice of adjusting the site boundaries based upon information obtained during the remedial program. The department does not consider such adjustments to be a "delist" action. Only a request to remove the site from the Registry or the Department's decision to do so, is considered a "delist" action. Paragraph 375-2.7(d)(2), which addresses site reclassification or modification, has been revised to acknowledge modification of the site description

in the Registry to remove portions of the site that are remediated, but only if no site management activities are required for the portion of the site sought to be modified.

C.7.12 Comment: This section should also be revised to clarify that a site may be delisted once OM&M is approved and implemented.

Response to C.7.12: Paragraph 375-2.7(e)(4) has been modified to clarify when a site may be delisted.

C.7.13 Comment: This section should also address how a change in use may affect a previous delisting decision.

Response to C.7.13: Paragraph 375-2.7(e)(5) has been added to address this comment.

C.7.14 Comment: What does "a significant degree of public interest exists" mean? NYSDEC deleted references to the Part 624 administrative procedures. Will NYSDEC be implementing a Part 375-2 process for adjudicating delisting disputes?

Response to C.7.14: The term “significant degree of public interest” at proposed regulation 375-2.7(f)(5)(ii)(b) is adapted from present regulation 621.7(c)(1) and we intend to apply the concept similarly in this context.

C.7.15 Comment: The modification of any information on the Registry should refer to a change of use.

Response to C.7.15: The Department has considered this comment and determined not to make a change. The phrase “any information” is sufficiently broad to include information related to a change of use.

C.7.16 Comment: The proposed regulation deleted the provision requiring the Department to respond to site nominations from the public. If someone is concerned enough to submit information, the Department should respond to that person.

Response to C.7.16: The Department has considered this comment and determined not to make a change to the proposed rule.

C.7.17 Comment: The new regulations do not appear to contain a new hearing process, either in this petition section or otherwise, regarding the findings associated with significant threat determinations. This is one of the new clear mandates in the revisions that were made to Title 13, and we do not believe it was addressed.

Response to C.7.17: This comment reflects a fundamental misapprehension of the purpose of ECL 27-1315.1, which is to require that we prescribe a process for the adjudicatory proceeding required by 27-1313.4 prior to the issuance of an order under authority of 27-1313.3(a). We note that State Administrative Procedure Act 301.3 is to the same effect. The requirement that a process be prescribed is satisfied by proposed regulation 375-2.5(a)(1) which incorporates the familiar procedures of Part 622. Generally see response to Comment # C.5.4 supra; conversely, all that is required in this context is an “administrative hearing” per ECL 27-1305.2(c). We are confident that in the event such a hearing must be convened, the hearing can properly be conducted with the same degree of informality as is contemplated by the dispute resolution process; and this is reflected in a modification at the revised 375-2.7(f)(5)(ii)(b).

C:8 Comments on Subpart 375-2.8

C.8.1 Comment: The draft rule states that the goal of Title 13 remedial programs is "to restore that site to pre-disposal conditions, to the extent feasible," which delete the existing regulatory language that this goal only applies "where authorized by law." The Department received various and diverse comments on this goal statement. Several comments argued that Title 13 does not establish a pre-disposal goal; to the contrary, it defines remedial programs as including a range of responses including eliminate, removal, abatement and control of hazardous wastes. Preferably, the final Part 375 would dispense with this non-statutory "goal." Others argued in favor of retaining the time-tested goal contained in Part 375. Another commenter stated that the goal language should be rewritten to expressly incorporate the eight statutory remedy selection criteria and the elements of the remedial program in 375-1.8 and 375-3.8. This is consistent with the legislative intent and ensures that these other program elements are not precluded from consideration as a result of the goal. Numerous comments advocated to remove land use as a consideration for SSF cleanups, arguing that this consideration would weaken the cleanup goal. Others applauded the Department for including land use consideration in the SSF, and advocated that land use should not only be considered when pre-disposal is not feasible. Several comments advanced the position that a "permanent and complete" cleanup is inconsistent with Title 13 and inconsistent with existing 375-1.10(c)(5).

Response to C.8.1: We received extensive comments on the articulation of the goal of an inactive hazardous waste disposal site remedial program. Some commenters asserted that the program goal set forth in the proposal is inconsistent with the statute's "significant threat." The Department received similar comments in 1991 during the comment period on the existing rule. Our response then (see Official History (March 1992) at pages II19-II21) is equally true today: Our position as to the statutory authority for these goals is set out in the April 1991 Regulatory Impact Statement at page 32. That discussion, and the responses to this and other comments on this topic, sufficiently justify our determination to retain the present goal. This provision does not purport to give us discretion beyond what the statute already provides us." In summary, we believe that the statutory definition of a remedial program authorizes by implication the generic "goal" set forth in proposed rule; with the site-specific program in a particular case being selected on the basis of objective data generated in the course of the RI/FS for the site. The goal reflects our policy judgment that restoration to predisposal conditions is the most desirable result, at the same it recognizes that because restoration is often impossible, there inevitably will be cases in which restoration is unachievable, in which event we will have to accept elimination or mitigation of all significant threats. This goal does not by its terms purport to establish an ironclad rule that a program in every case must accomplish restoration to predisposal conditions: we recognize that it will be often impossible to do so.

A complete and permanent cleanup of the site is consistent with that policy judgment, existing 375-10(b), and ECL Article 27 Title 13. To clarify several commenters' misunderstanding regarding the existence of a statutory goal, it is noted that ECL 27-1313 doesn't provide for a general goal for remedial programs under the SSF except in the limited circumstance of cleanups conducted by the Department after a determination that a State-implemented remedial program would be "cost effective." [see ECL 27-1313(d)]

Relative to the consideration of land use, the Department has historically considered land use in the SSF when, as set forth in the proposed 375-1.8(f), a cleanup to pre-disposal conditions was not feasible. The proposed approach is consistent with the Department's historical approach and not inconsistent with the federal Superfund approach to cleanups [see land use in decision making guidance Land Use in CERCLA Remedy Selection Process, OSWER Directive no. 9355.7-04]. For consistency, the Department elected

to apply the same 16 criteria in considering land use as found at ECL 27-1415(3)(i); which considerations were mirrored after the above mentioned US EPA land use guidance document.

The statute and regulation is clear that the remedy selection criteria, and other program elements, are relevant to developing a remedial program that is fully protective. In sum, the Legislature left to this Department the task of articulating the meaning of many of the critical terms that are used to shape the State Inactive Hazardous Waste Disposal Site Remedial Program. This was done to take advantage of the technical expertise residing within this Department and to enable those who would be given the responsibility to implement the State program--this Department--the associated responsibility to determine how best to achieve the Legislature's clear intention in enacting ECL Article 27, Title 13; to establish a State program that would promote and protect the public health, safety and welfare and the environment through the elimination of inactive hazardous waste disposal sites, the hazardous waste disposed at which constitutes threats to the environment. We believe that the stated goal achieves the Legislative intent and further we believe the phrase "authorized by law" at present regulation 375-1.10(b) is surplusage: we could never validly adopt a regulation exceeding what we are authorized to do by statute; and therefore its deletion at proposed regulation 375-2.8(a) changes nothing.

C.8.2 Comment: The remedy selection should be in substantial compliance with the NCP rather than "in a manner not inconsistent" with the NCP.

Response to C.8.2: See response to comment B.1.1.

C:9 Comments on Subpart 375-2.9

C.9.1 Comment: The Department received comments on who can receive a certificate of completion (COC). The commenter queried whether a party other than the responsible party "volunteer" to remediate a Class 2 Superfund site to earn a COC under this program, despite the fact that Class 1 and 2 sites are not currently eligible for the Title 13 program for the purpose of earning a COC. If so, would such party have to enter a consent order or could they enter into a consent agreement? Other commenters expressed concern as to the extent of the liability protections afforded under this section. One commenter indicated that the liability relief should be from the State and not the Department; while another commenter stated that the liability protections afforded should only be as to the Department and not to the "State."

Response to C.9.1: Any remedial party completing a remedial program under a consent order issued pursuant to Title 13 and 375-2 can receive the COC provided for under this 375-2.9. This is without regard to whether the party is a "responsible party" as that term is defined at 375-2.2(i) The commenter mistakenly refers to Class 1 and 2 sites being ineligible for Title 13, the Department assumes the commenter meant that such sites are ineligible for the BCP. As to the extent of the liability protection, the Department, absent statutory authority, does not have the authority to provide liability relief binding upon the State of New York.

C.9.2 Comment: Several comments were submitted relative to the re-opener provisions. One indicated that the limitation on the extent of a remedial program certificate of completion which provides that does not cover "[e]nvironmental contamination at, on, under, or migrating from the site if, in light of such conditions, the site is no longer protective of public health to the environment" should be modified to change "migrating from" to "emanating from a source at the site" because a remedial party is not required to address contamination that has

originated off-site that, subsequent to the certificate of completion passes through the site. The same commenter requested that the re-opener for fraud should be rephrased to cover pertinent fraud, that is, fraud relating to the entry into the remedial program or to the implementation of the activities required under the remedial program.

Response to C.9.2: The Department has revised 375-2.9(b)(1) to change "migrating from" to "emanating from." However, the Department disagrees with the limited view advanced by the comment relative to the "fraud" re-opener. Such a view is inconsistent with good public policy and is inconsistent with the similar provision enacted at ECL 27-1421(2).

C.9.3: Comment: Commenters indicated that the 30 days within which to cure the alleged deficiency or seek dispute resolution is unnecessarily limited. In some instances it may take more than thirty days for the certificate holder to cure the alleged deficiency even if it promptly agrees with the Department to do so. By specifying a rigid a thirty-day limit in the regulation, Part 375 as proposed unnecessarily limits the discretion of Department staff to provide the necessary time for a remedial party to cure the deficiency. Therefore, the cure provision should be modified to provide for a cure that is based on prompt agreement by the certificate holder but that takes into account the fact that some cure activities might take more than thirty days.

Response to C.9.3: The Department has considered these comments and determined not to make a change to the proposed 375-2.9(d)(3). The goal is to ensure timely compliance. The 30-day window advances that goal without unnecessary delay. It is noted that this is not pertinent to anything new as this requirement is consistent with current practice for cure periods generally.

C:10 Comments on Subpart 375-2.10

C.10.1 Comment: The Department received various, and times conflicting, comments on citizen participation activities. One commenter noted that these provisions seem consistent with existing provisions of Part 375 1.5 regarding public participation; while another indicated that the Department has deleted sections of the current rule that provide for meaningful public participation. Comments were received supporting citizen participation for IRMs.

Response to C.10.1: See generally responses to comments under B.10.

C.10.2 Comment: Comments were received that were supportive of the TAG provisions, but indicating that, as drafted, are too restrictive or not sufficiently restrictive. Specifically, one commenter indicated that the rule should preclude the use of TAG money as seed money for political campaigns, lobbying or lawsuits (primarily for litigation purposes). Bars on "political activity" and "lobbying legislative bodies" should include letter-writing campaigns to State and Federal elected officials. On the other hand, a commenter indicated that the Department should provide for competing grants, and should extend beyond "Qualifying Community Groups" (QCG), noting that the likelihood of residents in the vicinity of the site being part of a QCG is uncertain. Further commenting that even if a QCG has some members in the vicinity of the site, the group may not be concerned with issues such as contaminated site. These groups, given their intended purpose for forming, may not have the desire or purpose to pursue such a grant related to a contaminated site located in the area of some of it's members. Rather than a QCG, this commenter suggested that a much more appropriate mechanism to administer TAGs through would be local government entities including only Towns, Villages, or the like. Further, a commenter indicated that a TAG should be able to be used for sampling.

Response to C.10.2: While the Department agrees that it would be beneficial to allow it to provide a technical assistance grant (TAG) to a municipality, the statute does not allow the TAG to go municipalities. Sampling was similarly statutorily excluded from the scope of grants. The regulation follows the statutory provisions. The Department has revised 375-2.10(g)(2) and 375-3.10 (g)(2) to include a bar on the use of TAG money for litigation purposes.

C.10.3 Comment: Several comments were received on the TAG application process, including a comment that the TAG application should be required to be complete, any grants should be limited to an aggregate of $50,000.00, and that the responsible party should have notice and an opportunity to contest the provision of a TAG.

Response to C.10.3: The proposed 375-2.10(g)(4) and (5) presently address the comments relative to completeness and aggregate amount of all grants. The Department declines to provide an opportunity to contest the provision of a TAG.

C:11 Comments on Subpart 375-2.11

C.11.1 Comment: The Department received supportive comments on the interpretation that SEQRA does not apply to the approval and implementation of remedial actions pursuant to Department-approved work plans but it should be extended to include negotiation and execution of orders through site management activities.

Response to C.11.1: Comment noted. The referenced activities are already exempt under SEQRA as ministerial actions or actions required to be taken pursuant to an order. Relative to site management activities, these activities are a component of the remedial program, and therefore are expressly exempt under the proposed rule.

C.11.2 Comment: The Department received comments relative to the expenditure of money from the State's Hazardous Waste Remedial Fund. One commenter indicated that the Department should describe the circumstances when those circumstances will be determined to have been satisfied; while another asserted that the provision should be revised since it is faulty because it is inconsistent with the referenced statute which requires the Department to notify all potentially responsible parties, not just one potential responsible party. Further, a comment was received that the Department should specifically provide that attorneys and consultants fees are recoverable.

Response to C.11.2: This comment is not pertinent to anything new. Proposed regulation 375-2.11(c)(1)(i)(d) is no more than a continuation of present regulation 375-3.1(a)(1)(iv), which has been the law since it was adopted in 1992. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now.

C.11.3 Comment: The prohibition provisions were the focus of some comments. It was asked that 375-2.11(a)(2) and (3) be rephrased to only apply to persons who are subject to the reporting, access and record provisions of those two statutes. It was requested that 375-2.11(a)(4) be revised to apply to persons determined to be a responsible party after notice and an opportunity for a hearing and to whom an order has been issued pursuant to ECL 27-1313(4). Further, it was asked that the general prohibition on making "any physical alteration that constitutes storage, treatment or disposal of hazardous waste which served as the basis for such listing" should be rephrased to encompass corrective actions at TSDFs pursuant to 6 NYCRR §373-2.19 and other corrective actions.

Response to C.11.3: The Department has revised proposed 375-2.11(a)(1), which is at existing 375-1.2(e)(1), to provide for corrective actions at TSDF's pursuant to Part 373-2.19. It is important to note that this provision doesn't provide an absolute prohibition; rather this provision requires the express written approval of the Department granted either by order or in such other manner as the Commissioner shall direct prior to conducted such activities.

The Department has considered the other comments and determined not to make a change to the proposed rule. It is clear that an Order entered on Consent has the same force and affect as an Order issued after notice and an opportunity for a hearing. Further, by entering into an Order on Consent, a party is waiving its right to notice and an opportunity for a hearing prior to the issuance of the Order.

C:12 Comments on Subpart 375-2.12

No comments

PART D – COMMENTS ON PART 375-3
BROWNFIELD CLEANUP PROGRAM (BCP)

D:0 General Comments on BCP

D.0.1 Comment: The Department received a number of comment expressing concern that the regulations will obstruct, rather than facilitate, redevelopment; that a number of provisions will tend to make the state's brownfield program more difficult and/or more costly to access and successfully navigate, thereby making the cleanup and redevelopment credits more difficult to access, and in the end discourage participation in the brownfield program. One commenter expressed a concern that the three incentives (the tax credit, the liability protection and the quick decision making by DEC) are not effectively nor fairly utilized within these draft regulations. Other comments were to the effect that the rule reduces confusion, encourages the use of industry best practices, consistency across the Department's regions, improves public awareness, and reduces transaction costs.

Response to D.0.1: Comment noted. The Department recognizes that there are a range of opinions on the proposed rule.

D.0.2 Comment: Several commenters said that there needs to be a balance between the need to cleanup a site and the economic value of the land, especially given that the land values outside of New York City will not support extensive cleanups. The reality under the old programs is that we not only had standards but also insisted that sites be cleaned up to pre-release conditions, with the result that many sites were not cleaned up at all. Reasonable SCOs will lead to site cleanups; whereas the reverse will maintain the status quo and leave thousands of acres blighted. Other comments indicated that while developers and city officials might want to divert the focus of the brownfield program to an economic incentive program, public health and welfare concerns are of equal importance to the legislature and of greater importance to urban residents. The Department's Brownfield Program must address the environmental impacts of urban contaminated properties; not merely create a fast track avenue for brownfield tax credits with few environmental benefits.

Response to D.0.2: Comments noted. The Department believes that the goal of environmental and public health protection and the goal of economic stimulation are not mutually exclusive and that this rule satisfies both. This rule advances the policy of the State of New York to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well being. Further this rule will encourage persons to voluntarily remediate brownfield sites for reuse and redevelopment

D.0.3 Comment: One commenter requested that the rule-making should include a self- certification process; while several other commenters advocated the opposite result.

Response to D.0.3: This rule does not expressly include provisions for self-certification.

D.0.4 Comment: A commenter suggested that is not appropriate to assume that brownfields will never be used for anything other than industry or factory purposes. The toxins that lay in these soils will not go away on their own, nor will they become any less dangerous with out proper cleaning.

Response to D.0.4: The remedial programs under the BCP are designed to ensure that the cleanups are

fully protective of public health and the environment. The rule expressly contemplates a range of non-industrial uses and the remedial actions consider the contemplated use(s) and are protective of same.

D.0.5 Comment: One comment suggested that the Department withdraw the current draft program guide, and either revise it to be consistent with statutory and regulatory provisions, or simply delete sections where additional "guidance" is unnecessary, prior to its re-issuance.

Response to D.0.5: The Department intends to issue a revised program guide upon finalization of the revised rule.

D:1 Comments on Subpart 375-3.1

D.1.1 Comment: At least one commented noted that the regulations in this subpart appear to have been specifically designed to refine the implementation of the Title 14 program. Accordingly, it was stated that this Subpart should be limited to the implementation of Title 14 programs.

Response to D.1.1: The Department has revised the proposed 375-3.1 to clarify that this subpart applies to ECL Article 27, Title 14. A similar change has been made to 375-2.1 (clarifying that is applies to ECL Article 27, Title 13) and 375-4.1 (clarifying that it applies to ECL Article 56, Title 5).

D:2 Comments on Subpart 375-3.2

D.2.1 Comment: There appears to be a gap in the definition of "applicant" in Section 375-3.2 which leaves a property owner who does not take "reasonable steps"out of the process (even though other liable parties would be in the process as a "participant.") An "applicant" is either a "participant" (responsible parties) or a "volunteer" (non-responsible parties). The definition of "participant" in the same section, however, does not include persons who acquire property after disposal, while the "volunteer" definition in the section does include such persons acquiring after disposal - but only if they take "reasonable steps" as to the contamination.

Response to D.2.1: The comment is mistaken. The statute provides for two types of applicants: a participant and a volunteer. A volunteer is defined as an applicant "other than a participant." (See ECL 27-1405(1)(b)) Accordingly, any applicant who does not qualify as a volunteer, including one who acquires title after the discharge or disposal but does not take "reasonable steps", is a participant.

D.2.2 Comment: In the new 375-3.2 section of the regulations, the Department has selected and repeated the language for some of the same definitions in ECL 27-1405. For those definitions that have been repeated verbatim from the statute, the regulations should merely reference the statutory definition section.

Response: to D.2.2: The Department has considered this comment and determined not to make a change to the proposed rule. Inclusion of the definitions here provide for an easy reference without referring back to the statute.

D.2.3 Comment: The proposed rules state that an "Alternatives analysis" means a study undertaken to develop and evaluate options for remedial action, emphasizing data analysis". This short definition loses the details of how many alternatives must be analyzed in the BCP depending on which track the remedial party implements.

There should be a cross-reference to Title 14 Section 27-1413, which also discusses benefits to the State from different remedies.

> Response to D.2.3: The Department has considered this comment and determined not to make a change to the definition. While the definition of "alternatives analysis" set forth at 375-3.2(a) is brief, 375-3.8(f) provides the detailed information on the alternatives analysis suggested by the comment.

D.2.4 Comment: This provision adds a new term, "requestor", which is defined as an applicant prior to eligibility determination. This new term does nothing to clarify—and may in fact add confusion to—the administration of the program.

> Response to D.2.4 The Department disagrees with this comment. "Applicant" as defined by the statute means a party whose application has been approved for participation in the BCP. (see ECL 27-1405.1) The term does not include a person whose application is pending before the Department. Therefore, the Department defined the person who has submitted an application but whose application has not yet been approved as a "requestor."

D.2.5 Comment: The BCP law requires the Department to define "substantial interest" in a rule. However, no such definition is contained in the draft rule. What is the Department's plan relative to this term?

> Response to D.2.5: The Department has added a definition of"substantial interest"at 375-3.2(j). This definition is the same definition set forth at ECL 27-1501(9) relative to the regulated medical waste. Additionally, the Department has added definitions for "ownership" at 375-3.2(g) and "indirect ownership" at 375-3.2(e), which terms are used in the definition of substantial interest.

D:3 Comments on Subpart 375-3.3

D.3.1 Comment: The Department received extensive comments on the BCP eligibility section. The first group of comments focused on the relationship of this rule to the Department's BCP Eligibility Guidance (dated March 2005). One the one hand, some commenters indicated that the rule provided clarity; while others claimed it further confused an already difficulty aspect of the program. Some commenters urged the Department to incorporate its existing BCP Eligibility Guidance into the rule; while others urged the Department not to incorporate that guidance into this rule. Others urged the Department to incorporate new or different factors and considerations into the rule. Some comments took issue with the eligibility factors set forth in the March 2005 Eligibility Guidance, indicating that such factors had no statutory basis and that the guidance violates principles of rule-making set forth in the SAPA; thus depriving the public of an important opportunity to understand and comment on the factors, as well as the depriving the Department of the opportunity to clarify how the factors will be applied.

Some commenters indicated that the eligibility criteria "reasonably enough" follow the statutory definition of "brownfield," whereas other comments indicated that the proposed rule create a new, narrower and more restrictive definition of "brownfield" that is at odds with the statute as well as the federal counterpart of this definition, from which the State definition was derived. Comments were received to the effect that the restrictions to participation in the BCP encourage displacement by providing and facilitating the development of properties inconsistent with community needs. This could be avoided by ensuring that developers who are

accepted into the program have strict regulations concerning profits for developing properties. Comments hypothesized about the alleged "restriction" of eligibility being the result of the Department's concern related to the fiscal impacts of the BCP, and advocated for the de-coupling of eligibility issues from tax credit issues.

Some comments indicated that the Department's incorporation of some, but not all of the factors, further confused the issue; that the rule completely omits consideration of economic factors; that the rule lacks clarity as to what is "complicating the development;" that the Department should apply common-sense mechanisms for determining eligibility; and that the Department should not apply the program everywhere in the State. Other comments requested additional factors to be considered, including: profit caps; socio-economic factors; financial need; and benefit to the community. The Department was asked to provide special consideration for urban sites; low-income areas; and public-purpose projects (e.g. affordable housing). Other commenters stressed their desire to have projects that are in environmental justice areas, public purpose projects, and/or projects creating employment opportunities to be deemed eligible automatically. One commenter stated that the eligibility criteria should not unnecessarily exclude ecological resources.

> Response to D.3.1: The Department has considered these comment and decided not to make significant changes to the proposed rule. The Legislature gave this Department the responsibility to determine whether a property meets the definition of a "brownfield" using professional judgment and discretion to determine eligibility. The Department has undertaken this responsibility in a reasoned and thoughtful manner and with the statutory goal in mind. It is not possible to produce a regulation that provides a recipe for eligibility for every possible case, and the statute does not mandate such a regulation. We shall continue to produce guidance for the applicability of general principles to particular cases, which guidance, although not adopted according to the SAPA rule-making procedures, is publicly noticed for comment prior to finalization. The Department's eligibility guidance, which was properly issued pursuant to ECL 3-0301(2)(z), provides a framework for the consideration of the statutory definition. The guidance has not been incorporated into this rule because it is not a fixed, general principle to be applied without regard to relevant facts and circumstances. Rather, it provides for the eligibility determination to be made on a case-by-case basis following a review of all pertinent facts and considering the totality of the circumstances, including consideration of socio-economic factors (i.e., whether properties in the vicinity of the proposed site show indicators of economic distress).
>
> The Department does not have statutory authority to limit eligibility to public purposes (e.g. low income housing), to preclude for-profit projects, to consider financial need, or to include Class 2 sites nor to make a determination that a class of projects or sites is eligible.
>
> The Department also disagrees that the eligibility provisions encourage displacement; disregard economic considerations; or were developed to "restrict" the BCP or tax credits.

D.3.2 Comment: The following comments were received regarding the statutory exclusions from eligibility. It was advanced that the statutory exclusion provides an exemption (i.e. eligibility) for permitted TSDFs and interim status facilities (see ECL27-1405.2(e)), however, that draft Part 375-3.3(b)(3) includes within its definition of sites ineligible for brownfield program those sites subject to ongoing enforcement under ECL Article 27 Titles 7 (solid waste) and 9 (hazardous waste). It was urged that Class 2 sites on the Registry should be eligible and that the Department should clarify the phrase enforcement actions that are completed (not on-going) or merely threatened. Further, on the enforcement bar, a modification was requested so that the mere

existence of or potential for an enforcement action does not preclude entry into the BCP. Entry into the program may be appropriate when the enforcement action or threat of action is stale or has not given rise to remediation and redevelopment of the site or where the respondent is not responsible for the release of hazardous substances. A more flexible approach to program eligibility will provide a greater incentive to cleanup and redevelop brownfield sites.

> Response to D.3.2: The statutory language relative to TSDFs and interim status facilities is difficult to understand (see ECL 27-1405.2(c)); however, the proposed rule is in accord with the legislative history. Class 2 sites are excluded from the BCP. (see ECL 27-1405.2(a)) Any change to the TSDF, interim status and Class 2 provisions would require a statutory change. Turning to the enforcement actions, the Department declines to provide the specificity sought by this commenter. The enforcement bar in the proposed rulemaking is directly from the statute.

D.3.3 Comment: It was noted that ECL 27-1407.8a is cross-referenced in the eligibility section and that the Department could add "and is not otherwise rejected in accordance with" before ECL 27-1407(8)(a) if the cross-reference remains.

> Response to D.3.3: The Department has revised the proposed 375-3.3(a) consistent with the suggested language.

D.3.4 Comment: Numerous comments indicated that the implementation of eligibility criteria has left many sites in New York State without the ability to be remediated under state supervision. If denied eligibility, a site, which does not qualify as, either a Superfund site or a petroleum site is in regulatory limbo—there simply is no State program available under which to conduct a cleanup. Such a situation not only potentially damages site owners who may need state signoff for business, insurance or financing purposes: it also allows for cleanups without any regulatory supervision or public participation—a result that the Legislature cannot possibly have intended. Accordingly, the comments urged the Department to develop a new program, akin to the old Voluntary Cleanup Program, that is open to all sites that require some form of environmental investigation and/or cleanup. An alternative solution proposed was language in the context of the present rule that addresses this concern.

One commenter suggested that the proposed rule should clarify that sites where market conditions do not impede private investment for redevelopment may be eligible for the legal and social protection mechanisms of the BCP but not the tax credits. This could be based upon defined real estate geographic boundaries where real estate conditions are known to support market-driven redevelopment. Alternatively, they could be based upon more site-specific economic conditions.

> Response to D.3.4: Presently there are four remedial program options: the SSF, the ERP, the BCP and the Spills Program. Additionally, the VCP continues to be administered for existing sites, although new applications are no longer being accepted for new sites. In response to comments, as well as stakeholder interest generally, the Department is proposing a separate, but related, rule-making providing for a new remedial program, the Remedial Stipulation Program. This program would allow for Department approvals and oversight, a streamlined process, and liability protection from the Department. This proposed rule is currently available for public comment. A copy is available on the Department's website.

D.3.5 The Department received many comments relative to limiting eligibility to sites with on-site sources. It was declared that there was no basis in the statute and that such a restriction is inconsistent with the Department's goal of reducing sprawl and loss of open space, improving and protecting natural resources and the environment, and enhancing the health, safety and welfare of the people of the state as set forth in the declaration of policy of the enabling statute. Further, that the source of the contamination impacting a site is important; however it does not alleviate the complications associated with redeveloping such a site. Comments also expressed concern that this limitation was being used to disqualify "historic fill" sites from the BCP. Some comments noted that fill contaminated over the SCOs should be considered a source. Accordingly, it was argued that the off-site limitations should be omitted.

> Response to D.3.5: The Department has revised the proposed 375-3.3(a)(2)(i) to change the on-site language to "consider only contamination from on-site sources." This is consistent with the remedial programs' long history of addressing contamination at the source and working out from the source. The purpose of this provision is not to identify all "source areas." Rather, it is intended to determine whether it is likely that the contamination on-site is the result of an off-site source, which would be more appropriately addressed at such source. The commenters' misunderstand the application of this provision in relation to historic fill and sources. Off-site would be that contamination that has not resulted from the activities at the site and is located outside of the brownfield boundaries.

D.3.6 Comment: The law offers a chance for sites with minimum or no contamination to receive a review and sign-off from DEC allowing for the redevelopment of the site and access to financing. The law creates a mechanism under 27-1407 and 27-1411 to allow sites to demonstrate that they can meet the standards of this title "without necessity for remediation." I am pleased to see that the regulations offer these sites a chance to receive a certificate of completion.

> Response to D.3.6: In order to receive a COC, a site must first be eligible for the BCP. (see Response to D.3.1). Assuming that a site is admitted into the BCP, then it would be eligible for a COC; even if the remedial investigation ultimately demonstrates that there is little or no contamination on the site.

D.3.7 Comment: The provision, which allows the Department to require a Phase II prior to determination of eligibility [Section 3.3(a)(2)(ii)], was the subject of numerous comments. A few parties indicated that this is not consistent with the statutory definition of a brownfield in that the statute contemplates that sites where contamination has not been confirmed are eligible for the program. Yet others counseled that there is, and ought to be, statutory authority for the Department to require further testing prior to determining an application if the site's environmental history does not suggest the likely presence of contamination from historic operations consistent with the statutory definition of "brownfield." Other comments focused on the ASTM standard, which is not current and may change over time.

> Response to D.3.7: The Department has revised the proposed 375-3.3(a)(2)(ii) to provide clarification of the nature of the Phase II requirement. The Department does not intend to require a Phase II at all sites. Rather, where the information in the application does not support a determination that the site is contaminated (e.g. a history of residential uses and no observed contamination), the Department may require a Phase II so that additional information can be collected to support the application. Such information should be conducted in accordance with industry standards so that the Department can rely upon the report generated by the study.

D.3.8 Comment: Commenters expressed concern with the stated authority to approve only a portion of a parcel for participation in the BCP based upon a determination that only that portion of the parcel meets the definition of a brownfield site. Some comments indicated that the Department has the authority to do so; while others indicated that this is inconsistent with the statute; and one requested that the Department define when it believes it will exercise this discretion. One commenter believed that this authority should be limited to cases where a portion of a property does not meet the two elements of a brownfield site as set forth in 375-3.3(a)(1). Questions were posed regarding the effect of splitting a proposed site into an eligible site and an ineligible site (e.g., what happens to the ineligible portion, how are tax credits apportioned). Depending on many factors, including location, contamination in one corner of a 300-acre site may or may not be impacting the entire 300-acre site. In the event the Department feels the need to exclude portions of a defined parcel, then the boundary investigation requirements should be limited to the extent of the smaller brownfield site, not the parcel's complete metes and bounds description. Recognizing the authority for limiting the eligible portion of a proposed site, a comment requested that the rule provide a process for expanding the "site" based upon data not before the Agency at the time of the determination (e.g. during the investigation).

> Response to D.3.8: The Department has considered these comments and determined not to make a change to the proposed rule. The Department is obligated to determine what is a "brownfield." The definition of a "brownfield" is not necessarily synonymous with the boundaries of a particular redevelopment project. The Department must determine what is a "brownfield" based upon the statutory definition and not based upon a development project description. The proposed rule, coupled with the BCP Eligibility Guidance, provides sufficient information on this topic. Regarding the process to expand a site's boundaries, it is noted that the Department has historically allowed amendments to agreements under the administrative VCP in order to adjust the property descriptions. This flexibility has continued under the BCP. No express regulatory provisions are needed to continue this flexibility.

D.3.10 Comment: The public interest criterion was the subject of multiple comments. This provision of the draft rule says that the Department can reject applications for otherwise eligible sites upon a determination that it would not be in the public interest to approve the application. One commenter stated that this provision is neither specifically provided for, nor specifically precluded by statute and surmised that the statute contains no affirmative requirement to approve eligible applicants. Much like companion comments on eligibility, the comments were split between those concurring that the Department has the authority to reject an application based upon the public interest criterion and those that indicated that the authority doesn't exist, and one comment that didn't address the authority but requested that the criterion be deleted. Also, commenters requested that the criterion be defined, and that definition should be guided by the legislature's narrow definition of public interest; others indicated that environmental justice concerns should be incorporated. Parties questioned the applicability or use of this phrase: will it be used to consider commercial and economic considerations. Some commenters urged the Department to include within that exception sites that would be cleaned up and redeveloped without the benefit of the tax credits. This can be accomplished through the creation of a test based on the cost of the cleanup, socio-economic conditions of the geographic area where the site is located, and the likelihood that the site will be remediated without the benefit of the tax credits. In so arguing, these parties indicated that such an approach would advance an economic and social benefit, which benefit would not occur without the tax credits.

> Response to D.3.10: Initially, it is noted that the public interest criterion simply reiterates what is already a statutory provision. (see ECL 278-1409) The Legislature gave this Department the

responsibility to determine whether granting a particular application is not in the public interest and provided a non-inclusive list of factors for the Department to consider, customarily referred to as "bad actor" factors. With this direction, the Legislature left it to the Department's professional judgment and discretion to determine whether applications are not in the public interest. After considering these comments, the Department has decided that a more detailed statement of public interest considerations is not necessary in this regulation. It is not possible to produce a regulation that provides a recipe for every possible case that would not be in the public interest, and the statute accordingly does not mandate such a regulation. The regulation as proposed establishes a framework for decision-making. We shall continue to produce guidance for the applicability of general principles to particular cases, which guidance, although not adopted according to SAPA rulemaking procedures, is public noticed for comment prior to finalization. The proposed 375-3.3(d) has been moved to subdivision 3.4 and also revised to delete the reference to ECL 27-1407(8) and insert a reference to ECL 27-1407(9).

D.3.11 Comment: The criteria applied to ineligible parties should be revised so parties are not deemed ineligible solely for being named as a defendant (even without basis) in a suit for contribution under Article 12 of the Navigation Law. For consistency with ECL § 27-1407(4), we suggest that a claim must be made by the Fund to render a person ineligible for participation in the program.

Response to D.3.11: The Department has revised the proposed 375.-3.3(c)(3) to clarify that this provision applies to State claims on behalf of the Fund rather than by the Fund.

D.3.12 Comment: Commenters argued that small, moderately contaminated sites were being excluded from the BCP, which is problematic. These moderately contaminated sites are the very properties that are most attractive for community-backed, public purpose projects. Access to public funding, including the brownfield tax credits, is essential to these projects. Restrictions should be eliminated that presently limit these sites from being deemed eligible.

Response to D.3.12: The Department has considered this comment and determined not to make a change to the proposed rule. The term "moderately" is susceptible to subjective variability to the point where it is not sufficiently defined to enable the Department to respond. Eligibility of a site is determined by the Department on a site-by-site basis through the application of the statutory provisions for eligibility, which provisions have been included in this proposed rule, and the Department's BCP Eligibility Guidance. The Department has not systematically, or otherwise, excluded any class or type of site from the BCP. (see also responses to comments D.3.1 to D.3.9)

D.3.13 Comment: A full discussion of the "historic fill" issue is contained in the comments. Most comments asserted that the Department has been inappropriately excluding sites contaminated by fill material from the BCP, thus excluding the participation of countless brownfield sites, especially in urban areas, given the pervasive filling that occurred. The focus on fill material casts an arbitrary, bright-line distinction between historic fill sites and fill sites contaminated through subsequent activities, even though contamination at historic fill sites may equal or exceed contamination levels at non-historic fill sites. This distinction is unjustified, and sites that contain historic fill with high levels of contaminants should be eligible for the BCP.

Response to D.3.13: The Department has considered these comments and determined not to make a change to the proposed rule. The Department's BCP Eligibility Guidance provides a framework to

review applications for eligibility. That framework includes 5 factors relating to the contamination test and 4 factors related to the complication of development test. Only one (1) of the nine (9) factors is the extent to which the contamination is comprised of historic fill material or exceeds background levels. Clearly, the fact that historic fill is located on the proposed site does not preclude eligibility. See also response to B.2.18, D.3.1 and D.3.5.

D.3.14 Comment: Another commenter indicated that vapor intrusion should be considered at the application stage.

Response to D.3.14: Vapor intrusion needs, to the extent understood at the application stage, would be part of the eligibility evaluation. To the extent that a source of the vapor intrusion concern is off-site, such vapor intrusion concern will not constitute the basis for eligibility for the proposed site. See also response to D.3.5.

D.3.15 Comment: More than 80 VCP projects were allowed to transition into the BCP and will receive millions of dollars of tax credits. Yet affordable housing project in low and moderate-income areas that cannot afford the incremental cleanup cost cannot get in the BCP.

Response to D.3.15: The Department made a determination to allow parties in the VCP to transfer into the BCP. The transfer provisions were developed to encourage parties that had applied for and were participating in the VCP to encourage those parties to voluntarily switch to the new statutory program. That opportunity was afforded for a limited time after enactment of the BCP and pursuant to a procedure which was noticed on the DER website. After that window expired, all parties were required to apply to the BCP with a full application – even if such parties were already engaged in a remedial program with the Department.

D:4 Comments on Subpart 375-3.4

D.4.1 Comment: Several commenters advised that the language in the application completeness provision does not reflect statutory requirement of actual notification of application completion within 10 days of receipt. In addition, email communication with staff has been working so much better than a formal letter with respect to notifying the applicant about minor omissions in the application that need correction or supplementation.

Response to D.4.1: The Department has revised the proposed 375-3.4(b)(2) to reflect the 10 day requirement rather than providing for best efforts to notify the party within 10 days. While the Department agrees with and supports the comment regarding email, revisions to the rule will not be made. This is a matter for guidance.

D.4.2 Comment: A revision is needed to allow for an application to be "substantially" complete rather than just complete; in which event the application should be retained by the Department and supplemented.

Response to D.4.2: The Department has carefully considered this comment and declines to make the change. The Department's practice is to work with a party applying for the BCP; however, a complete application is required as opposed to a "substantially" complete application.

D.4.3 Comment: The proposed rule states "the Department shall use its best efforts to expeditiously notify the requestor within 45 days after receipt of a complete application whether such request is accepted or rejected." This regulation should alternatively provide for such notice "within 15 days of the close of the public notice comment period if the application is submitted with a work plan in accordance with 27-1411(4)."

Response to D.4.3: The proposed 375-3.4(c) has been revised to reflect the additional time needed for a remedial work plan that is submitted with an application. If the work plan is for investigation, it is subjected to a 30-day comment period, the same as the application.

D.4.4 Comment: To the extent that the Department decides to deny the application, the rule should require it to issue a letter explaining why the onsite contamination does not merit the site's participation in the BCP. The letter should include an analysis of the health and ecological risks posed by the site and an explanation as to why these risks will not interfere with the redevelopment of the site.

Response to D.4.4: The Department has considered this comment and determined not to make a change to the proposed rule.

D.4.5 Comment: ECL 27-1407(4) requires the Department to notify the New York Environmental Protection and Spill Compensation Fund of an application to the BCP upon its receipt. Further, the statute requires that the administrator of the Fund to notify the applicant party within 30 days of such notice of any outstanding claim by the Fund against that person. The Department has not included this requirement in the regulation.

Response to D.4.5: The Department has revised the proposed 375-3.4(b) by the addition of paragraph (4) to include this statutory requirement.

D.4.6 Comment: ECL 27-1407(4) requires the Department to provide a 30 day public comment period on compete applications prior to DEC approval; and if an investigation report is submitted with application, to notify the party within 60 days (includes 30 day public comment period) whether such report is complete.

Response to D.4.6: The two provisions cited actually appear at ECL 27-1407(5) and (7) not ECL 27-1407(4) as referenced by the comment. Department has revised proposed 375-3.4(b) to reflect these statutory requirements.

D.4.7 Comment: The Department should clarify whether an owner has to be included on an application if a tenant is applying. It seems the owner should be included.

Response to D.4.7: The Department considered this comment and determined not to make a change. Since a party will need to confirm that it has the ability to fulfill its obligations under the program, including the filing of any environmental easements, having the owner as a party to the application is advisable, but not mandated.

D:5 Comments on Subpart 375-3.5

D.5.1 Comment: The Department received numerous comments on the terms and conditions set forth at 375-5. One commenter opined that only some of the twelve specific components of a brownfield cleanup agreement

are set forth as well as a few generic terms from the model BCA; while the description of the site, payment of State costs and permit waiver provisions, all of which are required to be included in the BCA, are not set forth in the rule.

Response to D.5.1: Firstly, it is noted that ECL 27-1409 provides for nine, not twelve, specified terms and conditions to be included in a BCA. In addition, ECL 27-1409(10) provides for inclusion of "other conditions considered necessary by the Department…." Proposed 375-3.5 has been revised to include a requirement that the BCA include i) the site description; ii) a statement regarding not considering the Applicant an operator [ECL 27-1409(6)]; and iii) a claims waiver [ECL 27-1409(9)]. Proposed 375-1.6 has been revised to require investigation and/or remediation activities pursuant to a Department-approved work plan [ECL 27-1409(7)]. The following provisions are included in the proposed rule as noted:

payment of State costs [375-1.5(b)(3)];
dispute resolution [375-1.5(b)(2)];
indemnification [375-3.5(a)(1)];
termination [375-3.5(b) and (c)];
permit waivers [375-1.12];
citizen participation plan [375-3.10(b)(1)].

D.5.2 Comment: The indemnification provision in ECL 27-1409(4) is for "any claim, suit, action, and cost of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of the agreement." This regulation provides slightly different language and should be changed. "Agreement" provides the State with broader indemnification. In addition, there may be a conflict of law.

Response to D.5.2: The Department has revised the proposed 375-3.5(a)(1) to be consistent with the statutory language contained in ECL 27-1409(4).

D.5.3 Comment: The current model BCA does not include a 30-day notice to cure provision consistent with the proposed language in 375-3.5(c)(2). Several commenters suggested slightly revised language relative to the termination clause to clarify the timeframes associated with the right to cure and the obligation not to leave the site in a worse condition than when the BCA was entered into. One comment stated that the term "for cause" is undefined as a basis for termination and further the clause states "including but not limited to." The combination of "for cause" and "including but not limited to" language leaves too much discretion. The only basis to terminate should be substantial non-compliance and when the Department undertakes to terminate a BCA, it should provide sufficient information to allow the Applicant an opportunity to correct the deficiency. Additionally, one comment noted that the proposed rule requires the applicant to ensure that the site is in no worse condition, from an environmental or public health perspective, than before it entered into the brownfield site cleanup agreement in two places.

Response to D.5.3: The Department disagrees that the language provides for too much Department-discretion. The proposed language provides for a balanced approach. The rule provides for an opportunity to cure following a Department-issued notice of intent to terminate; which notice will include the basis for the Department's determination to terminate and commence the period within which the Applicant can cure the deficiency or seek dispute resolution. The terms of the model BCA is outside the scope of this rulemaking.

With respect to the clarification sought, the Department has revised the proposed 375-3.5(b) as follows for clarity:

(3) At the time of termination, the site is in no worse condition, from an environmental and public health perspective, than before the applicant entered into the brownfield site cleanup agreement.

The Department has revised proposed 375-3.5(c) to omit the proposed 375-3.5(c)(3), reorder this subdivision, and add revised language stating that the effective date of the termination shall be on the 31st day after the notice unless the remedial party has invoked dispute resolution within 15 days or cured the deficiency within 30 days. The Department has also revised the proposed 375-3.5(d) to delete the referenced language since it is redundant.

D.5.4. Comment: DEC should address the procedures for sites withdrawing from the BCP and any continuing obligations for the remedial party.

Response to D.5.4: The Department has considered this comment and determined not to make a change to the proposed rule. A party may terminate from the BCP at any time and for any reason or no reason at all. Upon terminating, the party needs to ensure that the site is in no worse condition, from an environmental perspective, than it was upon entering into the BCA. Certain terms of the BCA continue after the termination but those obligations are only as to claims incurred through the date of termination.

D:6 Comments on Subpart 375-3.6

No comments

D:7 Comments on Subpart 375-3.7

D.7.1 Comment: "In accordance with ECL 27-1411(1)(c)" should be added here. The Department will avoid a lot of grief if it references the statutory basis for applicable regulations. These cross-references will avoid future comments by parties asking where you derive authority to impose this determination.

Response to D.7.1: The Department has considered this comment and determined not to make a change to the proposed rule.

D.7.2 Comment: The proposed rule states that the significant threat determination shall be published in a fact sheet "in accordance with section 375-3.6", which is reserved.

Response to D.7.2: The proposed 375-3.7(a)(3) has been revised to reflect the correct reference, which is 375-3.10.

D.7.3 Comment: This provision would authorize the Department to expend moneys from the Fund to pay, in whole or in part, costs incurred in the development and implementation of a remedial program for off-site contamination at a brownfield site where the applicant is a volunteer and the site presents a significant threat. We acknowledge that this provision derives from Title 14 of Article 27 of the Environmental Conservation Law. However, we must point out the phrase "significant threat" is not a term used in Article 12 of the

Navigation Law. The proposed regulations blur certain essential differences between hazardous waste site cleanups and petroleum cleanups. For example, Article 12, and the regulations implementing it, envision that petroleum spills will be remediated to pre-spill conditions (New York Navigation Law §181, 6 NYCRR §611.6). Article 12 neither contemplates, nor permits a significant threat determination, just as it neither contemplates, nor permits cleanup and removal activities related to petroleum spills be conducted only "to the extent feasible."

Response to D.7.3: The Department recognizes that the legislature created a brownfields program that overlaps the traditional enforcement programs. Given that this is the latest pronouncement of the legislature, and that the legislature is presumed to understand the laws it has passed and that have been enacted, it is reasonable to assume that the legislature understood that petroleum sites were not classified in the same manner as hazardous waste sites. However, the legislature provided a clear mandate to provide significant citizen participation opportunities in the BCP. In this regard, the determination of significant threat in the BCP program only provides for the issuance of technical assistance grants for those BCP sites where this significant threat determination can be made, as a means of expanding citizen participation opportunities with "significant" contamination. Subdivision 375-3.7(b) has been revised to clarify that only hazardous waste contamination at a significant threat site will be grounds for Registry listing upon termination of a site's brownfield cleanup agreement.

D:8 Comments on Subpart 375-3.8

Tracks – General

D.8.1 Comment: Many commenters opined that the SCOs are not stringent enough or protective. Further, that the SCOs should meet the statutory requirement of 10^{-6} and should be strict.

Response to D.8.1: The generic tables of human-health SCOs identify soil levels of chemicals at sites that meet numerical measures of risk as defined by legislative requirements (i.e., hazard index of one and excess cancer risk of one-in-one million). Human-health based SCOs were derived using assumptions that are more likely to overestimate health risks than to underestimate health risks to the public. (NRC, 1994, US GAO, 2001). Additionally, the caps on VOCs, SVOCs, and metals employed by the Department further reduce some SCOs below the statutory risk levels. Further, the SCOs are set at soil levels that are in all cases lower, and usually much lower, than soil levels corresponding to doses that caused either non-carcinogenic or carcinogenic effects in animals or humans. Accordingly, we believe that the SCOs are protective and consistent with the statutory requirements.

References

NRC (National Research Council). 1994. Science and Judgement in Risk Assessment. Washington, DC. National Academy Press.

US GAO (US General Accounting Office). 2001. Report to Congressional Requestors. Chemical Risk Assessment. Selected Federal Agencies' Proecedures, Assumptions, and Policies. GAO-01-810. Washington, DEC: US GAO.

D.8.2 Comment: Numerous commenters discussed the explicit preference for "a remedial program that achieves a complete and permanent cleanup of the site." Several indicated that the law sets up four clean-up "tracks" for contaminated brownfield sites, with "Track 1" being the most protective, resulting in a permanent

cleanup allowing unrestricted use, and "Track 4" being the opposite end of the spectrum, leaving the most contamination on site and relying on engineering controls to limit exposure (for example, paving over polluted soil). The law provides financial incentives to encourage developers to select the most protective cleanups by providing the highest tax credits and other financial assistance for Track 1 "Unrestricted Use" cleanups. At least one commenter also suggested that there are increased tax credits for Track 2 "Restricted Use" cleanups. Several commenters impressed upon the Department that the concept of a "permanent cleanup" is a goal, but is not a mandated requirement.

> Response to D.8.2: The Department agrees that a "permanent cleanup" is not mandatory, but rather a preference. The Department disagrees that Track 4 cleanups are on the "opposite end of the spectrum." Nor, as suggested by the commenter, will the Department simply allow paving over contaminated soil in Track 4. (see also response to comment D.8.94) The Department requires consideration of source removal activities, groundwater remedial activities, and plume stabilization activities as a baseline in all Tracks, including Track 4. Further, all cleanups will be protective of public health and the environment as required by ECL 27-1415(1). Relative to the financial incentives, it is noted that the statute provides for tax credits in all tracks; however, Track 1 cleanups receive an additional 2%. Track 1 is the only track, contrary to the comment, to receive additional incentives to promote higher cleanups.

D.8.3 Comment: The draft rule states that "the use of the site shall be either for unrestricted or restricted use," excluding opportunity for multiple tracks to be used at a brownfield site.

> Response to D.8.3: The Department has revised 375-3.8(d)(1) to clarify that multiple tracks and multiple uses can be employed at a site; provided that the Department finds that any controls employed at the site can be implemented, managed, maintained and enforced effectively. (see also response to B.8.26 and B.8.27)

D.8.4 Comment: Remediation of industrial sites to residential standards make the cleanups expensive and unreasonable. It is likely that the pathwork of SCOs will encourage sites to remain contaminated with unhealthy levels of toxins.

> Response to D.8.4: The comment reflects a misunderstanding of the BCP remedy selection process. The applicant may propose a cleanup based upon the current, intended, and reasonable anticipated future land use. If the current, intended and reasonable anticipated future land use is industrial, and the applicant proposed to cleanup to the industrial SCOs, the residential SCOs will not apply. The Department believes that this rule will encourage sites to be remediated rather than remain unaddressed.

D.8.5 Comment: Numerous comments were received relative to the alternative analysis provisions in Section 3.8(f)(3). Some suggested that the provision allowing the Department to require a Track 2 cleanup under certain circumstances defeats the purpose of offering a Track 4 cleanup and performing the significant threat determination. Others indicated that an alternative analysis should not be required under Tracks 1 – 3.

> Response to D.8.5: These provisions are in accord with the BCP statute [see generally ECL 27-1413].

D.8.6 Comment: One commenter expressed that 375-3.8(g) needs to be revised since an alternatives analysis should not be a required item of the work plan if a record of decision has already been issued. In addition, the

work plan should include an explicit description of the complete three-dimensional conceptual site model and an explicit statement regarding whether or not contaminated groundwater is migrating off-site. Further, the Remedial Work Plan is not the Department's decision document if a ROD has already been issued. This distinction should be added.

Response to D.8.6: The Department has revised 375-3.8(f)(1) to provide that no alternatives analysis is required if "the Department has selected a remedy for the site in a record of decision under subpart 375-2 or subpart 375-4 prior to the approval of the application for participation". The Department has determined that no other changes are necessary.

D.8.7 Comment: Commenters questioned the time limitation for remediation under brownfield tracks 1-3; to wit: five years. Sites where effective or complete source removal is not possible due to the presence of obstructions, or deep DNAPL, or where contamination is found in bedrock, frequently require greater than five years to achieve remediation goals.

Response to D.7.: The Department has considered this comment and determined not to make a change to the proposed rule. While the Department agrees that effective or complete source removal may not be possible within five years, the statute provides that a soil remedy can not rely upon the long term use of institutional or engineering controls in Tracks 1 – 3. It is axiomatic that the opposite of "long term" is "short term." The Department believes that it is not realistic to consider efforts lasting more than 5 years as "short term." However, inasmuch as the comment suggests contamination in bedrock as problematic; the comment is misguided. If the contamination is in bedrock; then it is not in the "soil." In which event, the "short term" provision is not triggered.

D.8.8 Comment: It was noted that the brownfield tracks do not address how bedrock will be managed if present within 15 feet of the ground surface, or how bedrock impacts are addressed at any depth. The regulations should provide a protocol for the evaluation of the technical impracticability of cleanup in such circumstances.

Response to D.8.8: As noted in the previous response, bedrock contamination is outside of the scope of the "soil" cleanup objectives. Bedrock contamination, like soil vapor and surface water, will be addressed separately by the remedy for the site.

D.8.9 Comment: The draft brownfield tracks do not address how compliance with SCOs will be achieved beneath existing buildings, roads, parking lots, or other permanent structures. The depths over which SCOs will be applied for the protection of human health and groundwater are discussed in the draft regulations. However, existing permanent structures are frequently found over contaminated soils. In the past, the Department has considered such structures to be engineering controls for the prevention of contact with contaminated soil. Under brownfield tracks 1, 2, and 3 however, it does not appear that such long-term engineering controls would be allowed for compliance with soil SCOs.

Response to D.8.9: The Department will continue to consider buildings, roads, parking lots and other permanent structures as "engineering controls," where appropriate and subject to their competence to act as such. A remedy which includes such controls would be precluded from Tracks 1, 2 and 3 as a result of the prohibition on long-term controls to manage soil contamination.

D.8.10 Comment: Many commenters insisted that the law created an "unrestricted" use category so that its stated preference for permanent remedies – safe for any use without needing any future monitoring – could be put in place. The draft regulations threaten this preference for permanence by failing to create a truly permanent unrestricted category. The Department would prohibit any brownfield site – even in the supposedly permanent, unrestricted category – from having a farm on it in the future. Additionally, many commenters requested that the separate ecological SCOs be merged into one SCO for each compound.

Response to D.8.10: While the Department believes that the SCO approach in Track 1 of the proposed rule was appropriate and authorized by law, the Department has revised the proposed rule to provide a Table of unrestricted SCOs; which Table consists of only one column of SCOs. (See Table 375-6.8(a) This single number represents the lowest SCO for protection of public health (including consideration of farms), protection of groundwater and protection of ecological resources. Section 5.2.2.4 of the Technical Support Document has been modified to include the evaluation of consumption of animal products from a farm sited on a former brownfield. As was allowed by the statute, if the SCO is lower than rural background concentrations, the rural background value was selected as the SCO.

D.8.11 Comment: The Department received many comments on the allowance or restriction of gardens. There is no precise definition of the garden terms, and thus using them in practice will likely lead to debate between the Department, applicants and also the end-users of the sites. The comments insisted that monitoring what people grow will be impossible; that the Department should not be less protective of public health at multi-family housing developments; and that the distinction between "community vegetable gardens" and "vegetable" gardens is not clear. Moreover, comments argued that the Department has not made it clear how the Department will enforce these restrictions and ensure that new residents are receiving proper notice of them.

Response to D.8.11: As noted in the preceding response, the Department has revised the unrestricted SCOs. Gardens are allowed in Track 2 as follows: under residential use, gardens are allowed without restriction; under the restricted residential use, only community gardens are allowed. The residential use SCOs in Track 2 were adjusted downwards to account for the additional exposure pathway of homegrown vegetable consumption. In the restricted residential land use category in Track 2, only community gardens are allowed after approval of the Department. A community garden is generally associated with town houses and condominiums (restricted residential) where the owners' association wants to provide for a common area for gardening, in which event the Departments will ensure that sufficient soils meet the unrestricted SCOs for the protection of public health in the applicable area**.**

Track 1

D.8.12 Comment: It was suggested that environmental easements should not be required in Track 1.

Response to D.8.12: With only one minor exception, environmental easements are not allowed, and will not be required, in Track 1. The one exception is where the remedial party is a volunteer and the statutory conditions for bulk reduction to groundwater have been achieved.

D.8.13 Comment: A commenter indicated that it is unclear whether Track 1 would accommodate vapor intrusion mitigation systems.

Response to D.8.13: See response to B.2.36.

D.8.14 Comment: At least one commenter indicated that the Department should incentivize Track 1 cleanups.

Response to D.8.14: The legislature has incentivized Track 1. The statute provides an additional 2% tax credit for sites cleaned up to the Track 1 requirements.

D.8.15 Comment: Various comments were received requesting minor language changes to proposed 375-3.8(e)(1).

Response to D.8.15: The Department has considered these comments and determined not to make other changes to the proposed rule.

Track 2

D.8.16 Comment: The Department received numerous comments regarding the "restricted residential" SCOs. Some of the commenters applauded this as a reasonable and practical approach that would make the SCOs workable; while many comments insisted that this category was not authorized by law and that it allows more pollution to be left on site under the premise that vegetable gardening can somehow be prevented or controlled at apartment complexes or any other multi-unit dwellings. Commenters expressed concern that the Department or local agencies would not have the staff or resources to enforce this provision. Commenters were also concerned that the "restricted use" category includes day care centers, hospitals, nursing homes, schools and playgrounds; that residential cleanups in Track 2 are less protective, thus creating a second class cleanup for multi-family dwellings; and about the impacts on children playing in the dirt on such residential properties. In short, these commenters urged the Department to only promulgate SCOs for the three categories stated in law (unrestricted, commercial and industrial).

Response to D.8.16: The commenters' arguments that the Department lacks the authority to develop the "restricted residential" column and that this approach is not protective are without merit. The statute does not provide a limitation on the number of categories of uses and this category is consistent with approaches used by the Department for a number of years. The Department determined that developing the "residential" and "restricted residential" category of uses will maximize the flexibility of the program while continuing to ensure the protection of public health and the environment required by the statute. Further, without these categories, residential development would occur only in Track 1 or Track 4. The Department believes that it would be more likely to occur in Track 4, offering less predictability and consistency to all stakeholders, including applicants, lenders, investors, concerned citizens and the environmental community. The monitoring and enforcement of controls is discussed in response to comments B.8.26. The Department concurs with the many commenters who supported the need for this category.

The Department disagrees that this approach is creating a "second-class" cleanup for multi-family dwellings. The cleanups are equally protective based upon the uses allowed. Further, as described in section 5.2 of the Technica1 Support document, the residential and restricted residential SCOs were developed with the same stringent criteria as applied to the unrestricted category (i.e., soil ingestion, dermal absorption, inhalation) except for the farm pathway for residential SCOs and vegetable uptake exposure route for restricted residential SCOs. Accordingly, children would have the same protectiveness for contact with soil as the unrestricted category (Track 1). The restricted residential land use has become common practice by the NYSDOH and NYSDEC to allow redevelopment of sites with the type of limited residential land uses contemplated for restricted residential land use set forth in

subdivision 375-1.8(d) of the proposed rule. The incorporation of these concepts into this rule merely recognizes the current and past practice.

D.8.17 Comment: The land use categories were the subject of many comments. Commenters noted that some recreational uses may accompany a commercial or industrial use (e.g. picnic areas and playing fields). Some ccommenters felt that the Department should require all sites that are to be used for "passive" recreational activities to be cleanup up to "unrestricted use" levels. Some commenters were concerned about which use category that "day care" facilities fit into. In addition, camps, camping facilities, playing fields, and resorts, which are not mentioned in the draft regulations, must also be included in the "unrestricted use" category. Also, commenters inquired as to the enforcement aspects of the restrictions.

Response to D.8.17: The Department has revised the proposed rule to delete the examples of uses in the various categories. The examples were intended to provide clarification; however, they fostered confusion rather than clarity. The examples are more appropriate for guidance. The monitoring and enforcement of the restrictions is discussed in the response to comments B.8.26.

D.8.18 Comment: Several commenters argued that land use should not be considered in remedy selection.

Response to D.8.18: The statute expressly provides for land use to be considered. (See generally ECL 27-1415(3)(i)). Accordingly, no change has been made.

D.8.19 Comment: A comment was received to the effect that a comparison of the Track 2 SCOs show use based numbers for commercial and industrial cleanups that are generally higher than those currently employed through Departmental guidelines (TAGM 4046), properly reflecting the reduced risk of on-site public health exposures at commercial and industrial sites.

Response to D.8.19: Comment noted.

D.8.20 Comment: Multiple comments were received relative to the limitation of the Track 2 SCOs to the top 15 feet of soil. Some of the commenters applauded this as a reasonable and practical approach that would make the SCOs workable; while others argued that this limitation is contrary to the statute as the provision allows applicants to use engineering controls to cut-off exposure to contaminated soil at Track 2 sites. Some commenters were concerned about the relationship of this provision to vapor intrusion?

Some commenters opined that the 15' limitation was arbitrary, excessive, and overly-protective; especially for ecological resources. Some of these commenters proposed alternative approaches to the depth limitation, including a site-specific determination, and suggested that the Department consider the 1' and 2' cover system in Track 4 as an appropriate depth. Another commenter proposed that the rule allow the SCOs to apply to a subsurface interval equal to the distance between the surface and the seasonal low water table where groundwater standards are not contravened.

Response to D.8.20: The rule provides that a remedial party does not need to meet the applicable SCOs in Track 2 below the 15 foot interface. However, the remedial party would need to address the future handling or management of such soils in the Site Management Plan. The depth limitation is not affected by the depth of the water table. However, it is not absolute. To the extent that bedrock is encountered at less than 15 feet, then the remedial party would need only comply with the SCOs to the depth at which

bedrock is encountered. Further, this provision does not affect the obligation to fully investigate the nature and extent of contamination, including at depths below 15 feet.

Likewise, this provision does not alter the obligation to address sources, control plumes or evaluate and address media other than soil (e.g., groundwater). This provision was developed after: reviewing similar provisions utilized by other states; considering the typical depth of excavation for construction and infrastructure development; the typical depth for general construction equipment; and the increased efforts and planning associated with excavations to depths greater than 15. This provision is not inconsistent with the statute.

D.8.21 Comment: The Track 2 soil standards are in some cases high, particularly for industrial sites. The SCOs approach grossly contaminated soil. This puts workers, adjacent residences, and drinking water supplies at risk. Instead of protecting groundwater, as the law requires, the Department relies heavily on groundwater use restrictions and engineering controls, rather than requiring a soil cleanup level that would protect and restore groundwater quality. As a result, the proposed industrial "clean soil" standards are so high that they are likely to pose a long-term or permanent threat to groundwater and many approach the agency's definition of "grossly contaminated soil." Under the draft regulations, Track 2 cleanups are no better than Track 4 cleanups, except with 15 feet of "clean" soil rather than just the top 1-2 feet.

Response to D.8.21: The SCOs, including the industrial SCOs, are protective and represent the risk levels identified by ECL 27-1415(6) for the development of these objectives. (see Response to Comment D.8.1) Contrary to the suggestion by the commenter relative to the industrial SCOs representing a long term threat to groundwater, the rule makes clear that where groundwater standards are exceeded or likely to be exceeded, the protection of groundwater SCOs are applicable.

D.8.22 Comment: Numerous commenters sought clarity relative to when the groundwater protection SCOs apply. Further, it was noted that this provision says nothing about how such restrictions are to be "employed," and by what criteria the Department would approve the use of such restrictions. This section should state that any such restrictions have to be included in an environmental easement, as provided for in other sections of the rule. The Department should include criteria for approval of these groundwater restrictions. It was also requested that the Department explain how vapor intrusion mitigation systems are handled under Track 2.

Response to D.8.22: The proposed 375-3.8(e)(2)(ii)(a)(2) has been revised to provide for a reference to an environmental easement as the vehicle to employ such groundwater restrictions. Any groundwater restriction would be embodied in the Remedial Work Plan, the Site Management Plan and an Environmental Easement. The use of such restrictions would be approved where they can reliably be implemented. (See also response to comments B.8.26) Additionally, the provision has been revised to provide greater clarity relative to the application of the protection of groundwater SCOs. The vapor intrusion mitigation system question is addressed in response to comments B.2.36)

Track 3

D.8.23 Comment: Track 3 adjustments were the subject of some comments. Commenters inquired as to the site-specific factors upon which a Track 3 cleanup can be based. One commenter questioned whether SCOs can be adjusted where the remedial party wants to change the assumptions upon which the SCOs were based (e.g. erecting a fence to avoid the trespasser scenario). Some commenters opined that these provisions of the draft rule allow for too few opportunities to employ site specific data. At least one commenter suggested that a

remedial party should be able to consider leachability data and/or modeling, fate and transport modeling, site specific bio-availability in soil, site specific background, etc.

Response to D.8.23: The remedial program for Track 3 shall achieve the contaminant-specific SCOs set forth in Table 375-3.8(b), unless the Department approves SCOs which are modified by site-specific factors. The factors that may be modified include total organic carbon in soil (groundwater and ecological SCOs) and several factors used in calculating inhalation SCOs (protection of public health SCOs). Appendix E of the Technical Support Document provides guidance on modifying SCOs for Track 3 cleanups. The Department agrees with the Commenter that there are only a few opportunities to vary the SCOs in Track 3. In developing the SCOs, the Department, in partnership with the NYSDOH, considered a wide array of variables in the calculations. Given this approach, there are limited opportunities for site specific data to vary the calculated SCOs.

D.8.24 Comment: Can you pursue all categories of land use under Track 3 (i.e. unrestricted, commercial and industrial)?

Response to D.8.24: Yes. The Department has revised the proposed 375-3.8(e)(3)(i) to clarify that the various land uses are available under Track 3.

D.8.25 Comment: A method for determination of total organic carbon (TOC) is not specified in the regulations or the Technical Support Document. We suggest that TOC by dry combustion Method SW846 9060(Modified) be the required standard method.

Response to D.8.25: The Department has considered this comment and determined not to make a change to the proposed rule. Identification of a method is more appropriate to guidance.

Track 4

D.8.26 Comment: The Department received numerous comments on “exposed surface soils” under Track 4. Some commenters inquired whether the Department would consider soil covered by pavement or buildings as “exposed surface soils” under Track 4. Conversely, there was a request to expressly state that soils covered by grass or other vegetation qualifies as “exposed surface soils”. One commenter stated that exposed surface soils should be cleaned up to unrestricted levels while another requested that the requirement that the cover meet Track 2 SCOs be deleted.

Response to D.8.26: Exposed surface soils are those that exceed site specific background (as determined through the application of Department guidance) and are not covered by structures or cover systems (e.g. pavement). Institutional controls are required to ensure adequate maintenance of the foundations and pavement to ensure that any invasive construction activities continue the exposure controls (i. e., any excavation is repaved or a soil cover that meets the minimum requirements is installed). The Department notes lacks the authority to require exposed surface soils in Track 4 to be remediated to unrestricted levels. [see ECL 27- 1515(6)(d), which specifies that exposed surface soils at Track 4 cleanups are to meet the Track 2 protection of public health SCOs for the use of the site.] Lastly, it is noted that the BCP statute provides for the cover system to meet Track 2 SCOs. Accordingly, the requested change would require a statutory change.

D.8.27 Comment: Some commenters took issue with the Department's application of site background in Track 4. These commenters acknowledge the long-standing practice of considering site background, but suggest that the statute explicitly rejects this approach. The commenters inquired as to how this conforms to the requirement, in statute and the proposed rule, that cleanup level that poses a risk in excess of 10^{-6} must be accompanied by a site specific finding by the Commissioner, in conjunction with the Commissioner of Health, that such level is protective of public health and the environment.

Response to D.8.27: A Track 4 cleanup is required to include source removal and control measures pursuant to 375-1.8(c) and groundwater protection and control measures pursuant to 375-1.8(d). Additionally, the Department will consider as part of the alternatives analysis what other remedial activities are appropriate (e.g. removal, treatment, etc). Relative to the "cover system" required by statute, the Department will consider site background. As noted by the commenters, this is completely consistent with past practice. Further, it is in accord with the statute. Site background levels will be determined through the application of Department guidance. The Department does not consider soils exhibiting levels less than background to be contaminated as a result of activities at the site. The remedial program normally does not set cleanup levels below anthropogenic background concentrations. This is consistent with US EPA's approach to cleanups and background. The reasons for this approach include cost-effectiveness, technical practicability, and the potential for recontamination of remediated areas by surrounding areas with elevated background concentrations. The Department's decision document will include the referenced statutory finding, where applicable.

D.8.28 Comment: At least one commenter opined that although Track 4 (proposed Section 375-3.8(e)(4)) provides the opportunity to use site-specific background values to derive SCOs, Track 4 is "restricted use with site-specific cleanup objectives." The use of a site-specific background value as an SCO should not result in property use restrictions being required, and the proposed regulations should be modified accordingly.

Response to D.8.28: The Department has considered this comment and determined not to make a change to the proposed rule. The BCP statute requires an environmental easement in instances where an institutional or engineering control are employed as a component of the remedy. It is noted that the benefits of participating in the BCP outweigh the asserted unfairness.

D.8.29 Comment: One commenter requested that Paragraph 375-3(e)(4) specifically state that groundwater cleanups at Track 4 sites may be restricted or unrestricted use.

Response to D.8.29: The proposed 375-3(e)(4) has been revised to clarify that groundwater can be restricted in Track 4.

D.8.30 Comment: At least one commenter sought clarification regarding whether the one or two foot cover is a minimum or an average thickness.

Response to D.8.30: The Department does not use averaging approaches to determine compliance, the cover is to be the thickness identified in the proposed rule.

Exposure Assumptions

D.8.31 Comment: A number of commentors stated that many of the exposure assumptions are not conservative enough to be protective. The commentors stated that the use of 50^{th} percentile or average values for various

exposure parameters results in SCOs that protect the central tendency or mean population, leaving many people unprotected. Numerous commentors suggested the use of "upper end" values such as the 95th percentile values or reasonable maximum values for exposure parameters. One commentor indicated that all of the exposure assumptions for children and adolescents lead to unrealistically high estimates of exposure.

Response to D.8.31: The Department considered these comments and decided not to change its exposure assumptions. As described in Section 5.2 of the Technical Support Document, in developing exposure scenario assumptions the Department considered the exposure scenarios commonly used by US EPA, scenarios developed by other state regulatory agencies, and information on activity factors contained in US EPA's Exposure Factors Handbook. Our review of this information showed that there is considerable variability in the exposure scenarios used by others and no obvious consensus on scenarios. So, while the information was helpful, the Department found that it was not sufficient to provide a definitive technical basis for exposure scenario development.

With regard to the selection of values for specific exposure factors, a choice may be made to assume extreme values (e.g., 95th percentiles, 99th percentiles), central tendency values (e.g., means, medians) or other values within the distribution of values for a particular factor. Choosing to use "upper-end" values for all factors can be problematic in that the data from which an "upper end" value is derived may be limited (e.g., soil ingestion rate data), significantly reducing confidence in the value of the factor and the resulting SCO. Also, combining multiple "upper end" values may result in clearly implausible exposure scenarios and/or receptors (e.g., people who spend the majority of time indoors ***and*** outdoors). In calculating SCOs, the Department chose values that it considered to be generally representative of the majority of the potentially exposed population for a given scenario. In some cases, the factors chosen by the Department are closer to "upper end" values and in other cases they are closer to central tendency values. For example, in evaluating the inhalation pathway, the Department chose to rely on estimated ground-level contaminant concentrations in air even though estimated typical breathing height concentrations may be lower (see Section 5.2.2.2 of the Technical Support Document). Also, in choosing soil adherence factors for the dermal exposure pathway, the Department chose to use the more stable geometric mean rather than the 95th percentile value, but used adherence factors associated with high end soil contact activities (see Section 5.2.2.3 of the Technical Support Document).

D.8.32 Comment: In developing the SCOs, childhood exposure is assumed to occur after one year of age. In terms of outdoor exposure to soil contaminants, it is unlikely that a child younger than one year would be exposed routinely. However, in developing the SCOs, the NYSDOH also considered exposure to contaminated soil inside homes. It is likely that children younger than one year would also be exposed to soil tracked inside since they are often placed on the floor or carpeting. In addition, activities such as mouthing or teething on hands and toys would likely lead to exposure. Consideration should be given to including this age group in estimating overall exposure.

Response to D.8.32: The comment is partially incorrect in that the Department did account for inhalation exposures among children younger than one year of age when calculating cancer and non-cancer health-based SCOs. For calculating cancer and non-cancer ingestion and dermal SCOs, the Department chose not to include children less than one year of age because data to estimate exposure for such children are either not available or highly uncertain. For example, data for estimating soil/dust ingestion rates among children were derived from studies that did not include subjects under one year in age (Calabrese et al., 1989; Davis et al., 1990). Only one of the studies (Calabrese et al.) included children under the age of two years. Additionally, there would be substantial uncertainties in any

estimates of how frequently such children may have opportunities for ingestion/dermal exposure indoors (i.e., time spent on floors/carpeting; frequency of mouthing or teething hands or toys). Also, young children will have greater opportunities than infants for ingestion and dermal exposure to soil contaminants because they are more likely to spend time outdoors. Therefore, the Department has decided not to change the SCOs based on the suggestions in the comment.

D.8.33 Comment: Physiological parameters such as body weight, body surface area, skin absorption and inhalation rate change with age, as do the risks of exposure due to developmentally appropriate behaviors. The physiological values used in DOH's calculations are often based on children older than those at greatest risk of exposure, or on adults. For example, it is more appropriate to estimate ingestion exposure based on the body weight of a nine-month old, rather than a two-year old child. Use of this lower value would result in soil cleanup standards almost one and one-half times lower than those proposed by DOH.

Response D.8.33: The Department agrees that certain physiological parameters change with age and took this into account when developing the SCOs. For example, in developing the soil ingestion and dermal absorption SCOs for cancer endpoints (residential settings), the Department accounted for age-related changes in body weight, soil ingestion rate, exposed skin surface area and soil adherence to skin (see Sections 5.3.1 and 5.3.3 of the Technical Support Document).

The Department disagrees with the commentors' claim that physiological values used in the SCO calculations are often based on children older than those at greatest risk of exposure (or on adults). Physiological values appropriate for children were used in developing SCOs for children and physiological values appropriate for adults were used in developing SCOs for adults. For example, in developing the non-cancer SCOs for children the Department evaluated a two- to three-year old child weighing 13.3 kilograms (mean body weight for two-year old boys and girls) (see Section 5.2 of the Technical Support Document). One reason that the Department evaluated children of this age is that data for estimating soil/dust ingestion rates among children were derived from studies that did not include subjects under one year in age (Calabrese et al., 1989; Davis et al., 1990). Only one of the studies (Calabrese et al.) included children under the age of two years. Therefore, the degree of uncertainty associated with incidental ingestion rates would be relatively high for very young children compared with other children and adults. The Department's confidence in ingestion rate estimates is greater for older (i.e., two year-old) children than for the very young.

Additionally, the age group at greatest risk of exposure will depend on more than just one exposure factor (*e.g.*, body weight). For example, consider an SCO based on, among other things, an exposed child's dermal contact and soil ingestion exposures. If we reduce the assumed age of the child from two years to nine months, we must reduce the assumed body weight as well, which will in turn decrease the SCO. On the other hand, very young children may spend less time than older children in contact with outdoor soil, and may ingest less outdoor soil. If we assume less exposure to outdoor soil among very young children compared with older children, the SCO will increase.

For these reasons, the Department has decided not to make any changes based on the suggestions in the comments.

D.8.34 Comment: One comment stated that children are not even mentioned in the proposal.

Response to D.8.34: The comment is not correct. As described in Section 5.2.1 of the Technical Support Document, the Department evaluated child exposure for all land use categories except industrial. In fact, the word "children" (or "children's") appears 123 times, and the word "child" appears 124 times in the Technical Support Document.

Commercial and industrial exposure scenarios

D.8.35 Comment: Several comments state that for the commercial and industrial land use categories, the Department should have evaluated younger workers, such as teenage workers, in jobs such as gardening, landscaping, and maintenance.

Response to D.8.35: Teenagers of working age (e.g., 16 years of age and older) are not very different from adults in terms of the exposure parameter values that the Department used to calculate SCOs. For example, according to US EPA's 1997 Exposure Factors Handbook the mean body weight for 16 year-old males and females is 62.8 kilograms. Older teenagers have higher body weights (e.g., 66 kilograms for 19 year-old males and females). The SCOs for workers were calculated using a body weight assumption of 70 kilograms. Differences such as these would have a minimal effect on the final SCO values. Additionally, evaluating adults for the commercial/industrial worker scenarios is consistent with the approach used by US EPA in its 2002 Soil Screening Guidance. For these reasons, the Department has decided not to make any changes based on the suggestion in the comments.

D.8.36 Comment: Several comments suggested that the Department should evaluate additional worker exposure scenarios such as those that may occur during site redevelopment work, pipe laying and construction.

Response to D.8.36: Any site redevelopment work or intrusive work activities that would encounter contaminants remaining at the site, such as described in the comments, would need to be performed in accordance with the Site Management Plan, which would include a worker Health and Safety Plan. Accordingly, these considerations do not need to be evaluated as part of developing the SCOs.

D.8.37 Comment: One comment stated that workers use the out-of-doors during lunch and other breaks and, therefore, ballfields, volleyball, picnic areas, etc. need to be assessed.

Response to D.8.37: The SCOs for commercial and industrial land uses, which are based on incidental soil ingestion, dermal exposure and inhalation of particulate-bound and volatile contaminants, are applicable to all outdoor areas of the remediated site. As such, the SCOs encompass work activities as well as time spent outdoors during lunch or other breaks. The commercial SCOs also encompass passive recreational uses such as picnic areas (see revised land use descriptions). Active recreational uses such as ballfields and volleyball areas are not contemplated for either commercial or industrial land uses and would need to be addressed either by the remedy when proposed or site management plan if developed for such use post-remedy.

D.8.38 Comment: One commentor suggested that an on-site day care scenario should be evaluated since increasingly, businesses and industries are providing child day care.

Response to D.8.38: Day care facilities will only be considered for the unrestricted, residential or restricted-residential use categories. Since the SCOs for these land use categories are protective of residential uses, they also are protective for children and other people at day care facilities.

D.8.39 Comment: Several commenters stated that workers (e.g., in industrial settings) may bring contaminants home (e.g., on clothing), endangering the health of their families if they do not receive proper training.

> Response to D.8.39: The Department considered evaluating potential exposures to contaminants transported on the clothing etc. of commercial or industrial workers to the homes of the workers but decided not to do so because any estimates of such exposures would be extremely uncertain. For example, even if relevant data are available to evaluate this pathway, there would be considerable variability in estimates of the mass of contaminant adhering to the clothing of a worker, the mass of contaminant dislodged from the clothing after the worker arrives home, the ultimate fate of any contaminant dislodged from the clothing at home (i.e., deposited outdoors, deposited indoors on an accessible surface, dislodged in a clothes washer), etc. Notwithstanding, the Department believes that the SCOs are protective. (see generally response to D.8.1)

D.8.40 Comment: It is very reasonable to consider that workers, like laborers, groundskeepers and construction crews, are invariably exposed to other workplace hazards. DEC should incorporate a safety factor in the SCOs that takes into account those hazards and the potential for additive or synergistic effects, to adequately protect workers.

> Response to D.8.40: The scenarios suggested by these comments would be addressed as part of the Site Management Plan, and provide for additional protections being implemented during such activities. These additional protections are set forth in the worker health and safety plan and community health and safety plan, which are both part of the Site Management Plan. Accordingly, these considerations do not need to be evaluated as part of the calculated SCOs. See also response to comment D.8.44.

Exposure frequency and duration

D.8.41 Comment: Several comments were received on the exposure frequency assumptions for adults and children in residential settings. A number of comments stated that the outdoor exposure frequency assumptions are too low (*e.g.*, many children may be outside throughout the year). One comment stated that the assumed values are too high and entirely unrealistic

> Response to D.8.41: The Department considered these comments and decided not to change the exposure frequency assumptions. As described in Section 5.2 of the Technical Support Document, in developing exposure scenario assumptions, which include exposure frequency assumptions, the Department considered the exposure scenarios commonly used by US EPA, scenarios developed by other state regulatory agencies, and information on activity factors contained in US EPA's 1997 Exposure Factors Handbook. Our review of this information showed that there is considerable variability in the exposure scenarios used by others and no obvious consensus on scenarios. So, while the information was helpful, the Department found that it was not sufficient to provide a definitive technical basis for exposure scenario development. Notwithstanding, the Department believes that the SCOs are protective. (see generally response to D.8.1)

D.8.42 Comment: Several comments were received on the exposure frequency assumptions for children and workers in commercial settings. A number of comments stated that the outdoor exposure frequency assumptions are too low. One comment stated that the assumed values are too high and unrealistic.

Response to D.8.42: The Department considered these comments and decided not to change the exposure frequency assumptions. As described in Section 5.2 of the Technical Support Document, in developing exposure scenario assumptions, which include exposure frequency assumptions, the Department considered the exposure scenarios commonly used by US EPA, scenarios developed by other state regulatory agencies, and information on activity factors contained in US EPA's 1997 Exposure Factors Handbook. Our review of this information showed that there is considerable variability in the exposure scenarios used by others and no obvious consensus on scenarios. So, while the information was helpful, the Department found that it was not sufficient to provide a definitive technical basis for exposure scenario development. Notwithstanding, the Department believes that the SCOs are protective. (see generally response to D.8.1)

D.8.43 Comment: Several comments were received on the exposure frequency assumptions for adolescents and adults in industrial settings. For example, one comment stated that a worker exposure frequency of 4 or 5 days per week is more reasonable than the value of 2 days per week used in deriving the industrial SCOs. Also, a commentor suggested that adolescents may trespass on industrial properties more frequently than assumed in the Technical Support Document. One comment stated that trespassing is illegal and the exposure frequency assumptions for adolescents are unrealistic.

Response to D.8.43: As described in the responses to the previous two comments, the exposure scenarios and exposure frequency assumptions used in developing SCOs are largely based on NYS DOH staff assumptions, in consideration of information from US EPA and other states, about typical activities and behaviors in different exposure settings. Therefore, worker exposure frequency assumptions of 2 days per week or 5 days per week may both be reasonable. The Department decided to use an assumption of 2 days per week because workers may not perform outdoor work with high soil contact every day of the week, workers who do have opportunities to contact soil may not work in areas of contaminated soil every day of the week, workers may change job responsibilities with a given employer, and a worker may change employers.

The Department is not aware of data reflecting the frequency of trespass in industrial settings, although we are aware that various assumptions (e.g., 15 days per year, 20 days per year) have been employed by others for purposes of assessing risk from inactive hazardous waste disposal sites. The Department assumed an exposure frequency of 31 days per year. The Department acknowledges that trespassing is illegal but since this activity is known to occur, the Department has determined that a trespasser scenario should be evaluated. Therefore, the Department has decided not to change the exposure frequency for adolescents and adults in industrial settings.

D.8.44 Comment: One comment stated that the exposure duration assumption is limited for the commercial and industrial workers and that while it is plausible that yardwork might be restricted to 25 years or less, it is reasonable to consider the working lifetime as a plausible upper limit of exposure for those working on the commercial and industrial sites.

Response to D.8.44: As described in Section 5.2.2 of the Technical Support Document, the assumed 25 year exposure duration for commercial and industrial workers is based on information on "occupational tenure," defined as the cumulative number of years a person worked in an occupation regardless of number of employers, interruptions in employment, or time spent in other occupations, from US EPAs 1997 Exposure Factors Handbook. The selected value of 25 years reflects an average of median values

for men and women and is close to the US EPA recommended value of 21.9 years (median value for all workers).

D.8.45 Comment: One comment stated that the Technical Support Document assumes that inhalation exposure only takes place from April-November. This seems inappropriate since inhalation exposure would be year round.

Response to D.8.45: As stated in Section 5.2.2.2 of the Technical Support Document, the Department did not consider inhalation exposure to particulates or volatile contaminants released from soil outdoors during months when surface soils may be moist, frozen or covered with snow because these conditions reduce the potential for generation of fugitive dust and impede volatilization from soils. Inhalation exposure to volatile contaminants associated with the vapor intrusion pathway may not be limited to this same timeframe and this pathway will be assessed consistent with the approach described in Section 10.1.1 of the Technical Support Document.

D.8..46 Comment: One comment stated that the use of the post-frost period as an exposure period for contaminated soil is not logical. The 31-week assumed growing period should be extended at least 2 weeks, yielding a 35-week activity season. In reality, the ground is often uncovered during the winter, and dust is generated. The 35-week planting season is therefore a lower bound on likely exposures, and should be evaluated with more detailed empirical data.

Response to D.8.46 The Department considered this comment and decided not to change its approach. As described in Section 5.2.2.1 of the Technical Support Document, the 31-week period was defined using information developed by Cornell University Cooperative Extension. This time period represents the approximate amount of time each year when the weather is conducive to people spending considerable time outdoors *and* soils are less likely to be frozen or snow covered. This time period is not meant to be a "growing period" or a "planting season."

D.8.47 Comment: Two comments stated that the industrial land use category assumes an outdoor worker spending 2 days/week from April-November outside. The Technical Support Document indicates that if they spend more time, then use the commercial SCO. How will this be implemented and enforced? When a site is remediated, the plans may include outdoor work only 2 days/week, but if that were to change, it is unrealistic to imagine going back to further clean-up the site. It seems the commercial SCOs should be used everywhere.

Response to D.8.47: The Department decided to use an assumption of 2 days per week because workers may not perform outdoor work with high soil contact every day of the week, workers who do have opportunities to contact soil may not work in areas of contaminated soil every day of the week, workers may change job responsibilities with a given employer, and a worker may change employers. Based on these factors the Department considers the 2-day per week assumption to be reasonable for workers in industrial settings. The Department considered this proposed provision an additional conservative measure. The Department recognizes that its proposed approach of applying the commercial SCOs to industrial settings where an exposure frequency of greater than 2 days per week is anticipated could not reasonably be implemented or enforced. The Department believes that the SCOs are protective without this provision. Accordingly, the Department is withdrawing this proposed approach and will modify the Technical Support Document accordingly.

Soil ingestion pathway

D.8.48 Comment: The Department received a number of comments suggesting the use of greater adult soil ingestion rates. Some comments suggested using a soil ingestion rate (480 mg/day) for adults in all of the land use settings. Some comments suggested that a value of 100 mg/day rather than 50 mg/day should be used for commercial and industrial workers. Others suggested that indoor soil ingestion should be addressed using a rate of 50 mg/day.

Response to D.8.48: Limited information is available from which to derive soil ingestion rates for adults. As described in Section 5.2.2.1 of the Technical Support Document, the adult soil ingestion rates used in developing the SCOs were derived from US EPA recommendations. In its 1997 Exposure Factors Handbook, US EPA indicates that many US EPA risk assessments have assumed a soil ingestion rate of 50 mg/day for industrial settings and 100 mg/day for residential and agricultural scenarios. The US EPA also recommends 50 mg/day as a "central estimate of adult soil ingestion." The Department has concluded that the adult soil ingestion rates used in the Technical Support document (100 mg/day for the residential scenarios and 50 mg/day for commercial/industrial worker scenarios) are reasonable and consistent with US EPA guidance. The Department also has assumed that the majority of incidental soil ingestion exposure by adults probably occurs outdoors and therefore indoor soil ingestion is not assessed.

D.8.49 Comment: One commentor suggested that the child soil ingestion rate used in the Technical Support Document should reflect the upper percentile values from the soil ingestion studies cited in the document. Citing other analyses of these studies, the comment identifies an average upper percentile soil and dust ingestion rate of 790 mg/day. The comment indicates that if the studies on which the values used in the Technical Support Document are a true representation of the soil ingestion rates of children, half of all the children living, playing or going to school on former Brownfield sites will potentially be exposed to unacceptably high levels of contaminants.

Response to D.8.49: The Department considered this comment and decided not to change the child soil and dust ingestion rates used in developing the SCOs. In choosing soil and dust ingestion rates for children, the Department considered US EPA guidance on this matter. In its 1997 Exposure Factors Handbook and its 2002 Child-Specific Exposure Factors Handbook, US EPA recommends 100 mg/day as the best estimate of a mean rate for children under six years of age (with 200 mg/day as a "conservative estimate" of a mean) and 400 mg/day as an upper percentile value (noting that the latter value is derived from study values that are not estimates of usual intake). As described in Section 5.2.2.1 of the Technical Support Document, we evaluated the same studies evaluated by US EPA and derived a soil and dust ingestion rate of 160 mg/day. This value is between US EPA's best estimate of a mean and conservative estimate of a mean. The Department has concluded that this value is a reasonable estimate of the ingestion rate.

Dermal exposure pathway

D.8.50 Comment: Several comments indicated that the information in the Technical Support Document mischaracterizes the clothing worn by groundskeepers, which results in an underestimation of skin area exposed (2,480 vs. 5,800-10,000 cm^2).

Response to D.8.50 As described in Section 5.2.2.3 of the Technical Support Document, the Department relied upon US EPA's 2004 Supplemental Guidance for Dermal Risk Assessment for

estimates of exposed skin surface area for all land use scenarios. US EPA's guidance assumes that adult commercial/industrial receptors (e.g., groundskeepers) wear short-sleeved shirts, long pants and shoes, therefore, the exposed skin surface is limited to the head, hands, and forearms. The Department has concluded that the US EPA guidance provides reasonable estimates of the exposed skin surface area for workers and that no changes will be made in the Technical Support Document values.

D.8.51 Comment: Several comments indicated that the information in the Technical Support Document underestimates the rate of adherence and dermal absorption, which is higher for those engaged in manual labor (a factor of 0.2 vs. 0.3).

Response to D.8.51: As described in Section 5.2.2.3 of the Technical Support Document, the Department relied upon US EPA's 2004 Supplemental Guidance for Dermal Risk Assessment for estimates of surface area-weighted soil adherence factors for all land use scenarios. Based on that guidance we used US EPA's recommended geometric mean soil adherence factor of 0.2 mg/cm^2 for workers in commercial and industrial settings. US EPA characterizes this value as representative of high-end soil contact activities. The Department has concluded that the US EPA guidance provides reasonable estimates of soil adherence factors for workers and that no changes will be made in the Technical Support Document values.

As described in Section 5.2.2.3 of the Technical Support Document, the Department relied upon US EPA's 2004 Supplemental Guidance for Dermal Risk Assessment for estimates of chemical-specific dermal absorption fractions for all land use scenarios. In that guidance, US EPA indicates that its recommended values are experimental mean values and are applicable to the exposure assumptions (e.g., exposed surface areas and soil adherence factors) recommended elsewhere in the guidance. The Department has concluded that US EPA's guidance on dermal absorption fractions is reasonable and that no changes will be made in the Technical Support Document values.

Inhalation pathway

D.8.52 Comment: Several comments indicated that the Department did not consider inhalation of particulate-bound contaminants for workers engaged in activities that will result in additional potential for exposure (e.g., digging, maintenance of buried pipes and cables, working in pits or trenches).

Response D.8.52: The Department considered these comments and for the reasons below decided not to change the assumptions for estimating inhalation exposures to particle-bound contaminants. As described in Section 5.2 of the Technical Support Document, the Department reviewed exposure scenarios commonly used by US EPA and other state regulatory agencies and found considerable variability and no obvious consensus on scenarios. Our exposure scenarios reflect consideration of assumptions made by other regulatory agencies. As described in Section 5.2.2.2 of the Technical Support Document, the Department's approach for estimating exposure to particulate-bound contaminants for restricted land use categories is generally consistent with US EPA Soil Screening Guidance (1996 and 2002) approach for estimating generic Soil Screening Levels for commercial/industrial scenarios. US EPA's approach incorporates factors to account for the frictional force of winds entraining fine (very small) exposed soil particles into air. Furthermore, US EPA's approach assumes that all bare soil particles subject to wind erosion consist of finely-divided, loose soils and that substantial areas of sites have exposed surface soils. Additionally, any intrusive work activities

such as described in the comments, will need to be performed in accordance with the Site Management Plan, which will include a worker Health and Safety Plan. See Response to Comment D.8.44.

D.8.53 Comment: The Department received a number of comments indicating that inhalation rates for outdoor workers are underestimated. Most of these comments stated that inhalation rates relevant to laborers, groundskeepers, construction crew rather than sedentary worker inhalation rates should have been used. The inhalation rates suggested in the comments ranged from 20 to 60 m^3 for an 8-hour workshift. Some comments suggested using a safety factor of 10 to correct for underestimations of the inhalation rate. Other comments suggested that manual laborers may work extended hours or overtime shifts which would increase the duration of a worker's increased respiration rate.

Response D.8.53: The Department considered the various types of work activities that might be performed by an outdoor worker at commercial and industrial sites. As described in Section 5.2.2.2 of the Technical Support Document, the Department recognized that outdoor workers at the commercial and industrial sites might have an increased respiration rate during work activities. US EPA's 1997 Exposure Factors Handbook recommends an outdoor worker inhalation rate of 1.3 cubic meter (m^3) per hour, which is equivalent to 10.4 m^3 per 8-hour workshift. This is approximately half the assumed daily inhalation rate of 20 m^3 per day. Thus, we assumed that the worker inhales half of the daily intake of air during the workday. Since the approach used by the Department is consistent with US EPA recommendations, no changes will be made to the approach used to estimate inhalation SCOs.

D.8.54 Comment: A number of comments stated that the assumption of a breathing zone of 5-6 feet above the ground is unrealistic for groundskeepers and other outdoor workers who often dig, plant, weed, mulch, rake and engage in other activities close to the ground.

Response D.8.54: The comments are not correct. As described in Section 5.2.2.2 of the Technical Support Document, the Department used an approach that estimates ground-level concentrations of soil contaminants in air and these ground-level estimates were used to develop the inhalation SCOs. Also, as described in the Technical Support Document, the Department examined differences in estimated ground-level and adult breathing height concentrations and found that ground-level concentrations may be approximately two-times greater than breathing height concentrations.

D.8.55 Comment: A number of comments stated that the assumed vegetative cover percentage (50%) is overestimated, unrealistic and of limited relevance to a groundskeeper who will often work with areas that are not covered and are in fact disturbed.

Response D.8.55: As stated in Section 5.2.2.2 of the Technical Support Document, the assumed value of 50% vegetative cover is consistent with the default value recommended by US EPA in its 1996 and 2002 Soil Screening Guidance for developing generic soil screening levels. Use of this value means that the Department assumed that 50% of the area of the site is exposed and not covered by vegetation, pavement, buildings, etc. A groundskeeper may work in areas of bare, disturbed soils, as well as in areas of covered, undisturbed soils. The Department has decided not to change the assumption regarding percent vegetative cover as our our approach is generally consistent with US EPA.

D.8.56 Comment: Activities that would be likely to generate fugitive dusts were not considered. Activities such as dirt bike use, horseback riding trails or heavy truck traffic would not be accounted for in the SCO. How would the potential increased exposure from these activities be addressed for sites likely to have such activities?

Response D.8.56: As described in Section 5.2.2.2 of the Technical Support Document, the approach used by the Department is generally consistent with the approach used by US EPA in developing its 1996 and 2002 generic Soil Screening Levels.

Additionally, as described in Section 5.2.2.2 of the Technical Support Document, the US EPA approach that the Department used to assess exposure to particulate-bound contaminants incorporates factors to account for the frictional force of winds entraining fine, dry, loose exposed soil particles into air from 50% of the area of a site. The assumptions that dry soil particles subject to wind erosion consist of finely-divided, loose soils at all sites and that substantial areas of sites have exposed surface soils may not be applicable to all sites. For such sites, exposures may be overestimated. The kinds of activities described in the comment are likely to be confined to specific portions of a site and those portions, which may have varying levels of residual contamination, may comprise substantially less than 50% of the total site area.

For the reasons provided above, the Department has decided not to change its approach to developing SCOs based on the suggestions in the comment.

D.8.57 Comment: No particulate bound inhalation exposure was assumed to occur in children from indoor exposures. Children may in fact be at higher risk of exposure since they are closer to the ground where dust settles and is dispersed again.

Response D.8.57: As described in Section 5.2.2.2 of the Technical Support Document, particle infiltration into buildings is variable and a function of particle size, building characteristics and ventilation rates. The Department recognized that some particle-bound contaminants may infiltrate homes and that exposure to these contaminants may occur. The Department assumed that a portion of these particles is incorporated into household dust, and that the assessment of outdoor soil/indoor dust ingestion (Section 5.2.2.1 of the Technical Support Document) accounts for all indoor exposure to particulate-bound contaminants.

D.8.58 Comment: A commenter suggested that 19 days per year of exposure to particulate bound contaminants is a gross underestimate for restricted residential settings.

Response D.8.58: Inhalation exposures to particulate-bound contaminants was assessed for children and adults in residential settings. As described in Section 5.2.2.2 of the Technical Support Document, the Department assumed that children have outdoor inhalation exposure to particulate-bound contaminants five-days per week, every week, during the warmer months of the year for a total of 155 days per year. Since children would not be outdoors for 24 hours per day on each of those days, the Department assumed an outdoor exposure time of three hours per day, yielding the equivalent of a total of 19 days per year of exposure. However, if viewed in this manner, one must recognize that exposure on those 19 days would occur for 24 hours per day. As described in the response to the previous comment, the Department also assumed that particulate-bound contaminants infiltrate into homes and become incorporated into house dust, and that children have ingestion exposure to outdoor soil-derived contaminants in house dust every day of the year.

As described in Section 5.2 of the Technical Support Document, in developing exposure scenario assumptions, which include exposure frequency assumptions, the Department considered scenarios

commonly used by US EPA, scenarios developed by other state regulatory agencies, and information on activity factors contained in US EPA's 1997 Exposure Factors Handbook. Our review of this information indicated that there is considerable variability in the exposure scenarios used by others and no obvious consensus on scenarios. So, while the information was helpful, the Department found that it was not sufficient to provide a definitive technical basis for exposure scenario development. Therefore, the exposure scenarios are based on consideration of information from US EPA and other states, about typical activities and behaviors in different exposure settings.

For the above reasons, the Department has decided not to change its approach based on the suggestions in the comment.

D.8.59 Comment: We question the use of the "mass-limit" approach to develop volatilization factors for semi-volatile organics (SVOCs). This approach assumes that all the contaminant mass volatilizes from soil over the exposure period. It was included in US EPA's Soil Screening Guidance because the standard approach tended to violate mass balance for volatile organic compounds (VOCs), i.e., predicted more mass volatilizing from soils than was actually present. However, given the very low volatility of SVOCs, only a small fraction will likely volatilize, and therefore, the approach included in the proposal will substantially overestimate potential risks due to inhalation.

Response D.8.59: The comment is not correct. The Department did not use the mass-limit in developing inhalation SCOs for semi-volatile organic compounds. As described in Section 5.2.2.2 of the Technical Support Document, US EPA's mass-limit approach was only used to develop inhalation SCOs for volatile contaminants and elemental mercury. Inhalation exposure to semi-volatile contaminants (and metals) was evaluated by assuming that these chemicals are primarily associated with soil particles and these particles are entrained in air by winds, generally consistent with US EPA guidance.

Homegrown vegetable consumption pathway

D.8.60 Comment: The use of an across-the-board five-fold increase in allocation for the vegetable ingestion pathway is not supportable. As acknowledged in the Technical Support Document, there is considerable uncertainly associated with the estimation of exposure to soil contaminants via consumption of homegrown produce. Both the Department and NYSDOH have cited the USEPA. However, the USEPA did not incorporate the vegetable consumption pathway in the 1996 Soil Screening Guidance due to "a lack of empirical data" (U.S. EPA, 1996). In addition, the California EPA did not include the pathway in soil screening numbers because of the "paucity of data" and "enormous uncertainty in models" (CalEPA, 2005).

Response to D.8.60: It is true that there is great uncertainty in any estimates of contaminant transfer from soil to vegetables. There is also some additional uncertainty in estimates of vegetable consumption rates. Quantitative estimates of soil contaminant exposure via vegetable consumption were not included in the development of SCOs because of these uncertainties. However, studies have demonstrated that soil contaminants can become incorporated in vegetables and other edible plant parts. Rates of homegrown produce consumption can be relatively high (compared to rates of incidental soil ingestion), and small amounts of contaminants in vegetables could lead to potentially significant exposures. Thus the current unrestricted and residential SCOs incorporate a single exposure allocation across all the Priority List contaminants. This single percentage of total ingestion exposure acknowledges the potential significance of this pathway while avoiding incorporation of the error inherent in quantitative

estimates of chemical-specific exposure for vegetable consumption.

D.8.61 Comment: Some commentors stated that the factor used to account for homegrown vegetable pathway is not based on risk assessment calculations, and argued that the factor is arbitrary and may not be quantitatively defensible.

Response to D.8.61: The five-fold increase in estimates of incidental soil ingestion exposure incorporated in SCOs was not intended to quantitatively assess vegetable consumption exposures. The approach acknowledges a potentially significant pathway that cannot be quantified with a reasonable degree of certainty. As discussed in the Technical Support Document, a risk assessment approach to estimating exposure due to vegetable consumption would lead to highly uncertain estimates. US EPA has set regulatory precedents in the development of environmental guidelines and standards (e.g., drinking water standards) that account for the relative contribution of additional exposures (i.e., relative source contributions to the reference dose for non-cancer risk) that cannot be readily quantified. When available data are insufficient to accurately assess the magnitude of the additional exposures, the US EPA precedent suggests that allocations for these unquantified exposures may be set at a reasonable maximum allocation of 80% of total exposure. This approach served as a template for the development of exposure allocation incorporated in unrestricted and residential land use SCOs for the vegetable consumption pathway and the Department that it is protective.

D.8.62 Comment: Several commentors argued that the Department's approach for developing chronic health-based SCOs that included an allocation of 80% of ingestion exposure for unquantified vegetable consumption was not sufficiently conservative for metals readily taken up through plant roots. In particular, these commentors felt that the SCOs could seriously underestimate additional exposure to cadmium from gardening activity. One commentor presented data from the literature (citing McIntyre, 1977) with cadmium concentrations in various vegetables grown in sludge-amended soils). The commentor also combined these data with vegetable consumption estimates for adults and children reported in the literature (citing McBride, 2003). The commentor used these data to develop estimates of cadmium intake through consumption of vegetables grown on soils with cadmium present at the level of the final SCO based on rural soil background. These estimates are considerably higher than the 80% exposure allocation implicit in the health-based SCO.

Response to D.8.62 In the scientific literature, empirical data related to vegetable uptake are available for some contaminants. The results of the 1977 study of cadmium concentrations in sludge-amended soil and vegetables mentioned in one of the comments is an example of such data. These data, in combination with the vegetable consumption estimates presented in the comment, can be used to develop an estimate of cadmium intake through vegetable consumption. As the comment illustrated, estimated intakes based on these data and soil cadmium levels equivalent to the final background-based SCO (2.5 mg/kg) are higher than those implicit in the health-based SCO (0.86 mg/kg). This should not be unexpected as an SCO based on rural soil background is not based on estimated exposure, and therefore does not incorporate an allocation of exposure for vegetable consumption. For more discussion on the supercedance of health-based SCOs (including those incorporating an allocation for vegetable consumption) by SCOs based on rural soil background concentration, see the responses to comment on soil background.

Not enough is currently known about plant uptake of soil contaminants (including cadmium) to estimate plant uptake factors that could be generically applied for the development of state-wide Soil Cleanup Objectives. For instance, recent studies have shown that factors such as genetic variability within a

plant species (Zhu et al., 2004), and root morphology and soil texture (An, 2004) can significantly influence the cadmium concentration of plants. Even if the Department could identify data that are reasonably representative of soil conditions, plant types and vegetable consumption rates for New York State, and used those data as the basis for developing exposure estimates, these estimates would span a wide range. For these reasons – the limited amount of available data, the variability in this existing data, and uncertainty in the application of this data – the Department decided that a single exposure allocation would be applied to all Priority List contaminants, including cadmium.

References

An, Y. 2004. Soil Ecotoxicity Assessment Using Cadmium Sensitive Plants. Environmental Pollution. 127: 21-26.

Zhu, ZJ, Sun GW, Fang XZ, Qian QQ, Yang XE. 2004. Genotypic Differences in Effects of Cadmium and Elements in 14 Cultivars of Bai Cai. J. Env. Sci. Health B. 39(4): 675-687.

D.8.63 Comment: The adjustment of SCOs for volatile organic chemicals (VOCs) based on vegetable intake reduces the calculated SCOs by 80% to account for this pathway. However, constituent uptake by plants would only occur in the root zone, defined by US EPA as the top 20 cm of soil. This is the soil horizon most likely to be depleted of VOCs due to volatilization. The overall reduction appears overly conservative for all chemical classes, and most inappropriate for VOCs.

Response to D.8.63: As stated in responses to other comments, the approach for accounting for vegetable consumption incorporated in the development of some of the SCOs is not an attempt to quantitatively estimate chemical-specific exposure via this pathway. If it were possible to assess exposure quantitatively with sufficient confidence, it is likely that some assessments would result in higher exposure estimates, while others would result in lower exposure estimates, than the allocated exposure implicit in the unrestricted and residential SCOs. Because such an assessment was not feasible, the same allocation was applied to all contaminants and contaminant groups. Furthermore, it is possible that VOCs could be incorporated into edible plant parts. Numerous studies related to phytoremediation have demonstrated that plants can take up VOCs from contaminated soil and/or groundwater (e.g., Doucette et al., 1998). While VOCs may be substantially reduced in concentration in surface soils due to volatilization over time, the absence of land use controls to restrict earth moving and other soil disturbances that might result in the movement of deeper soils to more surficial strata. The potential availability of VOCs for uptake into plants following earth moving activities indicated by data reported in the literature, suggests that it is not inappropriate to apply the exposure allocation to VOCs, as it is applied to other contaminants.

Reference: Doucette, WJ, Bugbee, B, Hayhurst, S, Plaehn, WA, Downey, DC, Taffinder, SA, and R. Edwards. Phytoremediation of Dissolved-phase Trichloroethylene using Mature Vegetation. In: Wickramanayake, BB and Hinchee, RE (Editors), *Biomremediation and Phytoremediation: Chlorinated and Recalcitrant Compounds*. Battelle Press, Columbus, OH.

D.8.64 Comment: The barium SCO based on rural soil background may be excessively restrictive, given the low solubility and weak tendency of barium to be taken up by plants.

Response to D.8.64: The commentor is referring to the proposed SCO of 350 mg/kg for the unrestricted land use category. The calculated health-based SCO for this category, taking the vegetable consumption pathway into account, is 72 mg/kg (see Table 5.6-1 of the revised Technical Support Document). The legislation (§ 27-1415) stated that if the background soil concentration for a contaminant in rural soils in New York State exceeds a health-risk based soil concentration, the SCO for that contaminant may be

established equal to the background concentration. Since the rural soil background concentration for barium was determined to be 350 mg/kg, this value was established as the proposed SCO. In the absence of the vegetable consumption pathway, the barium SCO would be 400 mg/kg (based on acute exposure – see Table 5.6-1 of the Technical Support Document), which is not very different from the current SCO based on background.

D.8.65 Comment: One comment stated that the unrestricted lead SCO based on the EPA soil lead standard would be a substantial risk for gardeners because of dust and soil contamination of leafy vegetables.

Response to D.65: The US EPA residential soil lead standard (400 mg/kg) is based on EPA's Integrated Exposure Uptake Biokinetic (IEUBK) Model. This model estimates exposure for multiple pathways including soil and dust ingestion, as well as indirect dietary exposures, and others. The Department chose to use this standard, in part, because of its consideration of multiple exposure pathways. Also, the approach used to develop the standard was a scientifically rigorous, state-of-the-art method specifically developed to derive a health-based standard for lead in soil. For more information about the US EPA model and the standard, see Section 5.3.4 of the Technical Support Document and references cited therein.

Toxicity Assessment

Toxicity values

D.8.66 Comment: The Department received numerous comments about the toxicity values obtained from authoritative bodies and used to calculate the soil clean-up objectives. Most indicated concern that the established toxicity values of the authoritative bodies are outdated and do not make use of the most recent scientific information. Other comments on toxicity values made mention of or provided specific references from the scientific literature in support of contentions that toxicity values for certain chemicals (e.g., beryllium, arsenic, lead, cadmium, PAHs such as benzo(g,h,i)perylene, PCBs, DDT and metabolites) should be changed or not be used at all.

Response to D.8.66: Several approaches were considered for choosing toxicity values for calculating SCOs. One approach was to derive up to four toxicity values (reference dose, reference concentration, cancer potency factor, unit risk) for each of the chemicals on the priority list. In light of the fact that this would in many cases be duplicative of existing derivations and require an up-to-date comprehensive literature search on the toxicity of over 80 chemicals, in-depth review of all the potential critical studies, and finally, development of up to four toxicity values for each chemical, this approach was not considered practical. An alternative approach was to rank authoritative bodies (and not individual toxicity values) on the overall strength, comprehensiveness, and scientific quality of the organizations' derivations, and choose the toxicity value from the highest-ranked authoritative body without regard to the quality of the individual derivation. This use of a hierarchical ranking system to obtain toxicity values would be consistent with approaches used by other states (e.g., New Jersey, Minnesota and Florida) in their soil remediation programs (FL DEP, 2004; NJ DEP, 2004; MN PCA, 1999). However, our review of the toxicity values derived by authoritative bodies showed that no single agency always had the most scientifically rigorous and up-to-date derivation, and that the quality of the toxicity values derived by any single agency varied with the chemical and the toxicity value. Therefore, choosing the toxicity values based solely on the authoritative body would not necessarily provide the most scientifically defensible toxicity value, or one based on the most current information or methods. The

Department decided on an approach that involved obtaining and reviewing all the available toxicity values from the authoritative bodies, and choosing the values that were most consistent with current risk assessment practices and based on the best available scientific information. Thus, the current SCOs are based on the most up to date and scientifically rigorous toxicity values available.

Authoritative bodies may update noncancer and cancer toxicity values when studies become available that may more accurately define the most sensitive toxicity endpoint for a chemical, what chronic exposure levels cause adverse health effects, or (for cancer toxicity values) provide a better estimate of the chemical's carcinogenic potency. As authoritative bodies revise toxicity values, the Department will consider these values and update the SCOs within the time frame specified by the legislation (S 27-1415, 6(c)).

The Department also appreciates the comments that provided toxicity information and/or references on specific chemicals (e.g., beryllium, arsenic, lead, cadmium, benzo(g,h,i)perylene, PCBs, DDT and metabolites). If this type of information leads to a change in an authoritative body's toxicity value, the Department will, as described above, consider the value and, if appropriate, update the SCOs. Similarly, the Department may decide to use this kind of information to derive its own toxicity values for certain chemicals. If such values are derived, they will be considered in future updates of SCOs.

References

FL DEP (Florida Department of Environmental Protection, Division of Waste Management). 2004. Draft Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C. Gainesville, FL: HG Ochoa, HG, Gadagbui B, Tolson JK, and Roberts SM. Center for Environmental & Human Toxicology, University of Florida.

MN PCA (Minnesota Pollution Control Agency). 1999. Draft Guidelines: Risk-Based Guidance for the Soil-Human Health Pathway. Volume 2. Technical Support Document. St. Paul, MN: Site Remediation Section.

NJ DEP (New Jersey Department of Environmental Protection). 2004. Soil Remediation Standards Public Comment Notice. Basis and Background Inhalation Pathway Document. Trenton, NJ: Site Remediation and Waste Management Program.

D.8.67 Comment: Toxicological information (i.e., cancer slope factors and/or reference doses/concentrations) for a number of compounds presented in the Part 375 guidance were compared to those used in the EPA Region III Risk-Based Concentration Tables as well as EPA's Integrated Risk Information System (IRIS). Generally, the toxicity values used in Part 375 are more conservative than those used by the EPA. This is especially apparent when the RSC adjustment is made to the RfD/RfC values under the Part 375 program. The Department must provide further discussion and justification of the scientific merit for the use of cancer slope factors and reference doses/concentrations where these differ greatly from those used by other state and federal agencies.

Response to D.8.67: The Department believes that adequate justification and discussion on the choice of toxicity values were provided. The Department developed four fact sheets for each of 82 priority contaminants that provided a detailed discussion and scientific rationale for the choice of each chronic toxicity value. The chronic toxicity values were chosen based on which derivations reflected the most up to date scientific information and were the most consistent with current risk assessment practice. Detailed fact sheets describing the derivation of toxicity values based on acute toxicity were also provided. The chemical-specific fact sheets are found in Appendices A and B of the Technical Support Document. Criteria for the selection of toxicity values are discussed in Sections 5.1.1.3 and 5.1.1.5.

The basis for the relative source contribution is found in Sections 5.2.3.1 and 5.2.3.2.

D.8.68 Comment: One commenter recommended that toxicity values used in the development of the SCOs should be peer-reviewed to ensure that they are derived using information and methodologies that reflect the current state of the science.

Response to D.8.68: Most of the toxicity values that were used in the developmental of human-health based SCOs have undergone a significant level of peer review. The US EPA, CA EPA, NYS DOH, NYS DEC and Health Canada (i.e., the authoritative bodies from which nearly all the toxicity values were obtained) all have mechanisms in place that allow for internal and external review, including in some cases, external review by experts in the fields of toxicology and risk assessment. Although some toxicity values used in the development of human health SCO based on acute or dermal toxicity were not obtained from authoritative bodies, each was based on a recent review of the literature and risk assessment methods consistent with general risk assessment guidelines. Each was included in the Technical Support Document made available for review. Thus, the Department has confidence in the scientific quality of the toxicity values used in the development of health-based SCOs.

D.8.69 Comment: The Department used route-to-route extrapolation to derive inhalation toxicity values from oral toxicity values when inhalation toxicity values for a chemical were not available. To obtain these inhalation toxicity values, the Department applied adult parameters for body weight and inhalation rate (i.e., a 70-kg adult inhales 20 cubic meters of air per day) to the oral toxicity values. The Department should recalculate the inhalation toxicity values based upon children's parameters because children are at the highest risk.

Response to D.8.69 The Department does not agree with the suggestion to use child instead of adult parameters values for route-to-route extrapolation. Preferably, reference concentrations and inhalation unit risks should be obtained from inhalation toxicity data. For some of the priority chemicals, a reference concentration or an inhalation unit risk was not available. In these cases, if the chemical was a systemic toxicant (i.e., caused health effects on a body organ or system away from the site of exposure), a comparable reference concentration or an inhalation unit risk was derived from the reference dose or cancer potency factor, respectively, for use in calculating the SCOs.

The use of adult body weight (70 kg) and inhalation rate (20 m^3/day) to obtain inhalation toxicity values from oral toxicity values is a standard route-to-route default extrapolation that is consistent with current risk assessment practice. The US EPA uses adult values for body weight and inhalation rate to obtain inhalation unit risks from cancer potency factors for many chemicals in its Integrated Risk Information System database (US EPA, 2006), and to derive non-cancer ambient air guideline concentrations from reference doses (US EPA, 2004). In addition, other states (e.g., New Jersey, Minnesota and Florida) use adult body weights and inhalation rates in their soil remediation programs to derive inhalation toxicity values from oral toxicity values (FL DEP, 2004; NJ DEP, 2004; MN PCA, 1999). Thus, the Department will continue to use adult parameters when extrapolating from oral toxicity value to inhalation toxicity values.

References

FL DEP (Florida Department of Environmental Protection, Division of Waste Management). 2004. Draft Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C. Gainesville, FL: HG Ochoa, HG, Gadagbui B, Tolson JK, and Roberts SM. Center for Environmental & Human Toxicology, University of Florida.

MN PCA (Minnesota Pollution Control Agency). 1999. Draft Guidelines: Risk-Based Guidance for the Soil-Human Health Pathway. Volume 2. Technical Support Document. St. Paul, MN: Site Remediation Section.
NJ DEP (New Jersey Department of Environmental Protection). 2004. Soil Remediation Standards Public Comment Notice. Basis and Background Inhalation Pathway Document. Trenton, NJ: Site Remediation and Waste Management Program.
US EPA IRIS (US Environmental Protection Agency Integrated Risk Information System). 2006. Office of Research and Development, National Center for Environmental Assessment. http://www.epa.gov/iris/index.html
US EPA Region 3 (US Environmental Protection Agency Region 3). 2004. Risk-based Concentration Table. Superfund Technical Support Section. http://www.epa.gov/reg3hwmd/risk/human/index.htm

D.8.70 Comment: Benzo(a)pyrene equivalents are listed for seven carcinogenic PAHs. All equivalents used to develop the proposed SCOs are the same as the equivalents currently used by NYSDEC and NYSDOH except for chrysene, which the agencies are now assuming to be ten times more carcinogenic than assumed previously. This carcinogenic potency is not used by the USEPA. The rationale for the change in the chrysene benzo (a)pyrene equivalent was based on one study. It is suggested that without further peer-reviewed scientific evidence supporting the change in the benzo(a)pyrene equivalent for chrysene, that the benzo(a)pyrene equivalent for chrysene be left at the current value of 0.001 in accordance with EPA/IRIS.

Response to D.8.70: The Department considered this comment and did not change its relative potency factor for chrysene. The decision to use a relative potency factor of 0.01 rather than 0.001 for chrysene was based on a review of studies that compare the carcinogenic potency of chysene to benzo(a)pyrene under the same protocol. Both relative potencies (0.01 and the EPA value of 0.001) are based on "one study." The US EPA's relative potency factor of 0.001 is based on a single study that compared the relative ability of chrysene and benzo(a)pyrene (the reference or index chemical) to cause skin tumors in mice on direct dermal application. The relative potency factor of 0.01 is based on the relative ability of the same two chemicals to cause lung tumors on intrapleural implantation in rats. The intrapleural implantation study is clearly a better quality study than the mouse skin carcinogenesis study because it used two dose groups (compared to one in the dermal study) and used more animals per dose group (35 compared to 20). In the absence of compelling scientific information to suggest one mode of administration is preferable over the other for determination of relative potencies, the intrapleural implantation study was used as the basis for the chysene relative potency factor. The basis for the relative potency factors for the carcinogenic PAHs is discussed in detail in Section 5.1.5.2 of the Technical Support Document.

Sensitive subpopulations

D.8.71 Comment: Commenters stated that the Department analyzed only a small number of priority chemicals for acute toxicity associated with deliberate soil ingestion by children, and underestimated the amount of ingestion. They recommended that the Department should (1) justify their focus on the small number of contaminants or expand their analysis to include a much broader range of priority contaminants, (2) use a more appropriate assumption regarding the amount of soil ingestion associated with intentional ingestion behavior, and (3) extend their assessment of acute toxicity to sub-acute toxicity.

Response to D.8.71: Several factors lead to the selection of the contaminants for which acute SCOs were derived. First, they were identified in an important paper (Calabrese et al., 1997) as soil

contaminants that might pose a risk of acute toxicity at soil concentrations considered protective of chronic toxicity. This paper was identified in comments submitted to the Department following public meetings in 2004 that were held to solicit input on the proposed SCO process. Second, other state agencies developing soil guidelines based on acute toxicity considered the same set of contaminants.

In developing acute SCOs for the selected contaminants, the Department recognized that the available data on their acute toxicity were barely adequate for use in dose-response assessment. The Department also realized that risk assessment methods (particularly exposure assessment, see below) for evaluating acute toxicity are not as well developed as methods for evaluating chronic toxicity. Consequently, the Department did not evaluate other contaminants for their acute toxicity.

The soil ingestion rate used for children who deliberately ingest soil (i.e., pica children) was 10,000 mg soil per event. This value was chosen because data on the deliberate soil ingestion by children are limited and it is the value recommended in the US EPA Child-Specific Exposure Factors Handbook (US EPA, 2002a). It is also the value used by other state agencies (Florida DEP, 2004; MN PCA, 1999). Finally, an ATSDR expert panel convened in 2000 to discuss various issues on soil-pica, and recommended continued use of a soil ingestion rate of 5,000 mg per event (a lower value than that used in the Technical Support Document)(ATSDR, 2001). For these reasons, the Department did not change the value.

Regarding sub-acute toxicity, there are very limited data on the sub-acute effects of toxicants because toxicity studies (i.e., studies 14-28 days long) that provide such information are not part of the recommended set of toxicity tests described in US EPA guidelines for toxicity testing (US EPA, 2002b). In addition, consensus on the appropriate methods to derive sub-acute toxicity values and exposure scenarios for evaluating the potential for sub-acute toxicity are not as well developed as they are for chronic toxicity. Thus, the Department did not develop human-health based SCOs based on sub-acute toxicity. Notwithstanding, the Department believes that the SCOs are protective. (see generally response to D.8.1)

References

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Calabrese EJ, Stanek EJ, James RC, and Roberts SM. 1997. Soil ingestion: A concern for acute toxicity in children. Environ Health Perspect. 105(12):1354-1358.

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US EPA (US Environmental Protection Agency). 2002b. A Review of the Reference Dose and Reference Concentration Process. Final Report. EPA/630/P-02/002F. Washington, DC: Risk Assessment Forum.

D.8.72 Comment: Several comments indicated concern that the commercial and industrial SCOs do not adequately address acute health risks for workers, particularly pregnant women and teenagers, who may come into contact with soil contaminants on remediated Brownfields sites in the course of their work.

Response to D.8.72: Most chronic human-health SCOs based on non-carcinogenic effects were calculated using toxicity values (reference doses and reference concentrations) derived from chemicals' no-observed effect levels or lowest observed effect levels for the most sensitive health effect in the most sensitive species, typically observed in a subchronic or chronic study. These toxicity values were chosen because they are, by definition, derived to be protective against non-carcinogenic effects during a lifetime, and therefore are expected to protect against health effects (including developmental toxicity) that may result from short-term or acute exposure. Moreover, the derivation of reference doses and reference concentrations includes, when necessary, an additional uncertainty factor that is applied to NOEL or LOEL to compensate for missing data on developmental or reproductive toxicity. Chronic human-health SCOs based on carcinogenic effects were based on the exposure level (dose or air concentration) associated with an increased lifetime cancer risk of one-in-one million. The doses or air levels associated with an excess lifetime human risk of one-in-one million are also much lower than the exposure levels that cause short-term or acute health effects. Thus, the SCOs based on chronic toxicity values of chemicals are expected to be protective against acute health effects (including developmental effects in pregnant workers) of those chemicals when exposure scenarios for chronic and acute exposures are the same or are expected to be similar. In addition, chronic human-health SCOs for two chemicals (1,2-dichlorobenzene and methy ethyl ketone) were based on developmental toxicity because the toxicity data indicated that developmental effects were a more sensitive indicator of toxicity than other effects.

However, some comments raised concern about developmental toxicity if pregnant women ingested substantially more soil per day than assumed in the exposure scenarios used to derive industrial or commercial SCOs. The Department concludes it would be a very rare event for a woman to ingest substantially more soil at a commercial or industrial site. Moreover, a pregnant woman would have to ingest an extraodinarily large quantity of soil containing 1,4-dichlorobenzene or methyl ethyl ketone (46 pounds and almost 1 pound, respectively) at the level of their industrial SCOs to obtain a contaminant dose equal to the maternal contaminant dose that caused developmental toxicity in animals (see table below). To obtain a contaminant dose equivalent to the developmental no observed effect level, about 15 pounds and 0.32 pounds (or more than 100 grams) of 1,4-dichlorobenzene and methyl ethyl ketone would need to be ingested (see below). The amount of ingested soil necessary to obtain an exposure equivalent to the developmental effect levels and no-effect levels at commercial sites would be even larger since the commercial SCOs are lower than those for industrial sites. Thus, the Department concludes that the SCOs should be protective of the acute developmental effects of pregnant workers who ingest contaminated soil.

Contaminant	**Industrial SCO[1]**	**NOEL[2]**	**LOEL[2]**	**Pounds of Ingested Soil Required to Obtain Dose Equivalent to[3]**	**Pounds of Ingested Soil Required to Obtain Dose Equivalent to[3]**
methyl ethyl ketone	240,000	594	1771	0.32	0.95

1,4-dichlorobenzene	250	30	90	15	46

[1]milligrams contaminant per kilogram soil
[2]milligrams contaminant per kilogram body weight per day
[3]calculated assuming the average body weight for the first trimester is 58 kilograms.
LOEL = Lowest Observed Effect Level for Developmental Toxicity
NOEL = No Observed Effect Level for Developmental Toxicity

D.8.73 Comment: Commenters expressed the opinion that the Department should assume that children, including adolescents, are more sensitive to the non-carcinogenic effects of contaminants and should increase the magnitude of the uncertainty factor used to determine non-carcinogenic toxicity values (reference doses and reference concentrations).

Response to D.8.73: The Department disagrees with this opinion for several reasons.

(1) The observation and experimental evidence on the relative sensitivities of immature and adult animals or children and adults to the toxic effects of chemicals does not support the conclusion that the young are always more sensitive than the old to the effects of chemicals (Brent, 2004; Brent and Weitzman, 2004; NRC, 1993; Scheuplein et al., 2002; Schwenk et al., 2003). For example, children may be more sensitive to some liver toxicants than adults whereas adults are more sensitive than children to other liver toxicants (Pineiro-Carrero and Pineiro, 2004). Thus, the suggestion to reduce toxicity values to compensate for the possibility that children may be more sensitive to all chemical exposures than adults is not strongly supported by scientific data.

(2) The toxicity values based on the non-carcinogenic effects of almost all chemicals (reference doses and reference concentrations) were derived by an authoritative body using methods consistent with general risk assessment principles (e.g., ATSDR, 1996; US EPA, 1994, 2000a,b, 2002). Although the derivations of these values typically did not explicitly take into consideration the potential increased sensitivity of children to toxicants, they are all based on a number of health-protective assumptions, and the resulting values are considered protective of sensitive humans, including children. These health-protective, but scientifically reasonable, assumptions are made to bridge data gaps in the information necessary to make low-dose and cross-species extrapolations, and are more likely to overestimate rather than underestimate risk for most people (NRC, 1994; US GAO, 2001).

Some scientists believe that an additional factor of 10 should be used to compensate for the differences between adults and children (NRC, 1993). US EPA workgroups have indicated that a default uncertainty factor of 10 for human variation, including the variation among adults and children, is adequate in most cases (US EPA, 1999, 2002). Others have come to a similar conclusion (Burin and Saunders, 1999; Dourson et al., 2002; Renwick et al., 2000), while others have not (Landrigan et al., 2004) and the issues are not yet resolved (Brent and Weitzman, 2006; Daston et al., 2004; Miller et al., 2002). The US EPA conclusion was based on an analysis of the data on differences among adults and children, and on the realization that some of the uncertainty associated with human variation can be addressed by the use of an uncertainty factor for database deficiency (or a modifying factor). These uncertainty factors are used when there are concerns about the adequacy of the database to identify effects in sensitive populations. Their use addressed some of the concern about the increased sensitivity of children.

(3) The Department has not ignored the increased sensitivities or special characteristics of children in

the development of human-health based SCOs based on non-carcinogenic effects. The Department used toxicity values based on effects in immature animals or children for soil contaminants that are relatively more potent in young organisms than adult organisms. For example, the chronic human health-based SCOs for lead are based on toxicity values in pregnant women or children and because it is well known that infants and children are more sensitive than adults to the central nervous system effects of lead. The non-carcinogenic oral and inhalation toxicity value for methyl ethyl ketone and the oral toxicity value for 1,4-dichlorobenzene were based on developmental effects because those were the most sensitive responses observed in the toxicity studies. Moreover, the toxicity values used to derive chronic human-health SCOs included toxicity values derived with uncertainty factors for missing data, including missing studies on sensitive populations (i.e., study on reproductive or developmental toxicity). In addition, acute human health-based SCOs were derived for seven contaminants thought to pose an acute risk to children who deliberately ingest a large amount of soil.

For these reasons, the Department will retain the toxicity values based on non-carcinogenic effects of contaminants.

References

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US EPA (US Environmental Protection Agency). 2002. A Review of the Reference Dose and Reference Concentration Process. Final Report. EPA/630/P-02/002F. Washington, DC: Risk Assessment Forum.

D.8.74 Comment: Commenters recommended that the Department follow US EPA 2005 guidelines for evaluating the cancer risk of early life exposure to carcinogens in the development of SCO based carcinogenic effects of contaminants.

Response to D.8.74: In spring of 2005, the US EPA released its Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (US EPA, 2005). The document provides guidance on how to adjust toxicity values for carcinogenic effects (oral cancer potency factors and inhalation unit risks) determined from typical animal or epidemiological studies to compensate for potentially increased sensitivity of children to early-life exposures. The US EPA recommended such adjustments for chemicals that cause cancer by a mutagenic mode-of-action. Much of the Technical Support Document was completed before the US EPA released its final document, and the Department was unable to incorporate the recommendations into the draft Technical Support Document. However, the revised Technical Support Document contains material on the US EPA recommendations (Section 5.1.1.6) and on their use to derive SCOs for certain contaminants (Section 5.3). The Department modified the oral cancer potency factors and inhalation unit risks for those contaminants (see Table 5.1.1-2) that were easily identified as causing cancer by a mutagenic mode-of-action. In addition, the Department will determine in the future whether the mode-of-action for other priority contaminants is likely to be mutagenic, and if so, will adjust the toxicity value for those chemicals following US EPA recommendations.

References

US EPA (US Environmental Protection Agency) 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. EPA/630/R-03/003F. Washington, DC: Risk Assessment Forum.

D.8.75 Comment: Several commenters identified sensitive subpopulations, besides children, that they thought were not adequately protected by the SCOs. These included pregnant yard workers, adolescent yard workers, pregnant women in the workplace, subsistence fishers and people with a higher risk for health effects because of pre-existing health problems, nutritional deficiencies or concurrent elevated exposures to other chemicals).

Response to D.8.75: The Department recognizes that an individual's characteristics (e.g., health, diet,

genetic background, nutritional status, prior or contemporaneous exposures) are important factors in determining their sensitivity to a particular chemical. The Department also recognizes that some populations may be more sensitive than others to given levels of exposure. Individual-specific factors that may contribute to increased sensitivity would need to be addressed on a case-by-case basis and can not be incorporated into generic statewide SCOs. However, human-health based SCOs were derived using assumptions that are more likely to overestimate health risks than to underestimate health risks to the public (NRC, 1994; US GAO, 2001). For example, the possibility of greater sensitivity to chemicals is compensated to some extent by assumption and choices that are made when non-cancer toxicity values are derived (see Response to Comment on evaluating the risk of non-carcinogenic effects in children). The potential for non-site, and potentially above average exposures, of some groups is compensated to some extent by the use of a relative source contribution factor to calculate SCOs based on the non-carcinogenic effects of chemicals (see Response to Comment on relative source contribution). Human health-protective assumptions are also made to derive SCOs based on carcinogenic effects of chemicals. For example, oral cancer potency factors and inhalation unit risks are most often based on the assumption that humans have a sensitivity that is similar to that of the most sensitive tumor-sex-strain-species combination. In addition, toxicity values based on carcinogenic effects were derived using points-of- departure that represent lower bound estimates of doses, instead of average estimates of doses (i.e., maximum likelihood estimates). Finally, the Department emphasizes that it selected child SCOs (when calculated) as the final human-health SCOs when they were lower than the adult SCOs for the same land-use category. This choice minimizes potential risks to other sensitive subpopulations.

The generic tables of human-health SCOs identify soil levels of chemicals at Brownfield sites that meet numerical measures of risk as defined by legislative requirements (i.e., hazard index of one and excess cancer risk of one-in-one million). They are not concentrations that distinguish soil levels that will cause health effects from those that will not cause health effects. The SCOs are set at soil levels that are in all cases lower, and usually much lower, than soil levels corresponding to doses that caused either non-carcinogenic or carcinogenic effects in animals or humans. Thus, the possibility of site-related health effects at the SCOs is low for individuals who may be more sensitive than expected or who may have greater exposure than expected.

References

NRC (National Research Council). 1994. Science and Judgement in Risk Assessment. Washington, DC: National Academy Press

US GAO (US General Accounting Office). 2001. Report to Congressional Requesters. Chemical Risk Assessment. Selected Federal Agencies' Procedures, Assumptions, and Policies. GAO-01-810. Washington, DC: US GAO.

Bioavailability

D.8.76 Comment: There is no discussion concerning the incorporation of bioavailability into the process of developing SCOs under Track 3 or Track 4. It is suggested that the Part 375 be modified to allow verified methods to assess the bioavailable fraction of listed substances, which can then be used to adjust the SCOs under Tracks 3 and 4.

Response to D.8.76: Although some scientific studies have investigated bioavailability (the percentage of the applied, ingested or inhaled dose that is absorbed into the body of animals or humans) of a very limited number of priority contaminants, information sufficient to support a scientifically sound

bioavailability factor generally not available. Moreover, bioavailability is a complex biological process that is influenced by a variety of contaminant-, route-, soil- and site-specific factors (NEPI, 2000a,b; NRC, 2003). Hence, information necessary to determine bioavailability for a contaminant or a group of contaminants at a particular site would have to be obtained on a case-by-case basis. The Department did not include bioavailability considerations in developing the SCOs for Tracks 1 and 2 and, therefore, bioavailability is not a factor that can be modified in Track 3. Notwithstanding, the Department believes that the SCOs are protective. (see generally response to D.8.1)

References

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NEPI (National Environmental Policy Institute). 2000b. Assessing the Bioavailability of Metals in Soil for Use in Human Health Risk Assessments. Bioavailability Policy Project Phase II. Metals Task Force Report. Washington, DC: NEPI.

NRC (National Research Council). 2003. Bioavailability of Contaminants in Soils and Sediments: Processes, Tools and Applications. Washington, DC: National Academy Press.

Relative source contribution

D.8.77 Comment: The Department received comments for and against the use of a 20% relative source contribution (RSC) factor in the development of chronic human-health based SCO based on the non-carcinogenic effects of priority chemicals. Some commenters also identified groups (e.g., children, people of color, communities with elevated exposures due to cultural patterns, such as subsistence fishing, religious use of mercury, and workers exposed to the same chemicals in the workplace and in soil at Brownfield sites) that they thought might be at greater risk from aggregate exposures than other populations.

Response to D.8.77: The legislation required the Department to consider exposures "from other routes" (e.g., exposure from off-site sources) in the calculation of SCOs. In Section 5.2.3 of the Technical Support Document, the Department discussed approaches used by US EPA regulatory programs to compensate for other potential sources of exposures in the derivation of chronic human-health guidelines for non-carcinogenic effects of chemicals in drinking water and ambient water. The Department decided to use the US EPA approach in the calculation of chronic human-health SCOs based on the non-carcinogenic effects of chemicals. In summary, the Department allocated only a percentage (the relative source contribution) of the reference dose or reference concentration to a site. This reduces the likelihood that aggregate exposure would exceed the threshold dose for non-carcinogenic effects. Ideally, the percentage should be based on contaminant-specific data, but such data are lacking for most of the priority chemicals. Thus, the Department allocated 20% of the reference dose or reference concentration to a site (see Technical Support Document Section 5.2.3 for the rationale). This value is consistent with the US EPA drinking water and ambient water programs (US EPA, 1990, 1991, 2000a,b). None of the comments submitted provided sufficient information to warrant a change in the approach or magnitude of the relative source contribution factor. The Department will retain its use of the 20% relative source contribution factor in the development of chronic human-health SCOs based on the non-carcinogenic effects of chemicals.

References

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Chemical-specific

D.8.78 Comment: Many commenters stated that the human-health based lead SCOs are too high and not adequately protective of children and other sensitive or highly exposed groups. One commenter stated that it is unacceptable to omit a detailed analysis of lead when developing soil cleanup objectives. Several commenters also noted that the lead SCOs exceed rural background.

Response to D.8.78: The Department considered these comments and decided not to change its approach for developing the SCOs for lead. As described in Section 5.3.4 of the Technical Support Document, the SCOs are based on US EPA methods for deriving soil standards for lead using models that link environmental levels of lead with blood levels of lead in children or in the fetus. The US EPA methods are based on the avoidance of neurological effects in infants and children, generally recognized as the most sensitive non-carcinogenic effect in a sensitive population, and are protective of other potentially sensitive populations. The lead SCOs for children are based on child exposure and IEUBK (Integrated Exposure-Uptake Biokinetic) modeling performed by the US EPA in developing its 2001 hazard standards for lead in soil. This approach was chosen because it was a scientifically rigorous, peer-reviewed, state-of-the-art method specifically developed to derive a health-based standard for lead in soil. The Department concluded that the exposure scenario used by the US EPA in developing its 400 ppm standard for bare soil in a play area is a reasonable surrogate for the exposure scenario used in the development of the other SCOs for children. The lead SCOs for adults are based on US EPA's 2003 Adult Lead Methodology. This is a scientifically rigorous, peer-reviewed, state-of-the-art method.

The technical basis for the chronic human-health based SCOs for lead are provided in the Technical Support Document and the US EPA documents referenced within that document (see Sections 5.1.1.7 and 5.3.4, and references therein). Collectively, those sections provide adequate documentation for the SCO derivations. The Department recognizes that the proposed chronic human-health based SCOs for lead are above rural background levels. This is not inconsistent with Section 27-1415.6(b) of the legislation.

D.8.79 Comment: The SCO based on public health protection for carbon tetrachloride (0.76 ppm) is set higher than the USEPA's 1 in 1,000,000 cancer risk Soil Screening Level (0.3 ppm for Inhalation). This concentration can be found in EPA document OSWER 9355.4-24 (Appendix A / Exhibit A-1) (December 2002) titled "Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites."

Response to D.8.79: Differences between SCOs and soil screening levels (SSLs) are to be expected because the two types of values were developed for different purposes. The carbon tetrachloride SSL of 0.3 ppm is based on carcinogenic health risk from inhalation, while the carbon tetrachloride Track 1 SCO (0.76 ppm) is based on protection of groundwater, and therefore the two values cannot be directly

compared. The SSL value of 0.3 ppm differs from the unrestricted health-based SCO of 1.4 ppm (see Table 5.3.6-1 of the Technical Support Document) because the values were derived using different approaches and assumptions. For example, US EPA's SSL was developed assuming an infinite source of contaminant in the soil, while the SCO was developed using US EPA's mass-limit approach for contaminants that may violate mass-balance assumptions inherent in US EPA's infinite source model. Additionally, US EPA assumed an exposure frequency and exposure duration of 350 days/year and 30 years, respectively, while the SCO is based on corresponding assumptions of 217 days/year and 70 years. Also, the SCO of 1.4 ppm reflects combination of the ingestion, dermal and inhalation pathways. US EPA's SSL for the combined ingestion and dermal pathways is 5 ppm.

D.8.80 Comment: One commentor questions certain SCO's for unrestricted residential land use. For example, the SCO for the noncarcinogen acetone (0.05 ppm) is actually lower than the SCO for benzene (0.06 ppm), which is classified as a known human carcinogen. The agency should reevaluate the SCO's to ensure that resources are not wasted or misdirected toward addressing constituents that are less toxic.

Response to D.8.80: Track 1 SCOs are not based solely on the potential human health effects of the contaminants, but are also protective of groundwater and ecological resources. For example, the chronic human-health based SCO (unrestricted land use category Table 5.6.1) for benzene (2 ppm) is substantially lower than the human-health based SCO for acetone (3,200 ppm), but both of these values are higher than the groundwater soilcleanup objective values. Similarly the ecological resource values for benzene (70 ppm) and acetone (2.2 ppm) are also well above the groundwater values. Therefore, the final Track 1 SCOs for acetone and benzene (0.05 ppm and 0.06 ppm, respectively) are based on the protection of groundwater.

D.8.81 Comment: It would be logical to distinguish alkyl-Hg forms from inorganic or total soil Hg, rather than ionic from elemental. Elemental is of much less concern than organic forms of Hg because of bioaccumulation concerns.

Response to D.8.81: The Department evaluated the comment, as well as the information in the Technical Support Document which considered different forms of mercury typically encountered at remedial sites, and the Department considered this comment and has determined to present the SCOs for mercury in the form of total mercury in the unrestricted and restricted use tables. Organic ("alkyl") forms of mercury (e.g., methylmercury) are not analytes in standard test methods typically used in the investigation of remedial sites. Where a specific form of mercury, whether organic or inorganic is a contaminant of concern at a site, the Department may require, or the remedial party may propose to, develop a SCO for the specific form in question.

General SCOs

D.8.82 Comment: A commenter noted that, in general, the procedures and assumptions used to develop these SCOs appear to be very health protective. The process included health protective assumptions, such as exposure via consumption of home grown vegetables and compensating for additive effects of non-site related exposures to a chemical of concern. The SCOs are adequately protective, but balanced and realistic. This strikes an appropriate balance between the need to improve environmental conditions as well as the need to do that which is economically achievable. Reasonable SCOs will return blighted urban sites into cleaned up areas.

Response D.8.82: The Department agrees that the SCOs are based upon appropriate evaluations,

considerations and assumptions.

D.8.83 Comment: The law's preference for permanent and complete cleanups of contaminated sites is violated and fail to adequately protect groundwater, children, water supplies, and fish and wildlife.

Response to D.8.83: The Department disagrees. (See response to comment D.8.1 generally)

D.8.84 Comment: Adoption of reasonable, protective risk-based soil cleanup objectives, with risk based in large part on exposure risks inherent in the intended use of the site, is a significant, positive step toward promoting brownfield cleanup and redevelopment in New York. A comparison of the Track 2 SCOs show use-based numbers for commercial and industrial cleanups to be more realistic and achievable than those currently employed through the Department's residential exposure-based guidelines (TAGM 4046), properly reflecting the reduced risk of on-site public health exposures at these sites.

Response to D.8.84: Comment noted.

D.8.85 Comment: A commenter requested that the goal language should be rewritten to expressly incorporate the eight statutory remedy selection criteria and the elements of the remedial program in 375-1.8 and 375-3.8. This is consistent with the legislative intent and ensures that these other program elements are not precluded from consideration as a result of the goal. Further, it was highlighted that Title 14 provides that "all remedial programs shall be protective. . .", rather than establishing this as a discretionary program 'goal." Lastly, it was stated that the draft rule states that remedial programs shall be selected upon "consideration" of the requirement that a site does not exceed a 1 in 1 million cancer risk and a hazard index of 1 for non-cancer risks; whereas Title 14 establishes these as required risk levels for all final remedies (with limited exceptions under Track 4) .

Response to D.8.85: The proposed 375-3.8(a) has been revised to clarify that every remedy shall be protective of public health and the environment rather than establishing this as a "goal." The Department declines to make any other changes. The statute and regulation is clear that the remedy selection criteria, and other program elements, are relevant to developing a remedial program which is fully protective. Contrary to the commenter's statement, ECL 27-1415(1) states that all remedies shall be protective of public health and the environment and that the "target risk" of residual contamination at a site shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points. The use of the phrase "target risk" establishes a goal rather than a mandate for the overall remedial program. However, the individual SCOs must meet the specified standard, except for consideration of rural background.

D.8.86 Comment: The Brownfield law clearly states that "all remedies must be protective of public health and the environment including but not limited to groundwater; drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife." The Department proposes a mixture of soil cleanup standards in six columns that would protect either public health or ecological resources or groundwater, instead of all three; as the law requires. The draft regulations distort the remedial goal, stating that cleanups shall protect public health "and/or" the environment, allowing for a "mix-and-match" approach in which cleanups would protect either public health or ecological resources or groundwater.

Response to D.8.86: While the Department disagrees with the conclusion drawn by the commenters relative to the Department's use of "and/or" rather than "and;" the Department has revised the proposed

rulemaking to delete “and/or” and replace it with “and.” The proposed rule reflects a deliberate, reasoned and reasonable attempt on the part of the Department to provide for cleanups that will be protective of both public health and the environment and meet the statutory requirements. The multiple columns allow for maximum flexibility based upon site specific factors, while at the same time adhering to the statutory requirements. This flexibility recognizes that the subject of remediation is important to the protection of public health and the environment, and involves highly specialized science covering an exceedingly broad spectrum. It is complex and not reducible to easy equations. However, the Department’s experience indicates that contaminated soil at every brownfield site is not impacting groundwater; further, that habitat does not exists on, or is not impacted by, every brownfield. The application of the protection of ecological resources and protection of groundwater numbers will provide for protective remedies that are in accord with the statute and conform to practices employed in the remedial program for over two decades (as well as practices applied by other states). Such application will protect public health, ecological resources and groundwater.

D.8.87 Comment: In developing generic tables of soil standards, the Departments are directed to consider: applicable and relevant and appropriate standards, criteria and guidance; "the behaviors of children"; "the protection of adjacent residential uses"; "contaminants which act through similar toxicological mechanisms or have the potential for additive and/or synergistic effects"; "exposure to the same contaminant or group of contaminants from other sources and routes"; and the feasibility of achieving more stringent objectives, “based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or nonexistent for a specific contaminant" (§27-1415(6)(b)(i)-(v)).

Commenters voiced concerns that the draft regulations do not contain any of this foregoing language and are silent on how generic soil cleanup objectives (under Track 2) and site-specific soil cleanup objectives (under Track 3) are to be developed. While the Technical Support Document describes and discusses some of the criteria listed in §27-1415(6)(b)(i)-(v), the first set of criteria (those associated with protection of public health and the environment listed in §27-1415(1) and incorporated by reference in §27-1415(6)(b)) are never explicitly listed as a group, and some, such as the protection of surface water, are never discussed at all.

A few commenters indicated that containment doesn’t work, therefore the regulations should provide for the elimination of all contamination or should use its best efforts to maintaining the highest standards for safety. One commenter articulated that while the general principles and assumptions for developing the SCOs are outlined, the derivation of the SCOs is not always clear and consistent. Step by step derivation of the SCOs should be made available on the public record. Lack of this information poses a hindrance to the detailed analysis.

Response to D.8.87: The Department disagrees. The Technical Support Document contains a thorough discussion of the development of the SCOs. Such comments reflect a misunderstanding of the statutory direction relative to the development of SCOs [ECL 27-1415(6)] and the development of a remedial program [ECL 27-1415(1)]. Such comments confuse the relationship between the two statutory directives. In developing the SCOs, the Department was directed to “consider”: applicable and relevant and appropriate standards, criteria and guidance; "the behaviors of children;" "the protection of adjacent residential uses;" "contaminants which act through similar toxicological mechanisms or have the potential for additive and/or synergistic effects;" "exposure to the same contaminant or group of contaminants from other sources and routes;" and the feasibility of achieving more stringent objectives, “based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or nonexistent for a specific contaminant." [ECL 27-

1415(6)(b)(i)-(v))].

The term “consider” means to think about carefully especially with regard to taking some action. (see Merriam-Webster Online) The requirement “to consider” does not mean that the Department is required to adjust the SCO’s based upon that consideration. While not required by the statute; the Department, in partnership with the NYSDOH, developed an extensive Technical Support Document in support of the development of the SCOs. The Technical Support Document includes just under1,000 pages of appendices in support of the Technical Support Document and the SCOs. The Technical Support Document is expressly made part of this rulemaking and has been made available to the public. The Technical Support Document explains how the Departments developed the SCOs and evaluated each of the statutory criteria considerations. The Technical Support Document has been revised to reflect the additional consideration of surface water. Further, the Department’s approach to the protection of surface water is discussed in the response to comments D.8.152.
The Department is further directed to develop objectives that shall be protective of public health and the environment pursuant to ECL 27-1415(1). That provision requires that “all remedial programs shall be protective of public health and the environment including but not limited to groundwater according to its classification…; drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife. In all cases, the target risk of residual contamination at a site shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points.”

The commenters mistakenly believe that these two statutory provisions, when read together, require that each individual SCO must protect groundwater according to its classification, drinking water, surface water, and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife. The Department disagrees with this interpretation; which interpretation disregards, and in fact would completely undermine, the statutory intent to create use-based standards. The approach adopted by the Department fully complies with the statutory mandate to develop soil cleanup objectives that are protective of public health and the environment and, when considered as a component of a remedial program, will meet the requirements of ECL 27-1415(1). To illustrate this, below is an excerpt of the SCOs for several common contaminants from Table 375-6.8(b) in the revised proposed regulation.

Excerpt from Table 375-6.8(b)

Compound	Restricted Residential	Restricted Commercial	Restricted Industrial	Protection of Ecol. Res.	Protection of Groundwater
Tetrachloroethene	3.5	25	51	2	1.3
Toluene	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	21	200	400	2	0.47
Vinyl chloride	0.9	13	27	NS	0.02

If the lowest value of the protection of groundwater, ecological resources and human health columns above were to be combined into a single column based upon the use of the site in Track 2, this would result in an SCO

table for restricted (Track2) uses as shown in the below example. In this example, the protection of groundwater SCO from the above table would be the lowest and therefore result in the same SCO for each of the use categories, clearly thwarting the legislative intent for a use-based program.

Compound	Restricted Residential	Restricted Commercial	Restricted Industrial
Tetrachloroethene	**1.3**	**1.3**	**1.3**
Toluene	**0.7**	**0.7**	**0.7**
Trichloroethene	**0.47**	**0.47**	**0.47**
Vinyl chloride	**0.02**	**0.02**	**0.02**

D.8.88 Comment: Numerous comments summarily stated that the proposed regulations will leave too much contamination behind on sites, threatening public health, ecological resources, and drinking water supplies. Such commenters further summarily and categorically declare that the soil cleanup objectives do not protect children, groundwater, fish and wildlife. The commenters also requested that each of the three uses (unrestricted, commercial and industrial) include factors sufficient to allow those uses to be protective of the foregoing.

> Response D.8.88: In response to this, and similar and often more detailed comments, this Department and the NYSDOH have determined that the proposed rule, including the proposed SCOs, are protective of public health, ecological resources and drinking water supplies. (See generally response to comment D.8.1)

D.8.89 Comment: At least one commenter stated that the SCOs were developed using standard risk equations. However, there are many instances where the SCOs do not correspond to those provided either in TAGM 4046 or the EPA Region III Risk-Based Concentration Tables. In these cases, there was little explanation of why a different approach was used. Some of this discrepancy is due to the non-carcinogenic RSC adjustment, the Track 1 homegrown vegetable consumption adjustment, the use of caps, and the use of non-chemical specific volatile inhalation factors in the exposure modeling pathway in the final SCO calculations. Further discussion of the scientific merit for adopting more conservative SCOs, where the SCOs differ greatly from those from other state and federal guidance is warranted. To allow an assessment of how the use of the risk assessment factors influenced the selection of SCOs, we request that the Department provide in the Technical Support Document a table listing for each contaminant the health-based SCO values from the risk assessment for each exposure pathway (ingestion, particulate and volatile inhalation, dermal contact, an groundwater) *prior* to application of caps, background values, CRQLs, or other adjustments. These values should be shown next to the selected final SCOs, along with an explanation of how the SCO was selected.

> Response to D.8.89: The Technical Support Document has been modified to include a table of contaminant-specific SCOs for each exposure pathway prior to application of caps, background, CRQLs etc. This table is presented in Section 5.3.6 of the revised Technical Support Document.

D.8.90 Comment: A comment indicated that there was no language in the Technical Support Document linking SCOs to screening levels, which brings up the question as to whether SCOs can be used as Tier II screening

levels in a tiered risk assessment. The Department should make it clear that the SCOs are not to be used as screening levels in risk assessments.

Response to D.8.90: The SCOs are intended as cleanup levels similar to those presented in TAGM 4046. It is not the Department's intention that these numbers be used as screening values to determine if remediation of a site is necessary or appropriate.

D.8.91 Comment: Some expressed concern that the health based SCOs, which allegedly do not protect drinking water, fish and wildlife, will be used at most sites according to Department staff.

Response to D.8.91: The Department will apply the protection of groundwater SCOs or protection of ecological SCOs where appropriate. (See generally 375-6.5 and 6.6) In those instances where groundwater and ecological resources are not impacted or likely to be impacted as described in the rule, then the health based SCOs can be applied. The Department does not have a position on whether the health based SCOs will be used at most of the sites.

D.8.92 Comment: All sites should use the unrestricted SCOs given the uncertainty of the controls and the inability to protect children.

Response to D.8.92: ECL 27-1415 expressly provides for, and directs the Department to develop, use based SCOs. This proposed rule is consistent with that statutory direction.

D.8.93 Comment: Various statements in the remedial goal and remedial program requirements, while conforming to statutory language, are confusing and may cause undue alarm. The purpose of the regulation is to explain how the statutory goals will be met.

Response to D.8.93: The Department has considered this comment and determined not to make a change to the proposed rule. As noted by the commenter, this is directly from the statute.

D.8.94 Comment: The Department relies to heavily on "paving" over contamination rather than cleaning it up, weakening the preference for permanence and relying too heaving on institutional and engineering controls, which have not been proved to be reliable and viable.

Response to D.8.94: The Legislature gave to this Department the responsibility to develop and to implement a statewide program, which program provides a preference for a complete and permanent cleanup. The Legislature left it to the professional judgment and discretion of the Department to articulate the manner in which this preference would be expressed. The Department reiterated the statutory preference verbatim in the proposed rule. [proposed 375-3.8(a)(1)] Additionally, two of the nine remedy selection criteria in the rule expressly require the consideration of permanence. Specifically, proposed 375-1.8(f)(3) states that the Department shall consider "long-term effectiveness and permanence: a program or project that achieves a complete and permanent cleanup of the site is to be preferred over a program or project that does not do so…". Proposed 375-1.8(f)(4) states that the "reduction in toxicity, mobility or volume of contamination through treatment: a program that permanently and significantly reduces the toxicity, mobility or volume of contamination is to be preferred over a program or project that does not do so." Moreover, the Department requires every alternatives analysis to consider the unrestricted scenario. Accordingly, rather than weakening the statutory preference for permanence, the rule provides for every statutory provision evidencing a

preference for permanence.

It is instructive to note that the rule does not mention "paving" at all. While the rule does recognize the role of institutional and engineering controls, this is in accord with the applicable statutory provisions. [see, generally: ECL 27-1318; 27-1415(7) and 56-0503(g); 56-0503(h) and 56-0503(i)] The proposed 375-1.8(h) provides that such controls can be used after a thorough review and consideration of their reliability and viability, both short-term and long term.

D.8.95 Comment: The proposed 375-3.8(g)(4) should be revised to include at the end of the sentence the following: "certified by a professional engineer."

Response to D.8.95: The Department has so revised proposed 375-3.8(g)(4).

D.8.96 Comment: It was urged that the Department eliminate the inconsistency between the BCP regulations and the construction and demolition ("C&D") disposal regulations set forth in 6 NYCRR Part 360. Sampling of excavated soils at BCP sites may reveal the presence of contaminants at levels above certain SCOs or TAGM 4046, but with no history or evidence of spills or releases at the site. However, even though this fill material may be acceptable to re-use as fill on another project site (for example, below the top foot of surficial materials or beneath typical engineering controls such as foundations or paved surfaces), the Part 360 regulations prevent the applicant from re-using the material because the material now has data indicating contamination associated with it and, thus, can no longer be considered uncontaminated C & D debris. The Department should allow for an implicit Beneficial Use Determination (or BUD) for this type of material generated at BCP sites.

Response to D.8.96: The Department is presently reviewing 6 NYCRR 360 in preparation for future revisions and modifications. The Department will consider this comment when developing any revisions to such regulations.

D.8.97 Comment: Conflicting comments were received, advocating the use of the SCOs in the SSF and ERP (noting that, as a practical matter, there does not have to be a significant difference in the environmental conditions pertaining to a SSF, ERP, or BCP site); and advocating against the use of the SCOs in the SSF and ERP. By providing a regulatory framework for applying the SCOs in all remedial programs, the Department will achieve a level of clarity, uniformity, and pragmatism currently lacking in the proposed regulations. One commenter, indicated that absent a change to the proposal, EPA would not use the SCOs as ARARs in the federal Superfund Program but they be "To Be Considered" or "TBCs." Also, it is unlikely that EPA would consider relevant portions of such tables as ARARs unless the formula for determining any variance is incorporated into the regulation. Absent this, such tables are viewed as policy goals rather than an objective standard.

Response to D.8.97: As originally proposed, the SCOs only applied to the BCP. However, in response to comments the Department has considered how the SCOs may be applied in the SSF and ERP. The proposed rule was revised to incorporate the Department's determination that the SCOs have applicability to the SSF and ERP. (see, revised 375-2.8{c) and 375.2.8(c); see, also response to comment A.1 relative to the VCP and Spills Program)

Development of SCOs

D.8.98 Comment: Many commenters focused on the development of SCOs where there isn't an SCO in the

regulation. Commentors requested that the Department explain when SCOs will need to be developed as well as how SCOs will be developed. Alternatively, the Department, and not applicants, should be responsible for developing the SCOs or the Department should develop a mechanism to utilize SCOs developed by applicants and accepted by the Department. One commentor suggested that the Department state that an applicant may evaluate the existing site data to determine whether the toxicity or the distribution of the contaminant of concern would lead to a more stringent level of cleanup than would be proposed on the basis of the existing SCOs for the other contaminants of concern. If not, then the Applicant should not be required to develop an SCO for an unlisted contaminant. If the presence of the contaminant of concern could lead to a more stringent cleanup, then the applicant should have the choice of using TAGM 4046, if available, or developing an SCO in accordance wit the Technical Support Document. One group of commentors opined that the regulations should provide for the development of SCOs not on the list thorough the application of the statutory criteria and not the Technical Support Document methodologies.

Response to D.8.98: The Department may direct an applicant to develop a contaminant-specific soil cleanup objective for any contaminants not included in Table 375-3.8(a) or (b). It is expected that the Department will only request that a SCO be developed where the contaminant is a contaminant of concern (COC) at the site and is not otherwise being addressed to the Department's satisfaction as part of the proposed remedy. Guidance on developing these SCOs is provided in Appendix E of the Technical Support Document.

The Department has provided in 375-6.9 detail on the development of an SCO for an unlisted contaminant or the process of modification for site specific data. Further, the proposal has been revised such that an SCO, once approved by the Department, will be available as guidance to other remedial parties. At such time as the Department revisits the SCOs, which is required at least every five years, the Department will evaluate the inclusion of such SCO in the revised rule.

TAGM 4046 is not an appropriate substitute for a calculated SCO in all instances given that the law requires that calculated SCOs shall not exceed 10^{-6} for carcinogenic end points and a hazard index of one for non-cancer end points, with the limited exception of rural background levels.

Application of SCOs

D.8.99 Comment: At least one commentor inquired whether the SCOs are to be achieved on a point-by-point or on an averaged basis. The latter approach, which would be supported by risk assessment, is recommended as long as the averaging is performed over a reasonable area given the exposure scenario being considered. An approach that accounts for exposure potential is needed for evaluating site wide concentrations. In the past, NYSDEC has relied upon a comparison of soil data on a point-by-point basis and compared individual data points to TAGM.

Response to D.8.99: In general, the SCO's must be attained at all sampling locations for the remedy to be considered successful. However, the Department may exercise some discretion at sites where the SCO's have been achieved at the majority of confirmatory sampling locations and the ones that do not meet the SCOs only slightly exceed the SCO.

D.8.100 Comment: The draft brownfield regulations present soil cleanup objectives for 86 substances. It will be burdensome and costly to require investigation, testing, and remediation for all 86 chemicals (or more, if the target chemical(s) are not on the list of standard Soil Cleanup Objectives (SCOs). The draft regulations do not

specify how the SCOs will be applied at sites where only a few (or even only one) target substances are present.

> Response to D.8.100: Consistent with the Department's historical approach, the suite of contaminants to be sampled for will be evaluated on a site-by-basis. It may be that there is sufficient evidence to support narrowing the suite of contaminants sampled for based upon historical uses of the site, operational practices at the site, or existing data.

D.8.101 Comment: Many comments were received regarding remedy selection. Some commentors requested additional language from the statute, while others asserted that the current language was confusing. Some commenters indicated that the rule fails to state that the Department must select the final remedy at significant threat sites and may require the implementation of a Track 1 remedy at such sites and fail to state that Department has the authority to require the implementation of such a remedy. Moreover, the four listed criteria for making this determination in the statute and proposed regulations are subjective and involve judgments relating to redevelopment potential and economic benefit to the state. In order to help encourage greater use of the BCP program, volunteers working on a non-significant threat site should be provided significant discretion in remedy selection, and the Department should exercise restraint when considering using this authority. The regulations also should specify how the NYSDEC will make determinations relating to economic benefit and site redevelopment potential. It was requested that the rule expressly state that each remedial alternative that is developed and evaluated for each operable unit or each portion of the site shall conform to the requirements of one of the following cleanup tracks . . ." Lastly, one commenter advocated that the Department should select all remedies for off-site contamination.

> Response to D.8.101: The Department has revised 375-3.8(f) to more clearly state the various statutory provisions relative to evaluating alternatives and to expressly provide that each remedial alternative that is developed and evaluated for site, or portion of the site, shall conform to the requirements of one of the cleanup tracks. The criteria relative to the Department requiring a Track 2 evaluation are directly from the statute and fairly articulate the standards and criteria we will use in considering whether to require a Track 2 evaluation. With respect to off-site contamination, if the applicant is addressing the off-site contamination, than the "selection" process set forth in statute controls. Where the applicant is not addressing the off-site contamination, the Department will select the remedy. In either case, the Department will only approve a remedy that is protective.

Updating SCOs

D.8.102 Comment: Several commenters recommended that a regular schedule of review should be established to ensure that the standards are based on the best available evidence into the future.

> Response 8.102: The Department recognizes that the legislation requires the Department to update the SCO tables every five years (Section 27-1415, 6(c)). In developing those updates, the Department will consider relevant new information.

Other states SCOs

D.8.103 Comment: For some compounds (e.g., vinyl chloride), the SCOs are orders of magnitude lower (more restrictive) than cleanup objectives published by other states. The Department may wish to consider comparing the SCOs with those of other states as a quality control check.

Response to D.8.103: Although the Department reviewed the methods used by other states in developing soil cleanup values, the Department has not systematically examined the values developed by other states because the other states used methods/approaches different than those used by the Department (e.g., different statutory requirements).

List of chemicals

D.8.104 Comment: Numerous comments inquired about how the list of compounds for SCOs was developed. Some noted that contaminants commonly found at toxic sites do not have cleanup objectives, including radionucleids and pesticides and approximately 59 TAGM 4046 compounds.

Response to D.8.104: A discussion of the process of identifying the list of contaminants for which SCOs would be developed is included in section 4.0 of the Technical Support Document.

Background

D.8.105 Comment: Commenters observed that Rural Soil Background Concentrations (RSBCs) were established as SCOs for several carcinogenic polycyclic aromatic hydrocarbons (PAHs) and metals because risk-based Soil Clean-up Objectives (SCOs) were below rural soil background levels. Commenters noted the potential for higher concentrations of these analytes in urban soils and fill. Based on these observations, commenters requested that the Department develop SCOs for analytes that reflect urban soil concentrations. Towards that end, it was suggested that the Department conduct a study of PAH and metal levels in background urban soils.

Response to D.8.105: The Department considered these comments and decided not to change the approach to developing SCOs that are based on background considerations. It appears that levels of several PAHs and metals may be higher in urban soils compared with rural soils. However, the legislation indicated that if the background soil concentration for a contaminant in "rural" soils in New York State exceeds a risk-based SCO, the SCO may be established equal to the background concentration (see ECL 27-1415(6)(b)). The legislation did not allow for the consideration of "urban background" or "urban fill" in the calculation of SCOs. Accordingly, the Department did not develop SCOs to reflect urban soil concentrations. The Department will consider the suggestion to survey urban soils as such data may be useful for Track 4 cleanups.

D.8.106 Comment: Some commenters suggested that data from the statewide rural soil survey (Rural Survey) may not accurately reflect rural soil background levels because the Rural Survey reported higher (or lower) concentrations than some other surveys.

Response to D.8.106: The Department supports the use of the Rural Survey and other relevant studies to comply with the requirements of ECL 27-1415.6(b) to substitute Rural Soil Background Concentrations (RSBCs) for SCOs that are lower than such background concentrations. In establishing RSBCs, the Department considered other data sets that reflected regional or statewide concentrations of analytes in rural surface soils. Sections 9.1 and 9.2 of the Technical Support Document present more detail about the approaches used to develop background concentrations for risk-based and ecological SCOs.

Concentration distributions for analytes in soil depend on many factors. These include natural

geological variability, the criteria employed for determining sampling points, the extent to which diffuse and point sources are avoided, and sampling depths. Public comments that we received after publication of the draft Rural Survey protocol reflected the importance of these and other considerations, as well as the lack of consensus regarding how these factors should be balanced during the design of a statewide survey of analyte levels in soils.

Some people commenting on the Rural Survey protocol asked the Department to characterize analyte levels in only "natural" soils, avoiding direct or diffuse anthropogenic contamination. Other people encouraged the Department to characterize analyte levels in soils potentially contaminated by nearby sources, such as buildings and roads. The Department had set forth in the Rural Survey protocol a definition of "background levels" based upon the potential for exposure (or contact) with soils. Therefore, the Rural Survey characterized soils *to which people (or wildlife) in rural settings may be exposed*, including soils from areas near sources, soils that were farther from sources but still reasonable points of human contact, and soils generally more distant from human activity. By characterizing soil levels in a variety of rural settings, the Rural Survey data strongly supported the Department's rural soil background determinations, which needed to take into account the degree to which analyte concentrations varied in rural settings depending on proximity to human activities and potential sources of analytes.

Although some Rural Survey samples (*e.g.*, some remote samples) were obtained a great distance from any apparent sources of contamination, the survey did not avoid diffuse anthropogenic contamination. This aspect of the Rural Survey could have contributed to increased analyte levels in Rural Survey samples compared with samples collected by investigators evaluating only natural soils. This suggests that the Rural Survey data were well suited to the task of establishing the RSBC.

D.8.107 Comment: It was suggested that elemental concentrations determined by the Rural Survey were incorrect due to laboratory error or biases introduced by the analytical methods used.

Response to D.8.107: Different laboratory analytical methods may determine different elemental (metal) concentrations for soil samples. The Rural Survey employed methods developed by the US EPA. These were Method 7471A (cold vapor atomic absorption) for mercury and Method 6010B (inductively coupled plasma atomic emission spectrometry or "ICP-AES") for other metals. Both methods were identified in the draft protocol for the Rural Survey, which was published on the Internet and discussed at information sessions prior to survey implementation. Public comments were evaluated prior to finalizing the proposal. Survey soil analyses were performed by a contract laboratory certified by the Department of Health's Environmental Laboratory Approval Program. The use of these methods in the Rural Survey maximized the relevance of the survey data because the Department expects the same methods will be used by remedial parties.

D.8.108 Comment: It was suggested that some groups have been unable to obtain Rural Survey analytical results and sampling locations from the Department.

Response to D.8.108: The Department has made the Rural Survey laboratory analytical results and sampling locations available to those that have requested them, and will continue to do so.

D.8.109 Comment: Some commenters criticized various aspects of the proposed cadmium SCOs, stating that the SCOs are significantly higher than values indicated in the Department's guidance document TAGM 4046

and higher than rural soil background. They also indicated that the SCOs present an unacceptable human health risk. With specific regard to the cadmium SCO of 2.5 ppm for unrestricted land use, which is a Rural Soil Background Concentration, commenters indicated that the value exceeds background levels reported by sources other than the Rural Survey, is not protective of people consuming garden produce, and should be lower.

Response to D.8.109: The Department considered these comments and decided not to change the SCOs for cadmium. The Track 1 cadmium SCO is a Rural Soil Background Concentration (RSBC) that is higher than the calculated risk-based value. The RSBC was derived using data from the Rural Survey and other information as described in Section 9.1 of the Technical Support Document. The RSBC was used to comply with the legislative requirement that we consider rural soil background levels when establishing SCOs.

TAGM 4046 lists a guidance value for cadmium in soil of either one ppm or the site background concentration for cadmium. This guidance was based on, among other things, earlier assessments of the distribution of cadmium in soils based on survey data that were available at the time. The Rural Survey substantially augmented the information on levels of chemicals in New York State soils. Data currently available support a RSBC of 2.5 ppm for cadmium (see Technical Support Document, Section 9.1).

D.8.110 Comment: Rural background doesn't appear to take into account regional variations of metal concentrations due to geologic variability. The local background should be used, not the rural background.

Response to D.8.110: As the SCOs were developed on a statewide basis, statewide background information (rather than regional or local background information) was used. The Rural Survey protocol was designed to generate statewide and not regional rural background levels. Rural Soil Background Concentrations were heavily influenced by data from the Rural Survey, which collected soil samples from many rural regions of New York State. The Rural Survey employed a probabilistic random sampling approach so that the three dominant rural soil orders (Alfisols, Inceptisols and Spodosols) were proportionately represented. However, the regulation provides for determinations of regional rural background concentrations in Track 3 and site background concentrations in Track 4**.**

D.8.111 Comment: The rural background number should not have automatically been substituted for the lower calculated health based number. This approach allows for high levels and is not protective of children.

Response to D.8.111: The legislation provided that if the background soil concentration for a contaminant in rural soils in New York State exceeds a risk-based SCO, the SCO may be established equal to the rural soil background concentration. (see ECL 27-1415(6)(b)). The Department believes the use of the RSBC rather than the calculated SCO is appropriate, and consistent with over two decades of program implementation. For example, the use of site background for defining a cleanup level is a well established concept reflected in TAGM 4046 and the draft DER 10. Given the manner in which the RSBC's for the Brownfield Cleanup Program were developed, the RSBCs may be lower than the site-specific background; thus providing for a more stringent cleanup than under existing practice.

D.8.112 Comment: The use of background is fraught with problems. There is no specific guidance on how to develop a reasonable background and reasonable comparison neighborhood. This results in contaminated neighborhoods.

Response to D.8.112: The brownfields legislation directed the Department to consider background

concentrations of analytes in soils. The Department published and posted on the Internet an Information Sheet and a Rural Survey protocol describing how it intended to proceed to develop analyte concentrations in rural soils. The Department then held public meetings in various parts of New York State to discuss its plans, and expanded the scope of the Rural Survey based on comments received.

D.8.113 Comment: Background soil samples were collected from the 0-5 cm interval from near-source and source-distant locations, and 0-15 cm from remote locations. An explanation of the discrepancy in soil sampling depths was not provided. The data from these sampling locations were combined in blended or combined approaches to determine background concentrations. These distinctions should be further defined, as they appear somewhat arbitrary.

Response to Comment D.8.113: Three types of soil samples were collected by the Rural Survey. Source-Distant and Near Source samples were collected to characterize analyte concentrations in surface soils that people may contact during typical activities. As people commonly contact shallow surface soils, Source-Distant and Near Source samples were collected at a depth of 0-5 cm. Remote samples were collected to characterize analyte levels in surface soils that contribute to exposures among wildlife. As wildlife often encounter somewhat deeper soils, Remote samples were collected at a depth of 0-15 cm.

The Department simply combined that data from all three Rural Survey sample types (source-distant, near source, remote) when evaluating Rural Soil Background Concentrations (RSBCs) for focus metals because concentrations among the three sample types appeared similar and differences were not statistically significant (see Section 9.1 of the Technical Support Document).

A similar approach was not warranted when evaluating RSBCs for focus polycyclic aromatic hydrocarbons (PAHs) because the frequency of PAH detection in rural surface soils followed a trend (near source greater than source-distant greater than remote), and the trend was statistically significant. When establishing RSBCs for PAHs, the Department considered three ways of using the near source and source-distant data sets, each yielding different 98^{th} percentile concentrations.

As described in Section 9.1 of the Technical Support Document, one approach for using the near source data is to use only those data (28 observations). However, this "near source" approach ignores the source distant data (118 observations) which also reflect points of human contact with rural soils. Another approach (the "combined approach") is to pool the near source and source distant data into one combined data set (28 + 118 = 146 observations). Such an approach considers data representative of points of human contact. A third approach is to average the analytical results for the near source and source distant samples collected at 28 properties and to combine those average results with the analytical results for the 90 properties at which only source distant samples were collected (118 observations). This "blended approach" is reasonable because the average results for the 28 properties at which both types of samples were collected may reflect people's exposure both near and away from roads and driveways

D.8.114 Comment: While extensive details are provided on the methodology used by the Department in its rural survey, it was acknowledged that "other data sets were sought to help guide selection of appropriate data from the Rural Survey." Because the additional background data sets considered were identified based on subjective decision-making, and because valid statistical methods were not followed for the complete data set under consideration, the underlying statistical basis for identifying background is technically flawed. A valid

statistical basis should be developed and used to establish background concentrations.

Response to Comment D.8.114: The Department disagrees with the commenter's claim that the underlying statistical basis for identifying Rural Soil Background Concentrations (RSBCs) for analytes in soil is technically flawed.

The first statement, that "background data sets considered were identified based on subjective decision-making," merely describes the qualitative weight-of-evidence approach without explaining why such an approach infers a "flaw in the statistical basis" for establishing RSBCs. The additional background concentration data sets used in deriving the RSBCs were identified using specific inclusion criteria. These criteria were consistent with those established for the draft Rural Survey protocol, which underwent public review prior to implementation. The criteria are set forth in Section 9 of the Technical Support Document.

The second statement, that "valid statistical methods were not followed for the complete data set under consideration," is incorrect. The statistical methods employed by the Department included calculation of percentiles using the empirical distribution function with averaging, Kruskal-Wallis tests and Cochran-Armitage Exact Trend tests.

The Department's weight of evidence approach was based on comparisons of multiple concentration distributions for each focus analyte. Comparison of percentile values is an accepted approach to comparing multiple distributions. Kruskal-Wallis tests were used to compare distributions of metal concentrations among different Rural Survey soil types (near source, source-distant and remote). The Kruskall-Wallis test was an appropriate choice because it is robust when applied to data that include statistical outliers or display a degree of multi-modality.

Cochran-Armitage Exact Trend tests were used to compare frequencies of PAH detection among the three Rural Survey soil sample types. The trend test was an appropriate choice because the test evaluates linear trends in frequencies across multiple categories, such as those observed for several PAHs over three types of rural soils (near source, source-distant and remote).

D.8.115 Comment: The data set is not representative of conditions throughout New York State. This is due, in part, to the limited number of sampling locations (*i.e.*, 125 properties) and the three different category types into which samples were assigned (118 source-distant samples, 96 habitat samples, and 28 near-source samples). While a general description of the sample selection process was provided in the Technical Support Document, no technically valid justification of the sample size or property type was provided. An adequate data set should be relied upon for establishing background concentrations.

Response to D.8.115: The Department disagrees. The Department believes that the data from the Rural Survey, coupled with other sources of data as discussed in the Technical Support Document (see Section 9.1), is representative of conditions throughout New York. Justifications for both Rural Survey sample size and property types were provided in Appendix D of the Technical Support Document. Briefly, statistical power analyses employed during design of the Rural Survey guided sample size selection by identifying a range of sample sizes where, as sample number increased, only relatively small incremental increases in study power were expected. Property types were rural parcels selected at random to represent a cross section of rural New York State as described in Technical Support Document Appendix D.

The Rural Survey, while important in establishing analyte distributions across the state, was only one source of data on background levels of analytes employed by the Department. As noted above, other sources of data that were used are discussed in the Technical Support Document (see Section 9.1).

D.8.116 Comment: Commenters stated that there have been additional background studies conducted in New York State beyond those studies which are presented in Section 9.0 of the Technical Support Document. Specific investigations were sometimes referenced. Commenters noted that the other background studies include investigations conducted under Department-approved work plans, possibly a reference to contaminated site-specific background surveys. Commenters further indicated that two of the five studies considered by the Department were not conducted with oversight by the Department or the New York State Department of Health, and were not conducted in accordance with Department-approved work plans. Commenters urged the Department to consider results from additional background studies within New York State.

Response to D.8.116: The Department did not consider soil surveys that did not meet basic requirements. We employed only readily available data sets reflecting concentrations of analytes in New York State surface soils at locations that were not near point sources of contamination. Survey data that were not considered included data from numerous site-specific surveys, because these data often represented small geographic areas and were not maintained in a central database. Other survey data that were not considered included data for subsurface (rather than surface) soils and data for soils collected outside of New York State. The additional data sets referenced by commenters were not considered because they did not reflect concentrations of analytes in rural surface soils or were not specific to New York State.

D.8.117 Comment: The use of the 98th percentile rather than the 95th percentile is not justified. For many chemicals the numbers are not very different, but for others the use of the 98th percentile may result in excessively high values based on outliers. At a minimum, the 95th rather than the 98th percentile value should be used to estimate background values, but consideration should be given to using the 50th percentile, particularly if comparable percentile values are used to estimate exposure rates for children and adults.

Response to D.8.117: The Department believes that the 98th percentile soil concentration is an appropriate percentile. The reasoning for use of the 98th percentile soil concentration is described in Section 9.1 of the Technical Support Document. The 98th percentile more closely approximates the 97.5th percentile, which is often used by scientists and others to describe the upper bound of the "typical" or "reference" range. The use of the 98th percentile was not meant to exclude statistical outliers from the reference range. Outliers were considered during development of Rural Soil Background Concentrations because there were no indications that the extreme values were due to laboratory or reporting errors. Although it is reasonable to exclude concentration values that are in error, we see no need to exclude valid measurements when calculating percentile values.

The Department considered the suggestion that it employ 50th percentile (median) values when establishing Rural Soil Background Concentrations. The commenter suggested that this may be appropriate because some exposure parameter values are 50th percentile (median) values. We decided not to do so because under this approach the majority of New York State soils, including approximately one-half of all rural soils, may be expected to exceed at least one background-based SCO. One-half of all values in a distribution lie below the median value.

D.8.118 Comment: One commenter stated that there is no explanation of why 98th and 90th percentiles from different data sets were directly compared to create background concentrations. This comparison has led to the selection of background values that are lower than the 98th percentiles, which will underestimate actual background concentrations. On page 256 of the Technical Support Document it is stated: "The 98th percentile was used because it is the nearest whole percentile to the 97.5th percentile, which is the upper bound of the "reference range" (2.5th to 97.5th percentile) often employed to define values that are considered typical." In keeping with this statement, we believe that the 98th percentile values should be used.

Response to D.8.118: This comment relates to the approach that the Department used to establish background concentrations for polycyclic aromatic hydrocarbons. As discussed in Section 9.1 of the Technical Support Document, the Rural Survey established that rural soil background levels for polycyclic aromatic compounds (PAHs) were often elevated in near source soil samples compared with levels in source-distant samples. Therefore, the manner in which the near source and source-distant data were combined before calculating 98th percentile concentrations influenced the percentile values.

When establishing Rural Soil Background Concentrations for PAHs, the Department considered three ways of using the near source and source-distant data sets, each yielding different 98th percentile concentrations. The Department examined distributions of PAH levels in soils from the Seneca-Babcock, Mineral Springs and Hickory Woods neighborhoods of Buffalo to help us decide which combination(s) of Rural Survey data sets to use. These distributions were characterized using common measures such as 90th percentiles, 75th percentiles and means (averages). Based on the Department's evaluations, appropriate approaches to combining near source and source-distant data sets were identified, and 98th percentiles for these combinations formed the basis for Rural Soil Background Concentrations established for PAHs. The approach is described in greater detail in Section 9.1 of the Technical Support Document.

D.8.119 Comment: A commenter stated that the Department must reexamine the validity of using the same SCOs for arsenic and benzo(a)pyrene under all Track 1 and Track 2 protection of human health scenarios. It seems invalid that the same level of protection was determined to be required for an unrestricted residential site and an industrial site. The practical consequence of this is that all sites where either of these compounds are found pervasively across the site, along with other contaminants, would be required to implement the same level of cleanup regardless of whether the site is industrial or residential, which is contrary to the intent of use-based tables. The arsenic background is fairly close to soil background levels in many areas. Further, recent studies have been lowering arsenic levels in drinking water.

Response to D.8.119: In response to other comments, the Department has changed its approach for deriving Track 1 SCOs, and the Track 1 SCO for arsenic is now 13 ppm (based on the ecological background level).

For Track 2, the method used to establish Rural Soil Background Concentrations for protection of ecological resources was different than the method used to establish Rural Soil Background Concentrations for other purposes (see Technical Support Document sections 9.1 and 9.2). We agree that the Rural Soil Background Concentrations for arsenic are within the range of background levels observed in many areas. Acceptable arsenic levels in drinking water are not relevant when establishing Rural Soil Background Concentration for arsenic.

D.8.120 Comment: The SCO for arsenic is based on background surveys that were done. The concentration selected for the SCO is 16 ppm, approximately 76 times the 1 in a million risk level (0.21 ppm). This level is also four times higher than the background level of 4 ppm that has been used by Suffolk County. The Suffolk County background level of 4 ppm was based upon a limited survey that was conducted by the County to establish arsenic levels that could be found in native soils. For this reason, surface soil samples were collected below the layer of topsoil on residential properties. The highest level detected from this limited survey was 3.9 ppm. The Technical Support Document acknowledges the influence of agricultural activities to the background estimate of arsenic. I question whether it is appropriate to use a background estimate that includes agricultural soils, especially for Brownfield sites that have not been influenced by agriculture. Perhaps similar to the vapor intrusion consideration, background soil levels should be evaluated on a case-by-case basis.

Response to D.8.120: In response to other comments, the Department changed its approach for deriving Track 1 SCOs, and the Track 1 SCO for arsenic is now 13 ppm (based on the ecological background level). Results of the Rural Survey, and some of the other soil surveys considered when establishing Rural Soil Background Concentrations for arsenic, partially reflected arsenic levels in agricultural soils. It was appropriate to consider levels of arsenic in agricultural soils when establishing Rural Soil Background Concentrations for arsenic because the legislation directed the Department to consider background analyte levels in rural soils, and agricultural soils are a subset of rural soils.

The Rural Survey protocol, which underwent public review, indicated that the Department intended to avoid soil sampling at orchards or suspected former orchards. Nonetheless, four samples were collected from orchards or suspected former orchards. The influence on the Rural Survey 98th percentile of four "orchard samples" was described in Section 9.1 of the Technical Support Document. However, the assessment of rural soil arsenic levels did not include data for Rural Survey samples collected from orchards. Track 4 allows for local background soil concentrations to be considered on a case-by-case basis.

D.8.121 Comment: One commentor requested that the Department change Track 1 SCOs for benzo[a]anthracene, benzo[a]pyrene benzo[b]fluoranthene and chrysene to the 95th percentile concentrations for those analytes in near source surface soil samples collected by the Rural Survey.

Response to D.8.121: The Department considered using the commentors suggestion of treating one set of data (near source surface soil) for a subset of all of the analytes but declines to accept the proposed approach. Treating a small portion of all of the data collected and using it in place of all of the other data cannot be justified. The basis for the approach is specified in Section 9.1 of the Technical Support Document. The Department considered using only the Near Source data set from the Rural Survey to establish Rural Soil Background Concentrations for these PAHs, but decided against that approach. The Near Source data set was not used exclusively because it reflected only levels of PAHs in surface soils collected near rural roads and rural driveways, and did not reflect the lower PAH levels typically encountered in other areas. The Department's justification for using the 98th percentile, generally, is provided in Response to Comment D

With regard to the Track 1 SCO for chrysene, the Department inadvertently established a value (based on protection of groundwater) that was potentially below the Rural Soil Background Concentration. This error was corrected and the unrestricted and residential SCOs for chrysene are now based on the Rural Soil Background Concentration for the analyte (see Section 9.1 of the revised Technical Support Document).

D.8.122 Comment: The barium SCO is close to soil geometric mean for all U.S. soils (440 ppm). This may be excessively restrictive, given the low solubility and weak tendency of Ba to be taken up by plants. Note that the Department's 95th percentile background concentration for Ba is near 170 ppm. The discrepancy with Shacklette's geometric mean is probably related to the method used to analyze soils.

Response to D.8.122: The Track 1 SCO for barium was based on rural soil background for New York State, a value that is not influenced by the plant bioavailability of barium. The geometric mean for barium in U.S. soils was not considered when determining the SCO because Rural Soil Background Concentrations were based on concentrations in New York soils only.

We noted that barium concentrations for rural New York soil samples reported by Shacklette & Boerngen (1978) tended to be higher than levels reported by the Rural Survey and some others. We further noted that Shacklette & Boerngen reported their barium levels with less precision than is customary today. We supposed that the different barium concentrations and precision reported by different surveys could have resulted from the analytical methods employed, but lacking specific information on that point, we considered the Shacklette & Boerngen data when establishing the Rural Soil Background Concentration for barium.

D.8.123 Comment: The rural background study provides a much stronger scientific basis for establishing soil cleanup levels than the values listed in TAGM 4046.

Response to D.8.123: The Department agrees that the Rural Survey provides a strong scientific basis for establishing SCOs.

D.8.124 Comment: Although little is known about the behavior of beryllium in soils, the 14 ppm proposed is high compared to published typical background soil concentration of < 1 ppm (Shacklette and Boerngen, 1984).

Response to D.8.124: The Department agrees that the proposed SCO (unrestricted) for beryllium (14 ppm) appears to be above levels typically encountered in rural New York State soils. However, the SCO was established to protect public health, and was not based on rural soil background.

D.8.125 Comment: Several commenters stated that all sites should use the unrestricted SCOs.

Response to D.8.125**:** The proposed rule is in accord with the BCP statute, which expressly recognizes, and requires the development of, restricted use SCOs.

D.8.126 Comment: Numerous comments were received relative to the interplay of the SCOs and OSHA standards. Some commenters suggested that OSHA standards do not provide adequate protection against workplace exposure to environmental contaminants, as distinguished from occupational contaminants. Some comments indicated that OSHA exposure standards are less protective than other corresponding occupational or environmental standards.

Concern was expressed that OSHA lacks dermal or airborne exposure limits for many of the substances targeted in the soil cleanup objectives (SOCs) of NYS DEC. Since land-use categorization will permit some levels of brownfield contamination to remain on site, the absence of applicable occupational exposure limits is

particularly worrisome, as there is no clear legal mechanism by which potentially-exposed workers will be adequately monitored or protected.

Response to D.8.126: Acceptable workplace exposures are beyond the scope of this rule-making. The air pathway will be evaluated along with other environmental media (groundwater, soil, etc) as part of the remedial investigation and approved remedies will provide for adequate protection of human health and the environment for the intended use. Protection for workers conducting remedial actions will be provided through site specific Health and Safety Plans as required by OSHA.

D.8.127 Comment: In the calculation of SCOs for an industrial use setting, it is submitted that the appropriate starting points in the analysis is the worker exposure levels, namely acceptable workplace air concentrations for the inhalation pathway. It is recommended that the use of workplace exposure levels established by the Occupational and Health Safety Administration (OSHA) and best practices guidelines in place to protect worker safety. This enables workers at a given facility to be protected by a consistent standard, rather than two different standards for the same chemical depending on whether their exposure is "inside" the plant or "outside" in environmental media.

Response D.8.127: Workplace air standards established by OSHA are not relevant for use in the development of soil cleanup objective (SCO) values for the industrial land use category. The Brownfield Cleanup Program Legislation requires that the soil cleanup objectives for the industrial land use category (as well as other land use categories) "shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points" (Section 27-1415.6). OSHA values are not developed according to these requirements. Section 27-1415.6 of the legislation also describes other factors (e.g., consideration of exposure to contaminants from other routes) that are not reflected in the OSHA values. Therefore, the Department will not make any changes to the SCO values based on the suggestions in this comment.

Vapor Intrusion

D.8.128 Comment: Soil vapor should be dealt with in the soil cleanup objectives and more of the vapor intrusion guidance should be incorporated into the regulation, including a concern for workers.

Response to D.8.128: The Department has considered this comment and determined not to make a change to the proposed rule.

We considered potential exposures to site-related analytes from the migration of soil vapor into the indoor air of buildings ("vapor intrusion"). The vapor intrusion pathway is complex and depends on numerous factors that may vary considerably from site-to-site. We considered employing an algorithm to quantify vapor transport and related exposures when calculating SCOs. Although models that evaluate the transport of vapors from soil into indoor air are available, they have certain limitations and are typically only used for screening purposes. Furthermore, soil-to-air transport is just one way that site-related contaminants may enter indoor air. Soil-contaminated groundwater may also be a source of indoor air contamination, either due to soil vapor contamination or direct volatilization from sumps. When these other routes are considered, it becomes clear that employing a vapor intrusion algorithm when calculating SCOs may not be protective of public health and may, in fact, leave investigators with a false sense of security. Section 10.1 of the Technical Support Document provides a more detailed discussion on this topic.

SCO values do not account for the vapor intrusion pathway. Therefore, this pathway will be evaluated using a site-specific approach that is consistent with NYSDOH guidance for identifying and addressing current and potential human exposures associated with vapor intrusion. This proposed approach for addressing vapor intrusion is described in Section 10.1 of the Technical Support Document.

Reference in the Technical Support Document to the NYSDOH guidance is adequate for purposes of implementing the regulation, so it is not necessary to add more of the NYSDOH guidance to the Technical Support Document.

D.8.129 Comment: The Technical Support Document states that none of the models currently available to predict vaporization from contaminated soil are protective enough. Yet, an analysis of the standards proposed by the Department and NYSDOH recently completed by Dr. Anthony Hay, an Associate Professor of Soil Ecotoxicology at Cornell University, concludes that the draft soil standards for trichloroethene (TCE), tetrachloroethene (PCE), vinyl chloride and chloroform may be 10-100 times higher than the estimated soil concentrations of those chemicals associated with an excess cancer risk of one-in-one million when vapor intrusion is considered as a pathway. Dr. Hay is careful to emphasize that his calculations are only predictions based on assumptions used by both EPA and the Department. There is no guarantee that the soil concentrations calculated by Dr. Hay would be protective of human health, nor does his analysis prove that the soil standards proposed by the Department would be harmful to human health. His analysis does, however, suggest that vapor intrusion may be a sensitive exposure pathway that should be taken into consideration when establishing soil cleanup standards for brownfield sites.

Response to D.8.129: The Department agrees that vapor intrusion may be an important exposure pathway at some brownfields. As discussed in the Technical Support Document, the potential for vapor intrusion is highly dependent on site conditions, which may vary considerably in New York State. Therefore, the regulation provides for site-specific assessments of the potential for vapor intrusion at brownfields. (see also Response to Comment D.8.128)

D.8.130 Comment: The Department should re-draft its Guidance for Evaluating Soil Vapor Intrusion in the State of New York to ensure that soil cleanup standards (SCOs) will not be used to rule out the possibility of vapor intrusion at brownfields.

Response to D.8.130: The NYSDOH vapor intrusion guidance document is being revised to clarify that soil standards are not used to determine if soil vapor intrusion needs to be assessed at sites.

D.8.131 Comment: Vapor intrusion may be significant. Intrusion (infiltration) of contaminated groundwater into sewer lines, manholes that could impact sewer workers in those spaces and potentially impact the wastewater treatment plant. Many industries have floor drains, these may be sources of vapors. May not have venting option if the building is on a slab.

Response to D.8.131: Site investigations will rely on, among other things, NYSDOH vapor intrusion guidance, which recommends that investigators consider subsurface conditions (e.g., preferential pathways) and aspects of building design (e.g., tunnels and other confined spaces).

D.8.132 Comment: The known or likely presence of VOCs should trigger vapor intrusion evaluations. The proposed levels would appear to be in conflict with the soil vapor intrusion guidelines established by the

NYSDOH. We recommend resolving this conflict or establishing a method to determine appropriate SCO's when such conflicts exist. The SCOs should be extremely conservative given vapor intrusion concerns.

Response to D.8.132: The NYSDOH vapor intrusion guidance recommends that the potential for vapor intrusion be considered when VOCs are present at a site. There is no conflict between the SCOs and the soil vapor intrusion guidance. Rather, the two are complimentary. The SCOs consider pathways other than vapor intrusion, and the guidance outlines an approach to vapor intrusion investigations to determine if mitigation or other measures to address soil vapor intrusion are appropriate.

D.8.133 Comment: Short term institutional controls need to be developed for vapor intrusion issues.

Response to D.8.133: See Response to Comment B.2.36.

D.8.134 Comment: The Department should not assume that clean water translates to clean indoor air. Further, the Department should not rely on one sampling event. The Department should require mitigation systems rather than testing since it is more cost effective. The Department should consider contaminants other than TCE relative to vapor intrusion.

Response to D.8.134: There is no presumption in the guidance, or in the proposed regulation and supporting materials, that clean water translates into clean air. The guidance does not limit soil vapor investigations to a single sampling event, or to the consideration of a single chemical. The guidance present recommendations for actions from a public health perspective, but acknowledges that additional actions may be employed for reasons other than public health.

D.8.135 Comment: Has the Department calculated levels of key contaminants, like TCE, PCE and TCA, that models would suggest for soil contaminant limits?

Response to D.8.135: During the SCO development process, the Department performed some preliminary, screening level evaluations of SCOs for the three analytes mentioned (and others) after accounting for a completed soil vapor intrusion pathway. This was done employing model parameters not broadly applicable to sites in New York State. Given the importance of the soil vapor intrusion pathway and the lack of a vapor transport model that could be broadly employed with confidence, the Department concluded that only site-specific soil vapor intrusion investigations will adequately protect public health at brownfields.

D.8.136 Comment: Are the calculated levels using the models higher or lower than the proposed SCOs for the key contaminants?

Response to D.8.136: The Department interprets this comment in two different ways. First, the commenter may be asking if the use of models to evaluate the vapor intrusion pathway, in combination with an evaluation of the other exposure pathways, would raise or lower the final SCOs. Whenever an additional relevant exposure pathway is considered the SCOs will be reduced, but the magnitude of the reduction will depend on the relative contribution of the additional exposure pathway to overall exposure from other pathways evaluated. The commenter may also be asking if a modeled SCO for the vapor intrusion pathway alone would be higher or lower than an SCO derived for the other exposure pathways combined. Given that the models have certain limitations and are typically used for screening purposes, the Department believes that whether such calculated levels are higher or lower than the proposed SCOs is irrelevant. As described in Section 10.1 of the Technical Support Document, use of

vapor intrusion models requires a significant amount of site-specific data making it infeasible to rely upon such models to develop SCOs that have statewide applicability. The Department remains convinced that the appropriate approach, as described in Section 10.1.5 of the Technical Support Document, is to require an evaluation of the vapor intrusion pathway at every site.

D.8.137 Comment: With vapor intrusion being such a big issue, it may be prudent to consider an approach to vapor intrusion mitigation utilizing engineering controls similar to that employed by the City of Los Angeles, California.

Response to D.8.137: The Department has considered this comment and determined not to make a change to the proposed rule. The extensive protocols developed by the City of Los Angeles are more appropriate for guidance than for this rulemaking.

Consideration of Mixtures, Additive and Synergistic Effects

D.8.138 Comment: Revise the soil cleanup standards to protect against exposure to common mixtures of chemicals, including mixtures with lead. The Department and NYSDOH should identify the most common mixtures of chemicals that occur at contaminated sites, including TCE, PCE and their structural relatives; benzene, toluene, ethylbenzene and xylene; and the metals arsenic, cadmium, chromium and lead. Because it is such a ubiquitous chemical at contaminated sites and commonly found in combination with a number of other contaminants, special consideration should be given to developing generic standards for mixtures containing lead. Generic soil cleanup standards should be developed and promulgated in the regulations that list acceptable levels for each chemical found in common mixtures that would apply whenever they are present at a site in that mixture.

The statute states that in developing the generic tables of soil cleanup standards, "the department shall consider . . . exposure to the same contaminant or group of contaminants from other sources and routes" (§27-1415(6)(b)(iv)). The approach adopted by DOH to address this issue was to adjust reference doses in such a way that when estimating noncancer effects, 80% of overall exposure to a substance was assumed to come from sources other than the contaminated site. Generally speaking, this is a protective approach, and I commend DOH for addressing exposures from multiple sources and routes. Dr. Nathan Graber and colleagues from the Mt. Sinai Medical Center and Dr. Burns both express concern, however, that this generally protective assumption may be an underestimate for certain high-risk groups, including children who are exposed to very high levels of pesticides in their diet or environment, or subsistence fishermen and their families who are exposed to PCBs in amounts well over 100% of the reference dose. The Department should developed SCOs for other likely mixtures of chemicals. And where higher than average background exposures to contaminants found on a site exist in a community, DEC and DOH should require applicants to develop lower site-specific soil cleanup standards taking such exposure levels into account.

Most sites have more than one chemical present, but the standards don't fully address the total exposure to these chemicals at the same time. If the Departments of Environmental Conservation and Health looked at how chemicals often found together at Brownfield sites affect us (as required by law), they would need to set lower standards for some chemicals to make sure that the safety levels set in the law are met. For example, when more than one chemical that causes liver damage are on a site, the standard for each must be lower to make sure that the whole site does not pose an unsafe risk of liver damage. The Department must revise the soil cleanup standards to protect us the combinations of chemicals found at sites that cause the same health problems and to insure that the total cancer risk from a site is less than one in one million, as specified by law.

Response to D.138: ECL 27-1415.6(b) states "in developing such tables, the Department shall "consider…" (ECL 27-1415.6(b) emphasis added) The term "consider" means to think about carefully especially with regard to taking some action. (see Merriam-Webster Online) The requirement "to consider" does not mean that the Department is required to adjust the SCOs based upon that consideration. The Department, in partnership with the NYSDOH, has revised the Technical Support Document to discuss how ECL 27-1415.6(a)(iv), which requires consideration of "contaminants which act through similar toxicological mechanisms or have the potential for additive and/or synergistic effects…", was addressed. (see Technical Support Document Section 5.1.5)

PCBs

D.8.139 Comment: Numerous comments were received relative to PCB levels. Some comments supported the PCB approach but recommended that the Department employ different SCOs for commercial (10 ppm) and industrial use (<25 ppm PCBs SCO for the first foot of a restricted-industrial use, <50 ppm PCBs SCO for the soils below one foot). Other comments insisted that the Department retain the historical surface/subsurface approach to PCB remedial actions (i.e. <1 surface/<10 subsurface). Other commentors agreed that the proposed approach (total PCBs) was appropriate but incorrectly suggested that laboratories reports on an Arochlor basis. The standard method used by DEC, SW-846 method 8081, reports on a total basis.

At least one commenter questioned why the PCB SCOs are based upon a US EPA regulation rather than Aroclor specific toxicity data. And one commenter noted that there should be protection or amnesty to sites that have used this 1 ppm at surface / 10 ppm below surface cleanup objective in the past.

Response to D.8.139: A full discussion of the rationale for the Department's approach to setting PCB SCOs (including a discussion on total PCBs versus arochlors specific PCBs) is set forth at Section 6.0 of the Technical Support Document. With respect to the comments advocating the establishment of higher SCOs for the commercial and industrial use categories as well as the comment to set the cleanup levels based upon depth, the Department does not believe that such approaches would be consistent with the BCP statute. However, the Department will consider, on a site specific basis (i.e. Track 4), allowing polychlorinated biphenyls (PCBs) levels of 1 ppm at the surface and 10 ppm subsurface. Relative to the "protection" or "amnesty" comment, this is addressed in the Department's response to comment D.8.20.

D.8.140 Comment: It is suggested that the discussion of 335 hours or more per year on page 219 of the Technical Support Document should provide further clarification that this equates to approximately 6.7 hours or more per week. Considering the multiple uses of these facilities it is possible that an individual may be exposed for more than 6.7 hours/day. If they are exposed under the Superfund default exposure assumptions of 250 days/year for a period of 25 years then the resulting non-cancer HI would equate to approximately 2.5. It may be helpful to provide additional risk information in Technical Support Document Section 6 regarding the upper bounds of the risk range based on typical industrial exposures.

Response to D.8.140: As discussed in Section 6.0 of the Technical Support Document, the PCB SCOs are not based on risk calculations performed by the Department, and the requested clarification regarding hours per week is irrelevant. The SCOs are based (as described in Section 6.0 of the Technical Support Document) on US EPA's TSCA standard and not Superfund default exposure assumption or "typical industrial exposures" and the commenter's statement about the hazard index and the request to provide additional information regarding the upper bound of the risk range are irrelevant.

Cyanide

D.8.141 Comment: A comment was received that no analytical method was specified in Part 375 for determining cyanide species and concentrations. TAGM 4046 allows for the site-specific form of cyanide to be used to determine the cleanup objective. Language similar to that used in TAGM should be included, as well as an update on the current state-of-the-art thinking in terms of cyanide forms in soil and groundwater. The SCO for cyanide is for free cyanide. A testing method for compliance with this SCO must be specified, as there are many forms of cyanide, and a true test of free cyanide is not commonly performed. The recommended analytical method for free cyanide is EPA Method OIA-1677 (or ASTM method 6888-04) for available cyanide by flow injection-ligand exchange, for the characterization of biologically active cyanide compounds.

Response to D.8.141: Site investigations will be conducted with an analysis for total cyanide using the following SW-846 methods: 9010B (Distillation), 9013 (Extraction) and 9014 (Determinative Methods).

Protection of Groundwater

D.8.142 Comment: Comments were received to the affect that where groundwater at the site boundary contravenes drinking water standards at non-significant threat sites, the statute requires that the annual certification regarding institutional and engineering controls must also certify that no new information has come to the owner's attention, including groundwater monitoring data from wells located at the site boundary (if any) to indicate that the assumptions made in the qualitative exposure assessment of offsite contamination are no longer valid. Every five years, the owner at such sites shall certify that the assumptions made in the qualitative exposure assessment remain valid.

Response to D.8.142: The Department has added 375-3.8(h)(2) to reflect these requirements.

D.8.143 Comment: Many comments were received requesting that the Department include statutory language to strengthen the definition of remedial investigation, including vapor intrusion language.

Response to D.8.143: The Department has revised the proposed 375-1.8(e) to include the additional remedial investigation details from ECL 27-1415(2). However, the Department has determined not to expressly include additional language regarding vapor intrusion, since that topic is sufficiently covered in the context of the existing and revised language.

D.8.144 Comment: Extensive comments were received on the groundwater SCOs. One commenter, Suffolk County, supported the Department's approach and confirmed that the PGW SCOs are generated with a methodology consistent with the approach currently used by Suffolk County to determine the need for a remediation. Another commenter, concluded that the proposed groundwater SCOs are reasonable in many situations and for many chemicals. Other commenters took issue with the Department's approach (e.g., linear soil-to-water partitioning coefficient coupled with a dilution/attenuation factor of 100, a high pH value, lack of consideration for facilitated transport) and indicated that it was not sufficiently protective of groundwater and had the net effect of writing off groundwater. Other commenters supported the decoupling of human health and protection of groundwater resources for land uses other than unrestricted residential. Some commenters expressed concern that the Track 2 SCOs exceed the standards proposed for the protection of groundwater by an order of magnitude or more. In this regard, soil cleaned up to mandated "clean" levels will still pose a considerable threat to groundwater quality, especially at industrial use sites. DEC's adoption of this approach means that groundwater will be written off.

Another concern raised was the potential for runoff to be concentrated as a result of impervious surfaces such as parking lots or roofs, which can greatly increase the recharge rate around such structures, allowing for less degradation and leading to heightened groundwater contamination in a much shorter period of time. Comments were received insisting that there is no statutory authority for the creation of separate protection of groundwater SCOs rather than incorporating this consideration into the Track 2 SCOs.

Many commenters indicated that it will be difficult to address sites where there is ubiquitous contamination or overlapping plumes. These commenters pointed to ECL Article 15 Title 31, which has many key provisions drafted for the specific purpose of recognizing that while the goal of groundwater remediation may be restoration of groundwater to its classified use (the highest and best use of which is drinking water), this is not technically possible in brownfield areas with ubiquitously contaminated groundwater based on a "one brownfield site at a time" approach. Implementation of short term source removal and utilization of long term remedial strategies in areas with groundwater that has been impacted by multiple brownfield sites is the strategy contemplated by Title 31 to implement the restoration goals in Title 14 over the long term. The regulations should contain practical provisions that define what short and long term groundwater remediation strategies will be imposed on volunteers and participants, respectively, and how the Department will handle off-site contamination problems when discovered.

Many comments urged the Department to link groundwater remediation to groundwater background, so as to avoid the situation where the remedial party is cleaning up another party's plume. This is especially important in urban settings.

> Response to D.8.144: The proposed and revised rule is fully protective of groundwater. While there is a statutory preference for permanent and complete cleanups, the Department recognizes, as did the legislature in passing ECL Article 15, Title 31 and ECL Article 27, Title 14, that groundwater is a very important resource. However, not all groundwater can, or will, be remediated. The Department also recognizes that once contamination has reached the groundwater, restoration to its classified use may not be feasible. As noted by many commenters, a permanent remedy is not the only permitted outcome. The Department's groundwater strategy would require that protection of public health and the environment be maintained, the removal or control of on-site sources of contamination, the removal of "free product", and the reductions in mobility and concentration related to the on-site sources of contamination in accordance with a Department-approved assessment which takes into consideration cost effectiveness and technical feasibility.
>
> The Department agrees that in many urban brownfield areas, contamination of soil and groundwater is typically widespread and ubiquitous. Further, that in such areas groundwater is not a source of drinking water. In such instances where groundwater standards cannot be met due to regional, pervasive groundwater contamination, the Department will consider these circumstances in developing and implementing a groundwater strategy for the area to identify ongoing sources of contamination and measures to mitigate this contamination.
>
> In addition, several aspects of the BCP will minimize levels of soil contaminants, thus minimizing the potential impact to groundwater. For instance, remedial actions taken to address sources and elevated levels of individual contaminants at a site will typically reduce the concentrations of those contaminants to levels that are substantially lower than the SCO values (see Section 10.3 of the Technical Support Document). The remedial actions also will typically decrease the concentrations of other site-related contaminants that

did not exceed corresponding SCO values. Additionally, the proposed regulation establishes maximum acceptable soil concentrations ("caps") for organic chemicals (Section 9.3 of the Technical Support Document). These "caps" are lower than the human-health based SCO for some organic contaminants. Each of these aspects of the program increase the protectiveness of the remedy in general and groundwater in particular.

After addressing sources, and applying the SCOs; natural physical and chemical attenuation mechanisms act on the remaining compounds, resulting in degradation or sequestration and consequent reduced bioavailability of remaining chemical residuals. Additionally, the remedial party is required to evaluate groundwater remedies and plumes (375-1.8(d)). The groundwater remediation strategy that is being developed pursuant to ECL Article 15, Title 31 will be consistent with the ECL Article 15, Title 14 approach to soil as well as the approach that the Department has employed for many years. It begins with source control, is followed by plume migration control and will outline a process to determine the appropriate response action for the portion of plumes that have migrated beyond where the migration control has been implemented. Collectively, these activities will continue to ensure the protection of groundwater for current uses as well as future uses.

The development of a separate column for SCOs designed to protect groundwater in Track 2 reflects the recognition that groundwater is not impacted at every site. The Department's experience indicates that there are instances where soil contamination has not impacted groundwater due to contaminant or site specific reasons. For example, the nature of the contamination (e.g. metals, pcbs) may be such that it would not typically be found in groundwater; the site geology may minimize groundwater impacts; or the soil composition may minimize groundwater impacts (e.g. tight clay vs. sandy soils).

Further, providing for a separate column for the protection of groundwater is not inconsistent with the statute. The inclusion of columns other than for unrestricted, commercial or industrial uses to maximize the flexibility and utility of the tables advances the policy of the State: to conserve, improve, and protect the State's natural resources and environment in order to enhance the health, safety, and welfare of the people of the State and their overall economic and social well being. Further, it encourages parties to voluntarily remediate brownfield sites for reuse and redevelopment and encourage cleanup and redevelopment of brownfield sites.

D.8.145 Comment: Many commenters sought clarity relative to when the protection of groundwater SCOs would apply. In this regard, supporting comments were received relative to the provision that groundwater standards had to be contravened in order for the protection of groundwater SCOs to apply. However, other comments argued against the advisability of the Department's proposed policy of not requiring the clean up of soil to groundwater protective levels if groundwater standards are not currently being contravened. Still other comments urged the Department not to apply the protection of groundwater SCOs where groundwater was not a source of drinking water.

Response to D.8.145: The Department has clarified the circumstances under which the PGW SCOs apply. (See 375-6.5)

D.8.146 Comment: A commenter expressed concern that Tracks 3 or 4 don't mention that they can be either restricted or unrestricted. The regulation should also clarify whether a groundwater use restriction would be required if soil at the site meets Track 2 SCOs but groundwater exceeds GA standards?

Response to D.8.146: Groundwater restrictions may occur in any of the 4 Tracks (note: restrictions are allowed in Track 1 under only limited circumstances). The revised regulation at 375-3.8(e)(2)(v) in discussing a Track 2 remedy allows for a groundwater restriction and environmental easement for any site where groundwater is impacted above standards, this would also apply to a Track 3 cleanup. A similar provision is included in Track 4 at 375-3.8(e)(4)(ii). A groundwater restriction will be required in situations where the protection of public health SCOs have been achieved but the groundwater standards are exceeded. The fact that the soil has been addressed so as not to be a continuing source of contamination to groundwater does not alter the need for a restriction to protect against the use of contaminated water.

D.8.147 Comment: One commenter recommended that language requiring a groundwater evaluation be included, even if SCOs have been achieved for most chlorinated hydrocarbons.

Response to D.8.147: Site investigations will always evaluate whether groundwater contamination exists and include a full characterization of the nature and extent of contamination (375-3.8(b)(1)) and the impact of groundwater must be analyzed as part of the remedial program (375-1.8(a)(6)). If contaminated, appropriate remedial alternatives will be developed and evaluated to address the groundwater contamination. In addition, the remedy selected and implemented would include monitoring as required to insure that the remedy is successful.

D.8.148: Comment: The Department received numerous comments requesting clarification relative to a party's obligation to address off-site contamination which is impacting the site (i.e. an upgradient plume flowing under the site) as well as such party's obligation to address plumes emanating from the site.

Response to D.8.148: The Department has clarified the obligation of an applicant is to address contaminated groundwater emanating from on-site sources, see 375-1.8(d)(2). The Department has also omitted the off-site source of contamination requirement under the proposed 375-3.8(d). The Department will, consistent with past practice, pursue responsible parties relative to off-site sources for which the remedial party is not responsible for addressing. However, the Department has not revised the proposed rule to limit the remediation to on-site sources given that the contamination may be in the form of an on-site plume emanating from on-site sources which have been addressed.

ECL 27-1413(5)(b) requires that plume stabilization be evaluated for all remedies and that further migration be prevented to the extent feasible. Feasibility of migration control will consider the potential impacts of off-site receptors (both in terms of groundwater exposure and vapor intrusion potential). If there is an upgradient source of groundwater contamination coupled with an onsite source of contamination of the same compounds, the applicant is required to evaluate migration control. (See 375-3.8(f)(4))

D.8.149: Comment: A commenter requested that the rule clarify that "on-site" contamination of groundwater means and only means the groundwater vertically under the boundaries of that site that has been polluted from sources on a particular site.

Response to D.8.149: Groundwater is considered to be impacted by the site when the downgradient groundwater indicates a contribution from the site as compared to upgradient groundwater. This evaluation will be undertaken based upon the remedial investigation. Factors considered in this

evaluation include, but are not limited to, the nature and extent of contamination on-site, groundwater flow direction and groundwater fate and t6ransport data.

D. 8.150 Comment: Several comments were received indicating that the Department is only protecting groundwater when it is being utilized for drinking water.

Response to D.8.150: The Department disagrees with this comment. Groundwater is being protected regardless of whether it is being used for drinking water.

D.8.151 Comment: One commenter recommends including the protection of groundwater component under the unrestricted use category to ensure that all land use categories and remediation evaluate impacts to groundwater on a consistent basis.

Response to D.8.151: This commenter misunderstands how the SCOs were developed for Track 1. In response to comments, the Department has collapsed the two columns of cleanup objectives to one column in Track 1, representing the lowest of the protection of public health, ecological resources or groundwater values.

Protection surface water

D.8.152 Comment: Some commenters voiced the opinion that it is a violation of the statute not to have the SCOs protect surface water. The law requires both the remedial program and the soil standards to protect surface water. The SCOs must consider soil run-off into surface water. The potential impact on surface water adjacent to a contaminated site needs to be addressed. The Department must consider leachate impacts from contaminated soil reaching surface water.

Response to D.8.152: ECL 27-1415(1) requires, and the rule provides for, all remedies to be protective of public health and the environment, including but not limited to surface water. While, the Department considered surface water impacts during the development of the SCOs, it did not factor the protection of surface water into the calculated SCOs. Due to the , the high variability of site specific factors, the Department determined that the most appropriate course was not to expressly adjust the SCOs, . rather to require an evaluation at each site regarding the fate and transport of soil from the site to surface water bodies.

The Department intends to protect surface water by addressing this as a media on a site specific basis. The proposed 375-3.8(e)(5) expressly requires that all other media at a site be addressed. (See also 375-1.8(1)(6); 375-6.7) All measures undertaken to protect surface water on a particular site will be memorialized in the remedial work plan and site management plan. These requirements will be monitored and enforced along with all other remedial program requirements. (see response to comment D.8.99) While drains, landscaping and barriers may have a role in protecting surface water, the regulations is silent on the approach. Under the proposed rule, surface water impacts must be considered and measures must be taken, as appropriate. Measures could include active remedial measures (e.g. removal or containment).

Protection drinking water

D.8.153 Comment: Several comments suggested special consideration for sensitive resources (e.g., the Great Lakes water supply, sole source aquifers). The restricted use SCO's in Tracks 2, are set at levels that could pose a threat to groundwater at most locations and under most conditions encountered in Suffolk County. Thus, the commenter recommends that the Part 375-3 regulations be further strengthened, to reflect that protection of groundwater quality in a sole source aquifer will always be a paramount goal, irrespective of the track of a subject property.

> Response to D.8.153: The Department will consider the sensitive resources mentioned in this comment on a site-specific basis rather than addressing this request in this rule. Protections for sole source aquifers have been, and will continue to be, of special concern to the Department.

Protection of Ecological Resources

D.8.154 Comment: The Department received extensive comments on its approach to the protection of ecological resources. Some applauded the Department's approach to decouple human health and ecological risk considerations in its proposal since there are numerous situations where a particular site does not provide sufficient habitat to support diverse ecological resources – especially in urban, commercial and industrial settings. Other comments, however, countered with an assertion that there is no statutory authority for the separate protection of ecological resources SCOs rather than incorporating this consideration into the Track 2 SCOs. Commenters expressed concern that the Department's approach places arbitrary limits on what qualifies as "ecological resources."

Some commenters opined that the provision was overly broad. The protection of ecological resources should not include pest species, lawns, landscaping, paved surfaces, ornamental trees, stormwater ponds, swimming pools, etc. While others advocated for the inclusion of livestock, crops, aquatic organisms and domestic animals.

Many commenters urged the Department to clarify when the protection of ecological resources SCOs would apply. In this regard, at least one commenter noted that while §3.10 of DER-10 provides a relatively detailed fish and wildlife resources impact analysis, it is unclear how this guidance will apply to BCP sites and there are potential conflicts between DER-10 and the draft regulations. A commenter requested specific guidance for assessing ecological resources in urban environments. Another commenter indicated that the Department should apply the ecological SCOs under Track 2 in instances only where there are significant wildlife or habitat resource at a site, and where contamination poses a significant risk to wildlife or habitat. In this regard, reference is made to the long-standing significant threat determination under the State Superfund Program.

One commenter suggested that the Department's regulations should include a defined decision-making process specifically for areas with area-wide groundwater contamination adjacent to ecological receptors. Such a process would consider the impacts of background levels of contamination on the ecological resources and the benefits of removing the contribution of those impacts contributed directly by the site as well as the level of protection required by the proposed future use of the site.

One commenter indicated that the regulations should provide flexibility such that the application of ecological SCOs is waived if their implementation would cause more harm than good to the environment. Several commenters requested that the Department consider whether SCOs protective of ecological resources will be applicable to the entire site or limited to the area where the resources are present and whether the Department will use habitat areas or species designations promulgated under the Endangered Species Act or state laws in

order to determine if ecological resources are present. Further, whether there is area-wide groundwater contamination adjacent to the ecological resource.

One commenter proposed for the Department's consideration the concept of compensatory mitigation for ecological resources. EPA has recognized circumstances in their Compensatory Wetlands Mitigation Program in which proposed projects that cause impacts are allowed the option of compensatory or preservation of existing wetlands.

One commenter indicated that the ecological SCOs are based upon USEPA Eco-SSLs which are not intended to be used as cleanup levels and are unduly restrictive. Further, that insufficient modifications have been made to transform the screening levels to cleanup levels. While an other commenter tacked in the other direction, complaining that the ecological objectives may still be too dirty for some plants to survive, or may lead to animals getting sick from eating plants at the site. For example, the standards may allow too much cadmium and chromium to remain on sites cleaned up – even under the ecological resources category.

Response to D.8.154: The arguments that the Department lacks the authority to develop the "protection of ecological resources" column and that this approach is not protective are without merit. The BCP statute requires that the remedial program for each site shall be protective of ...ecological resources, including fish and wildlife. (ECL 27-1415(1)); and the SCOs shall be protective of public health and the environment pursuant to ECL 27-1415(1). The inclusion of separate SCOs for protection of ecological resources maximizes the flexibility and utility of the tables and enhances the predictability and consistency of the program relative to addressing the protection of ecological resources. This approach is consistent with and advances the policy of the State to conserve, improve, and protect the State's natural resources and is consistent with the BCP statute.

The Technical Support Document (Chapter 8) details the approach to developing the protection of ecological resources SCOs, and Department believes that the SCOs are protective of ecological resources at BCP sites. In modifying the EcoSSLs from screening levels to cleanup objectives, the Department balanced the need to protect ecological resources while implementing the BCP program which seeks to promote the cleanup and development of brownfields while preserving greenfields. The methods and models used to convert the EcoSSLs to cleanup objectives were peer reviewed by a member of the EPA EcoSSL group and found to be acceptable.

Ecological resources are defined as all flora and fauna and the habitats that support them, excluding such non-wild species as pets or livestock, and agricultural and horticultural crops. This definition arises out of ECL Article 11-0103 which defines fish and wildlife and specifically excludes pets, and ECL 9-1503 which refers to "native" plants and does not seek to define horticultural crops as ecological resources. This does not mean, however, that the SCOs for ecological resources are not protective of pets and horticultural crops. Being developed from a database of toxicity to plants and animals, the SCOs are considered protective of all animals and plants, including pets.

The Department agrees that ecological resources are not present at every site. In fact, our experience (and the experience of sister states) shows that many brownfields are generally found in developed or blighted areas with limited ecological resources. For instance, the corner gas station which is developed with buildings and pavement over the entire site contains no ecological resources. However, brownfields can contain or be situated adjacent to habitats such as forests, fields, wetlands, streams. Therefore, in order to expedite the cleanup of sites without resources while providing for protective

remedies at sites that do contain resources, the Department determined that a site specific application of the SCOs for protection of ecological resources was preferred for sites with restricted uses.

The SCOs for protection of ecological resources will apply where soils exceed the SCOs and the intended use of the site preserves, expands or creates habitat. If no ecological resources are identified on or adjacent to the site, or if the proposed use of the site involves construction that eliminates or precludes the existence of ecological resources, the SCOs will not apply. This has been clarified in subpart 375-6.6.

The Department has added 375-6.6 to clarify the applicability of the PER SCOs. It is not the intention of the Department to apply the SCOs for ecological resources to landscaping, swimming pools, paved areas or grassy areas between buildings. Nor is it necessary to define urban resources differently than rural; however, it is acknowledged that urban wildlife habitat is especially important. The resource characterization includes a section where the value of the habitat is described, and this is the appropriate place to document the importance of a particular urban ecological resource.

The Department declines to develop a compensatory mitigation procedure under this rule.

D.8.155 Comment: The protection of ecological resource SCOs should be limited to the top 1 or 2 foot, and not 15' or further, unless there is site-specific information regarding the depth of the biologically active zone for significant ecological resources at the site. This depth would be protective of surface ecological receptors and most subsurface receptors.

Response to D.8.155: The Department disagrees.

D.8.156 Comment: Commenters asked how the Department will guard against the possibility that the approach to ecological resources may discourage the maintenance or creation of green space on or near brownfield sites.

Response to D.8.156: The Department is not responsible for approving or authorizing the actual site plan for the development project. By its very nature, property reuse is a local activity. Because of the primarily local significance, the local authorities are responsible for the planning, implementation and overseeing of the redevelopment project. Local planning is how towns decide how they'll grow, operate, and govern themselves and their land. In other words, the planning tools are what towns use to govern their growth and ensure that the community's values and priorities are maintained. Typically, parties are dealing with the local planning and zoning entities. It would be inappropriate for the Department to seek to direct the decisions appropriately placed with the local planning agencies, however matters within Department jurisdiction (e.g. wetlands, endangered species habitats) would continue to be addressed by the Department.

D.8.157 Comment: Commenters asked how sediment is addressed in this rule.

Response to D.8.157: Sediment will be addressed as an additional media. (See generally 375-1.8(1)(6); 375-3.8(e)(5); 375-6.7).

D.8.158 Comment: There was no mention of the soil depth to be considered for comparing environmental concentrations to SCOs. This should be included in the regulations and in the Technical Support Document. It

is suggested that samples be collected from the same surface soil interval as the ecological rural study background samples (i.e., remote soils at 0-15 cm below the ground surface).

Response to D.8.158: The Department has considered this comment and determined not to make a change to the rule. This information is more appropriate for guidance.

D.8.159 Comment: A commenter stated the proposed SCO for beryllium of 10 ppm is unsupported by Efroymson et al. (1997a) and the terrestrial plant literature. In proposing an SCO for beryllium based on the Efroymson report, it was stated that the Department has ignored the purpose and limitations of the report; the qualifications expressed by its authorities, including their assessment of the paucity and weakness of the beryllium data, and the factors which limit the uptake of beryllium in soil by plants. Indeed, the Efroymson report and the data it references can provide no basis for deriving an SCO for beryllium. Hence, the proposed SCO for beryllium should be withdrawn and no such SCO adopted.

Response to D.8.159: The Efroymson report represents the best available data regarding a threshold for ecotoxicological effects for beryllium and therefore was included in the calculation of soil cleanup objectives for protection of ecological resources. The value has been adopted by other regulatory agencies for use in a similar manner. The 10 ppm reference value for beryllium was originally adopted as a Preliminary Remediation Goal (PRG) for the Department of Energy. Further, Washington State uses the same value to identify "chemicals of ecological concern" in their Model Toxic Control Act - Cleanup (Chapter 173-340 WAC, dated 2/12/01). As noted in the TSD, there are limitations to the calculated values for soil cleanup objectives. ECL 27-1415.6(c) requires a five year review process during which any new data can be used to refine the current cleanup objective.

Phytotoxicity

D.8.160 Comment: The nickel SCO for protection of ecological resources (30 ppm) is probably overprotective with respect to phytotoxicity. Phytotoxicity or plant uptake may not be a concern for silver, even at 180 ppm because of strong sorption of Ag ions on clays and organic matter. Natural background for AG in soils is < 1 ppm. Regarding nickel, the 30 ppm proposed ecological SCO is probably overprotective with respect to phytotoxicity (30 ppm is not an uncommon background soil value). However, 300 ppm would be toxic in some soils. A limit near 100 ppm would probably be adequately protective against phytotoxicity.

Response to D.8.160: Section 8.2.1 of the Technical Support Document provides a basis and description of the evaluation of phytotoxicity. These values are not significantly different from the soil cleanup objectives in TAGM 4046 that have been in use for a number of years. Relative to background levels, Table 9.2-2 of the Technical Support Document identifies SCO's that were modified based on the rural soil background study.

D.8.161 Comment: Phytotoxicity should be reevaluated for the following contaminants in Track 1: copper, and zinc. The zinc limit would need to be lowered to about 150 – 200 ppm to be protective for most soils. Nickel, zinc and copper are phytotoxic metals, and the proposed unrestricted SCOs of 270, 2,200 and 130 ppm, respectively, are likely to be toxic to crop plants as well as many native plants in soils with certain properties. Gardening could be difficult or impossible if soils are allowed with these limits. Phytotoxicity should be considered for Track 2 "restricted residential" SCOs since it is possible that gardens would be allowed or may occur without authorization.

Response to D.8.161: Phytotoxicity was considered in the development of the SCOs.. Section 8.2.1 of the Technical Support Document provides a basis and description of that evaluation. This consideration is included in the Track 1 SCO's. Phytotoxicity was not considered in the development of the human health SCOs because it is not a human health related concern**.** These levels will be protective of human health and the environment.

Adjacent residential use

D.8.162 Comment: The Department received various comments that the possible health risks from contaminated dirt blowing into next door neighbors' homes or onto their yards was not considered. The commenters indicated that the language in the statute was drafted in direct response to the concern that vegetative covers and even buffer areas would not be adequate to protect against the movement of contaminants from more highly contaminated commercial and industrial sites onto residential areas. Commenters argued that the Department should recalculate the Track 2 SCOs to adjust them downward to account for this, while other commenters urged the Department to ensure that physical barriers are maintained and buffer zones are created.

Response to D.8.163: ECL 27-1415.6(b) states "in developing such tables, the Department shall consider…." the protection of adjacent residential uses. (ECL 27-1415.6(b)(iii) emphasis added) The term "consider" means to think about carefully especially with regard to taking some action. (see Merriam-Webster Online) The requirement "to consider" does not mean that the Department is required to adjust the SCOs based upon that consideration. A full discussion of the Department's evaluation and consideration of this criterion is set forth in the Technical Support Document at Chapter 10.2. As stated therein, there are seven separate columns/sets of SCOs contained in this proposed rule (unrestricted, residential, restricted residential, commercial, industrial, protection of groundwater and protection of ecological resources).

As set forth in the Technical Support Document, the unrestricted SCOs, the residential SCOs and the restricted residential SCOs are inherently protective of adjacent residential uses. Protection of adjacent residential use was therefore considered for the commercial and industrial land uses. For commercial or industrial uses, the Department will select a remedial program that will include measures to mitigate off-site transport of residual contaminants from the sites to adjacent residential properties. Five of the seven columns/sets of SCOs (unrestricted, residential, restricted residential, protection of groundwater and protection of ecological resources) are all protective for residential uses on site. By extension, the numbers would also be protective of adjacent residential uses.

The Response to Comment D.8.1 provides further support for the Department's consideration of adjacent residential uses; as well as the Department's conclusion that the soil cleanup objectives are generally protective of adjacent residential uses. However, the residual contamination levels may present concerns in some instances to adjacent residential uses. In considering the impact on adjacent residential uses, one could use an area source model. Area source models predict impact at receptors from area sources such as parking lots and landfills. Such a model is an analytical or numerical method for predicting and quantifying contaminant migration within the environment. These models range from very simple equations requiring little data to very complex equations (or series of equations) requiring detailed site-specific information. Here, the Department believes that the model would be complex and require significant site specific data in order to be predictive due to the significant variables involved (e.g. meteorological conditions, soil type, grain size, moisture content).

Due to the complexity of the models, the high variability of site specific factors, and the lack of predictive abilities of the models, the Department determined that the most appropriate course was not to expressly adjust the SCOs based upon such models and criterion. Rather to require an evaluation at each site regarding the fate and transport of soil from the site to adjacent properties being used for residential purposes. In evaluating, selecting and implementing a remedial program for planned restricted commercial or industrial land uses, the Department will include a review of measures that may be necessary to mitigate the transport of soil contaminants from the sites to adjacent residential properties.

Where appropriate, the Department will require remedial measures to ensure that soils are not transported to the properties being used for residential purposes (e.g a vegetative cover system, a barrier system, etc).

Institutional and Engineering Controls

D.8.164 Comment: 375-3.8 should be amended to reflect that more than one institutional or engineering controls can be employed.

Response to D.8.164: The Department has provided for this in the revised rule.

D.8.165 Comment: The proposed 375-3.8(f)(2)(iv) should qualify “reliability” with the word “cost” and the entire requirement should reference 375-1.8(h) in addition to ECL 27-1415.7(a).

Response to D.8.165: The Department has considered this comment and determined not to make a change to the proposed rule. However, the proposed rule has been revised to reference 375-1.8(h).

D.8.166 Comment: The proposed 375-3.8(g)(3)(v) should be revised to include at the end of the sentence the following: “as required in 375-1.8(h), if applicable, and 375-3.8(f)(2)(iv).

Response to D.8.166: The Department has revised proposed 375-3.8(g)(3)(v) to add “as required in 375-1.8(h), if applicable, and 375-3.8(f)(2)(iv) at the end of the sentence.

Signs/fences

D.8.167 Comment: Several commenters stated that as children age they might wander onto adjacent properties, placing themselves at an increased risk of exposure prior to adolescence. The commenters stated that in the absence of a physical barrier, such as a well-maintained fence (monitored over time), combined with parental education and guidance regarding the risks of trespassing, children are likely to enter adjacent restricted-use properties. The commenters also suggested that clear signs labeling areas that are not safe for children should be posted.

Response D.8.167: The requirements of the BCP are not intended to keep trespassers away from "unsafe" areas. They are intended to ensure that remedies are protective for the use of the site. The industrial land use category includes a trespasser scenario; and the SCOs are protective of trespassers. The commercial land use category includes an evaluation of child exposure as well as adult exposure and the SCOs that are protective of these populations also would be protective of any trespassers in the scenario noted by the comment. See response to comment B.10.5 regarding signs**.**

Off-Site Responsibilities

D.8.168 Comment: Several commenters inquired relative to how the off-site exposure assessment requirement works in the BCP.

> Response D.8.168: The off-site exposure assessment has been implemented since 2001, first under the VCP; and presently under the VCP and the BCP. The statutory requirement is based upon draft guidance (DER-10) which explained the concept of an off-site exposure assessment as early as 2002. Pursuant to this requirement, a remedial party is obligated to qualitatively, but not quantitatively, identify impacts resulting from the site. In many instances, the on-site information provides a basis to complete this assessment; however, in some instances, investigative work off-site may be required to complete this assessment. This requirement is not a remedial investigation level of effort.

D.8.169 Comment: Numerous comments were received questioning the appropriateness of requiring a party to address a source which is not on or related to the site. Other commenters requested that the Department clarify important off-site investigation responsibilities by stating that Participants must "fully characterize" the nature and extent of contamination that has migrated from the site and including other statutory provisions. Similarly, there were requests for the Department to clarify its role and level of coordination on off-site cleanup activities for volunteers, including the ability of the Department to reimburse volunteers who assume off-site responsibilities.

> Response to D.8.169: The Department has considered these comments and revised the rule at 375-3.8(b)(2) to clarify the various obligations. The Department has also added 375-6.5(a)(1) relative to off-site sources. The referenced requirement to perform a qualitative exposure assessment is set forth at proposed 375-3.8(b)(1), which states that the scope of the investigation includes a qualitative exposure assessment in accordance with ECL 27-1415.2(b).

D.8.170 Comment: To ensure timely and protective cleanups of off-site pollution, the rule should be amended to include the law's directives relative to the Department's obligations within 6 months. (Section 27-1411) This requirement should be extended to all remedial programs.

> Response to D.8.170: The Department has considered this comment and . revised 375-3.8(b)(2)*(i)* to include the requirements set forth in ECL 27-1411 Under the SSF and ERP, the remedial party is obligated to address off-site contamination without regard to the significant threat limitation unique to the BCP. Accordingly, a similar provision is not needed under the SSF or ERP.

Consideration of More Stringent Objectives based on Past Practice

D.8.171 Comment: The Department's rationale fails to satisfy the requirements of the statute. The clear intent of the law is for DEC and DOH to consider feasibility in those situations where information on risk may be lacking and soil cleanup standards developed based on current knowledge may not be protective enough. NYSDOH should re-calculate the soil cleanup standards for all use categories taking the feasibility of achieving more stringent standards, based on experience under the existing state Superfund and Oil Spill programs, into account. The development of soil cleanup standards based on feasibility should be given highest priority for those chemicals where NYSDOH has determined that toxicological, exposure or other data are inadequate to

develop a standard based on risk. The Department must reconsider past cleanups and adjust the SCOs downward accordingly.

Response to D.8.171: ECL 27-1415.6(b) states "in developing such tables, the Department shall "consider….the feasibility of achieving more stringent remedial action objectives, based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or nonexistent for a specific contaminant." (ECL 27-1415.6(b)(v)) The term "consider" means to think about carefully especially with regard to taking some action. (see Merriam-Webster Online) The requirement "to consider" does not mean that the Department is required to adjust the SCOs based upon that consideration. The Department considered past cleanups in developing the SCOs and has included a discussion of this consideration in the Technical Support Document at 10.4.

D.8.172 Comment: Some of the developed SCOs are less protective than current numbers in TAGM 4046. A number of other aspects that improve the derived soil cleanup objectives compared to the current TAGM 4046 values. These include (a) incorporation of rural background concentrations for metals, (b) utilization of more sources of toxicity data, and (c) review of exposure factors with subsequent adjustment where necessary to reflect New York State considerations. These inclusions are a considerable improvement over the approaches used in TAGM 4046.

Response to D.8.172: The Department has determined that the proposed SCOs are protective of public health and the environment. One cannot compare TAGM 4046 to the calculated SCOs and conclude that the SCOs are less protective. TAGM 4046 is a guidance document which sets forth a process to develop site specific residential cleanup numbers. The SCOs were developed based upon specific statutory criteria. (see also response to comment D.8.3) The Department has developed site specific cleanup numbers for "restricted" use sites for 25 years. In these instances, TAGM 4046 was used as a starting point for discussions rather than representing the cleanup objectives for such sites.

It is noted that the SCO's for metals in TAGM 4046 are based on background (Eastern United States or, if available, New York) consistent with the goal of returning inactive hazardous wastes disposal sites to predisposal conditions, to the extent feasible. The proposed SCO's in these regulations are heath based (one in a million risk) or rural background based. While it is recognized that some of the SCOs for metals are higher, it does not indicate that they are not protective. The approach at developing the cleanup objectives is different. See also response to comment D.8.1.

Maximum allowable contaminant concentrations - "Caps" and CRQL adjustments

D.8.173 Comment: Several commenters questioned the inclusion of a maximum allowable concentration of contaminants in soils, particularly for industrial settings, advocating that such use is not valid and unwarranted. The constituents involved are low-toxicity chemicals and therefore artificial caps would yield cleanup levels unsupported by human health considerations. While the Department noted that considerations other than human health were involved, we believe that the Department must demonstrate that these criteria are based on the statutory authority for the remedial program(s) that the SOCs are being applied to. One commenter asked for a separate table for "caps".

The Department's use of CRQLs to adjust SCOs to the CRQLs, if a CRQL exceeds the risk-based SCO value is appropriate and supported. Are all SCO values in the proposed regulation based on protection of human health, groundwater and ecological resources or have some been modified?

Response to D.8.173: The Department has considered these comments and determined not to make a change to the rule. The adjustments to the SCOs based on background concentrations of contaminants in rural soils, detection limits, and maximum allowable contaminant concentrations for organic compounds ("caps") are supported by the statute, appropriate, and protective of public health and the environment. These modifications are described in Section 9.0 of the Technical Support Document. Additionally, the proposed rule includes footnotes for the SCOs that were modified.

D:9 Comments on Subpart 375-3.9

D.9.1 Comment: This provision requires notice and hearing to parties prior to revocation of a COC. We commend the Department for considering and incorporating past comments made by the Section on this topic.

Response to D.9.1: Comment noted.

D.9.2 Comment: Draft 375-1.9(a)(2) says that entities receiving the Department "no further action" determinations also qualify for the COC, implying that – contrary to statute – that they too would be eligible for tax credits. This inconsistency needs to be addressed in the draft rule.

Response to D.9.2: See response to comment B.9.1.

D.9.3 Comment: This section states that the COC triggers the ability to file for tax credits for costs incurred after the BCA is executed by the Department. Given the importance of this date, the proposed rule should include a deadline for the Department to execute the agreement.

Response to D.9.3: The Department has considered this comment and determined not to make a change to the proposed rule. The Department will strive to expeditiously execute the agreement but declines to impose a regulatory deadline.

D.9.4 Comment: The articulated reasons to modify or revoke a COC largely track ECL § 27-1419.5, but additional layers of detail have been incorporated (e.g., failure to manage controls or monitoring; intentional violation of the terms of an environmental easement). While these additional details are helpful, the proposed subsection does not distinguish between factors that justify modification of a Certificate of Completion, and those that would justify its revocation. Such a distinction would be helpful.

Further, it is important to realize that modification of the remedy, accompanied by corresponding modifications of a Certificate of Completion, should be the procedure for handling most issues that arise after the issuance of a Certificate of Completion. Revocation of a Certificate of Completion carries severe consequences, including permanent loss of liability protections and forfeiture of brownfield tax credits. Accordingly, formal revocation of a Certificate of Completion should be reserved for more drastic situations, including: (1) culpable conduct (negligence, gross negligence, recklessness, intentional misconduct) that causes a release, threatened release, or human, environmental or natural resource exposure to hazardous substances; or (2) a showing of financial incapacity to perform, which causes a release, threatened release, or human, environmental or natural resource exposure to hazardous substances.

Response to D.9.4: The referenced provisions are derived from ECL Article 27, Title 14 and Article 71, Title 36. The Department does not believe the Legislature intended to limit its authority to modify or revoke a COC as requested by the commenter.

D:10 Comments on Subpart 375-3.10

D.10.1Comment: Under 375-3.10(c)(6), a TAG shall be made by the Department pursuant to a State assistance contract between the Department and the grant recipient as set forth in subdivision 375-2.5(c). The State assistance contract shall contain such terms and conditions as the Commissioner may deem to be appropriate. All such grants are recoverable State costs subject to recovery from responsible parties. This should only be under subpart 4. Another commenter opined that the rule should allow the Applicant to comment on an application for a technical assistance grant.

Response to D.10.1: This provision relates to TAGs, which are available under the SSF and BCP. TAGs are not available under the ERP, which uses the term "SAC" in a different context. Accordingly, the inclusion of this provision in 375-3.10 is appropriate. Relative to notice to the responsible party of a TAG application, the Department declines to include a requirement in the rule to this affect, however, it is noted that guidance presently provides for notice to the Applicant.

D.10.2 Comment: The regulation should state that the 30 day comment period on the application doesn't commence until the newspaper notices are published and the notice is mailed to the parties on the site contact list. This commenter requested that the rule require that additional information be included in the notice; namely the contaminants that are known or believed to be present on the site, the intended or reasonably anticipated future land use of the site, and the method by which the public may provide comments.

Response to D.10.2: The Department has considered this comment and determined not to make a change to the proposed rule. The notice of a complete application includes a "no later than" publication date and mailing date. The notice advises the recipient that a failure to meet either of these timeframes will result in an extension of the comment period to provide for a 30-day comment period from the latter of the publication date or the mailing date. The additional information requested by the commenter is contained in the application; itself which is available in the public repository.

D.10.3 Comment: Public participation should include more than newspaper notification. It should be made to local community boards within New York City.

Response to D.10.3: See response to B.10.2.

D:11 Comments on Subpart 375-3.11

D.11.1 Comment: The draft regulation specifies that "[r]emedy selection and implementation of remedial actions under Department approved work plans pursuant to Title 14 of Article 27 of the ECL are not subject to review" under SEQRA, "provided that design and implementation of the remedy do not: (i) commit the [State] to specific future uses or actions; and (ii) prevent evaluation of a reasonable range of alternative future uses of or actions on the remediation site." This exemption is "in addition to, and not in place of" the enforcement exemption and other SEQRA exemptions that apply pursuant to Parts 617 or 618. This provision is a desirable change that remedies an anomaly that existed under the VCP. This should extend to all aspects of the project, including application, agreement through site management.

Response to D.11.1: Comment noted. The acts related to application and entering into the agreement are already exempt under SEQRA as ministerial actions. Site management activities are a component of the remedial program, and therefore are expressly exempt by this rule.

D.11.3 Comment: Draft regulation 375-3.11(b)(2) should be relocated to a new sub-section numbered 375-3.8(c)(4) since this provision more appropriately should be in the remedial program 3.8 section than the 3.11 miscellaneous provisions. Moreover, the current location of this paragraph, within the provision exempting remedy selection from SEQRA review, is confusing. Relocation will present all factors affecting remedy selection in a single section.

Response to D.11.3: The Department has considered this comment and determined that the referenced language is appropriate under 375-3.8 rather than 375-3.11. The reference language is an important component of the SEQRA exemption.

D.11.4 Comment: The Department appears to have created a State cause of action here with respect to recovery of expenses that will be incurred for off-site costs. While others may have a problem with this provision, it seems reasonable given that it is limited to off-site.

Response to D.11.4: The Department has not attempted to create a State cause of action through this rule, but has merely noted that applicable principles of statutory or common law liability may provide a means to recover costs.

D:12 Comments on Subpart 375-3.12

No comments

PART E – COMMENTS ON PART 375-4
ENVIRONMENTAL RESTORATION PROGRAM (ERP)

E:0 General comments

E.0.1 Comment: It appears that minor and unnecessary word changes have been made to these existing regulations that will likely lead to confusion for the municipalities utilizing this program. Where such minor word changes have been made, unless there is a substantive reason for the changes, the language should remain as currently drafted to avoid confusion.

> Response to E.0.1: As noted by some commenters, the rule has been revised to clarify the programs; reduce confusion; encourage the use of industry best practices; promote consistency across the Department's regions; improve public awareness; and reduce transaction costs. (see also response to comment B.2.3)

E:1 Comments on Subpart 375-4.1

No comments

E:2 Comments on Subpart 375-4.2

E.2.1 Comment: The definition section references definitions in the statute but in some instances changes language and does not cross-reference the statutory definition. This creates a potential conflict of law. Pre-existing statutory definitions should merely be referenced here with the statutory provision noted.

> Response to E.2.1: The Department has considered this comment and determined not to make a change to the proposed rule. The proposed rule is consistent with the statute and is sufficiently clear without adding cross-references.

E.2.2 Comment: Under the definition of "State Assistance", a clause needs to be added to the regulations to clearly provide that State assistance payments may be made to a municipality, "or a CBO acting in partnership with a municipality."

> Response to E.2.2 The Department has considered this comment and determined not to make a change to the proposed rule.

E:3 Comments on Subpart 375-4.3

E.3.1 Comment: In a rare comment, the Department was criticized for providing too much detail: definitions for eligible site, eligible municipality, eligible project and eligible and ineligible cost sections.

> Response to E.3.1: This comment is not pertinent to anything new. The proposed regulation is a continuation of the present regulation 375-4.2(c) and 375-4.7. We considered it to be sound for reasons explained then, and our experience since then has given no reason to revisit it now. See also response to E.0.1.

E.3.2 Comment: The draft regulation clarifies that the cost of operating remedial systems is grant eligible for up to five years after the commencement of the remedy. This is an important clarification as annual system operating costs can easily range up to $50,000, and it is sometimes difficult to accurately estimate the length of time required for remedial systems operations. For local governments this cost burden can be difficult to manage.

Response to E.3.2: Comment noted.

E.3.3 Comment: The limitation on eligibility for on-site contamination unless there is a mechanism to elimination site recontamination should be deleted.

Response to E.3.3: This requirement is set forth at existing 375-4.3(a)(4) relative to the eligibility of remediation costs in a remediation application, not the eligibility of a site as is set forth in proposed 375-4.3(a). Accordingly, the Department has revised the proposal to move this to proposed 375-4.3(d)(1).

E.3.4 Comment: Numerous comments were received regarding the role and relationship of CBOs in the ERP. The 2003 statute redefined a municipality to include municipality acting in partnership with a community-based organization "CBO"). However, it was noted that Draft Part 375 does not include this in the definition and is unclear whether state assistance is directly available to a CBO working on such a project and how this differs from a municipality not acting in partnership with a CBO. Further, the commenter noted that it is unworkable to require the municipality and CBO to "co-own" the site. In this regard, it was stated that the regulations should clarify that "CBOs can act in the place of municipalities, provided there is documented evidence that a CBO is acting in partnership with the municipality.

Response to E.3.4: The Department has revised 375-4.2(f) to expressly include, for purposes of this title, a municipality acting in partnership with a CBO. However, the Department expressly rejects the proposal that CBOs can act in place of municipalities. Such an interpretation is not consistent with the statute. Further, proposed 375-4.3(a)(3) does not require a CBO to co-own the site with the municipality and the Department declines to accept the proposal that the CBO can solely own the property. While the municipality may act in partnership with a CBO, the statute is clear that the municipality has to own the site. (See ECL 56-0502(3) and (4)).

E.3.5 Comment: Documented evidence that a CBO is acting in partnership with the municipality should, at a minimum, consist of confirmation from the municipality that a partnership agreement between the municipality and the CBO that lays out the business terms and responsibilities has been executed.

Response to E.3.5: The Department does not agree that the rule should mandate the specific documentation that would confirm that there is a "partnership." This is so given the varied forms that such a partnership might take. Flexibility is necessary and appropriate to fulfill the Legislative intent of fostering such relationships in the furtherance of community revitalization projects.

E.3.6 Comment: DEC should provide an exemption for the eligibility of sites contaminated by fill prior to the 1954 – when the State's solid waste law was first enacted. The omission of such sites from the ERP based on the City's presumed status as a responsible party excludes a great deal of waterfront property from State assistance. DEC can perhaps condition this exemption by requiring that the site be designated as parkland before the remediation, thus ensuring that the public is benefited by the State grant.

Response to E.3.6: The Department has considered this comment and determined not to make a change to the proposed rule.

E:4 Comments on Subpart 375-4.4

E.4.1 Comment: 375-4.4(a)(4)(ii) says that the municipality will not undertake any indemnification obligation respecting a party responsible under law for the remediation of the site is a new term and should not be applied retroactively.

Response to E.4.1: This comment is not pertinent to anything new. The proposed regulation is a continuation of the present regulation 375-4.4(b)(1). We considered it to be sound then, and our experience since then has given no reason to revisit it now.

E.4.2 Comment: Priority ranking scores are to be provided for the potential opportunity for public recreational use where "the municipality has legally committed itself to implement a specific public recreational use of the site." The designation of parkland in the City is achieved through different means, each resulting in creation of parkland that is protected under the public trust doctrine. Parkland is created typically in one of three ways, all of which should be understood as a legal commitment for creating public recreational use and scored as creating the potential for public recreational use.

Response to E.4.2: Comment noted.

E:5 Comments on Subpart 375-4.5

E.5.1 Comment: One commented opined that 375-4.5(b)(4) should include within the phrase "municipality's cost of the environmental restoration project" the costs to maintain the property during the very lengthy Bond Act process as well as taxes owed to the municipality during the years it takes to investigate and remediate a Bond Act site.

Response to E.5.1: The Department has considered this comment and determined not to make a change to the proposed rule.

E.5.2 Comment: This commenter stated that some municipal charters do not allow the municipality to provide indemnification. Therefore, an amendment is necessary to qualify this requirement to those circumstances where authorized.

Response to E.5.2: The Department has considered this comment and determined not to make a change to the proposed rule. This comment is not pertinent to anything new. The proposed regulation is a continuation of the present regulation. We considered it to be sound then, and our experience since then has given no reason to revisit it now.

E.5.3 Comment: The provision requiring a municipality which transfers the site prior to completion of the remedial program to commit to timely remediate all of the site in accordance with the Department's record of decision should be deleted. It effectively eviscerates the liability protection in the ERP by making the municipality responsible for remediation regardless of the indemnification provided upon application approval if they sell the site. Certainly, notice of sale should be required, but the indemnification should remain and the municipality

cannot be required to perform the cleanup. This is particularly true since a municipality may not get funding for the remedial phase.

> Response to E.5.2: The Department has considered this comment and revised proposed 375-4.5(b)(1)(ii) to provide the ability to transfer or subdivide a site after execution of an environmental easement which requires the new owner to implement the site ROD for the transferred or subdivided parcel.

E:6 Comments on Subpart 375-4.6

No comments

E:7 Comments on Subpart 375-4.7

No comments

E:8 Comments on Subpart 375-4.8

E.8.1 Comment: The remedial goal of the ERP was the subject of numerous, and diverse comments. One group argued that the draft regulations weaken the cleanup goals of the ERP in that the regulations would allow land use to be considered as a factor in selecting the cleanup remedy. This group argued that the ERP law mirrors the Superfund law's cleanup goal. While another group of commenters indicated that the proposed remedial goal of the ERP does not include the same criterion as found under the BCP remedial goal, which appears to make the ERP goal weaker.

> Response to E.8.1: The Department has considered these comments and determined not to make a change to the rule. The ERP goal in the proposed rule satisfies the statutory requirement.

E:9 Comments on Subpart 375-4.9

E.9.1 Comment: Several commenters expressed concern over the liability protections afforded. Specifically, that liability protection should be based on the plain language in the statute when the municipality's application is approved, not subsequent to completion of remediation. This means the liability protections in this program are given to municipalities at the beginning, not the end. These two draft regulations, as currently drafted provide municipalities with a COC, which is a useful document not previously provided in the program, but does not provide the municipality with the liability protections until the COC is issued (i.e. at the end of the remediation project) and only then make the liability protections retroactive to the date of application approval. Presently, Part 375-4 doesn't require a municipality to commit to remediate the site in order to obtain the indemnification. In this regard, it is sufficient for the municipality to perform the investigation.

> Response to E.9.1: While the Department disagrees that the proposed language is inconsistent with the statute, the statute is sufficiently vague to allow multiple interpretations. The Department has revised proposed 375-4.9(a) to provide for the liability protections to be provided upon approval of the municipality's application, subject to timely receipt of a COC and compliance with all other statutory and regulatory requirements under the ERP.

E.9.2 Comment: Additionally, a commenter requested that the rule expressly provide for liability protection for

the CBO.

Response to E.9.2: The Department has considered this comment and determined not to make a change to the rule. It is noted that the statute expressly includes within its definition of "municipality" - "a municipality acting in partnership with a CBO.

E.9.3 Comment: Comments were also received to the effect that the statute specifically requires that "any settlement of such an action shall be subject to the approval of the attorney general as to form and amount, and this subdivision shall not apply to any settlement of any such action which has not received such approval." The Department and the Attorney General should develop a process, for inclusion in the regulations that will meet this test for approval.

Response to E.9.3: As to the request for a process to approve settlements, the Department declines to provide for in this rule. It is not appropriate to set out the roles of this Department and the Department of Law in this rule-making.

E:10 Comments on Subpart 375-4.10

No comments

E:11 Comments on Subpart 375-4.11

No comments

E:12 Comments on Subpart 375-4.12

No comments

PART F – COMMENTS ON MATTERS OUTSIDE PART 375;

F.0 General Comments

F.0.1 Comment: The Department should convene an advisory committee" charged with promoting protective cleanups through the development of regulations that clearly and effectively address the unique circumstances associated with urban settings.

Response to F.0.1: This concept is outside the scope of this rule-making.

F.0.2 Comment: Several commenters suggested that all workers on former contaminated sites with close contact to the soil should receive "Hazardous Waste Operations and Emergency Response" (Hazwoper) training developed pursuant to the Occupational Safety and Health Act (OSHA) in order to avoid bringing home contamination at levels that might affect the health of their families and children. All remediation workers should also receive such training unless a site-specific characterization determines that full coverage is not needed. Failing to address this issue is in marked contrast to another New York State regulation, NYS Industrial Code Rule 56 (12 NYCRR Part 56), which explicitly requires specific measures to protect public health and thereby protects worker health during a remediation process (asbestos abatement).

Response to F.0.2: A site specific health and safety plan is required for the remediation of every site. These plans will address the protection of workers and the community. Workers will complete training as required by 29CFR1910.120. Protection of the community will be addressed by work practice standards to prevent any offsite exposure and a Community Air Monitoring Program will be required to confirm that exposures do not occur.

F.0.3 Comment: Many comments were received regarding affordable housing. One commenter noted that the proposed rule is silent on the pressing need for affordable housing, which is needed.

Response to F.0.3: While the Department is supportive of the need for affordable housing, the remedial programs are not affordable housing programs. However, the programs can be used to facilitate affordable housing.

F.0.4 Comment: In addition to the comments regarding contribution protection and rights that are discussed in other comments, the Department received specific comments that it should: advocate to the Legislature for statutory amendments to provide express State statutory rights to cost-recovery and contribution for participants in the BCP; and enter into a Memorandum of Understanding and/or a cooperative agreement with EPA under 42 U.S.C. §9604(d)(1)(a), so as to remove any doubt that settlement with the State qualifies the settling party to pursue a contribution action under §9613(f)(3)(B).

Response to F.0.4: These requests, while laudable, are outside the scope of this proposed rule.

F.0.5 Comment: Several comments indicated that there is a need for enhanced oversight by Albany-lead projects as well as better coordination between the Department, NYSDOH, USEPA and the counties.

Response to F.0.5: Comments noted.

F.1 Brownfield Opportunity Areas

F.1.1 Comment: Numerous comments were received regarding the Brownfield Opportunity Area Program. The comments ranged from recognizing: that the program will be a beneficial tool; that the program could influence positive changes as long as the interests of the people who currently live in the community are invested into the program; that there is a need to work with owners to persuade recalcitrant industries to cooperate. One commenter noted that between the BOA and the BCP, the Department is now administering one of the State's largest community development programs; resulting in the need for the Department to recognize that their policy and technical decisions have impacts that are far wider than just how many parts per million are being cleaned up from toxic sites.

Response to F1.1: Comments noted.

F.2 Tax Credits

F.2.1 Comment: Many commenters mentioned the need for changes to the Tax Credits under the BCP. One commented indicated that the Governor's proposed Manhattan Exclusion Zone is inappropriate, multiple comments were received urging changes to the tax credit formulas: i) to incorporate financial need, cleanup costs, socio-economic conditions of neighborhoods or benefit to the community; or ii) to create a nexus between the cost of remedial activities and the redevelopment/rate of return; or iii) to create a workforce development initiative that benefits low and moderate income individuals; or iv) to make construction of single-family homes and condominiums eligible for tax credits; or iv) to allow parties to limit or waiver the tax credits and still participate in the BCP. A comment was received stressing the need to incentivize for-profit or low-profit development projects such as affordable housing.

Response to F.2.1: These comments would require legislative action to implement. They are outside the scope of this rulemaking. The referenced Manhattan Exclusion Zone, which was such a proposal, was not passed by the Legislature. However, the Department notes that the extent of cleanup that may be required is considered in the context of the nature and extent of contamination factors. Further, socio-economic factors are considered as part of the complication on redevelopment/reuse factor.

F.3 Site Specific concerns

F.3.1 Comment: The Department received numerous comments that were site-specific. The comments explained the commenter's experience relative to the site or the Department. The referenced sites were: the Gowanus Canal sites; Stanton Cleaners; 47 Northern Blvd; PS65 Ozone Park; Starlight Park; West Side Corp; Duetsche Bank; Hopewell Precision Site; Whole Foods;
Tutor Time; 858 E. Ferry Street; PS 141; and the King Fuels site.

Response to F.3.1: The Department will review the site-specific concerns, however, they are beyond the scope of this rule-making. While the name is misleading, an active facility can come within the statutory definition of an "inactive hazardous waste disposal site." (ECL 27-1301)

F.4 Other

F.4.1 Comment: This commenter called for a moratorium on all of the current Brownfield applications at this time.

Response to F.4.1: A moratorium is outside the scope of this regulation, outside the authority of the Department, and inconsistent with the underlying goals of the brownfield legislation.

F.5 Draft Generic Environmental Impact Statement

F.5.1 Comment: Evaluation of Alternatives. A comment received on the DGEIS indicates that the document only addresses the "no action" alternative, but indicates that many choices were made in the development of the draft regulations that should have been evaluated in the DGEIS. These included such issues as (i) development of separate soil cleanup objectives for protection of human health, ecological resources, and groundwater - the commenter argues that each of the SCOs must be protective of human health and the environment, including groundwater and ecological resources; (ii) in developing the SCOs, the commenter indicates that the DGEIS should evaluate the alternative of developing SCOs that consider such factors as protection of surface water; protection of air (including indoor air, via vapor intrusion); protection of fish and aquatic organisms; protection of adjacent residential uses; additivity and synergy; and the feasibility of achieving more stringent SCOs; and (iii) the cleanup tracks and proposed land uses do not meet the law's preference for permanence.

Response to F.5.1: See responses to D.8.2, D.8.10, D.8.26, D.8.27, D.8.86, D.8.87 and D.8.94.

F.5.2 Comment: Environmental Impacts. A comment received on the DGEIS takes issue with the DGEIS statement that "no negative impacts upon the environment are anticipated from this action" they cite their belief that the draft regulations, as proposed, could have potential adverse environmental impacts from increased paved surface areas and increased public exposure to contaminated soils.

Response to F.5.2: See responses to D.8.26 and D.8.144

F.5.3 Comment: Growth Inducement. The DGEIS states that "the Department has not identified any potential for growth inducement as a result of this action." The express purpose of the Brownfields Cleanup Program is to "encourage cleanup and redevelopment of brownfield sites." (ECL 27-1403). Encouraging growth, in particular in blighted urban areas rather than in greenfields, was a major goal of the BCP. The DGEIS should acknowledge that the BCP will induce growth.

Response to F.5.3: The DGEIS has been revised to address the issue of growth inducement in greater detail. While the rule is intended to provide opportunities for redevelopment, job creation, and overall economic growth, this program is designed to advance the policy of the State of New York to conserve, improve, and protect its natural resources and environment and control water, land and air pollution in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being. The goal of the brownfield cleanup program is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields". As redevelopment/growth is specifically being targeted for abandoned, idled or underutilized properties, the Department has not identified any potential for significant or negative growth inducement as a result of this action.

F.5.4 Comment: Impact on Rural Areas. One commenter notes Appendix D of the DGEIS ("Rural Area Flexibility Analysis") states that "The Department has determined that there is a positive impact in that the cleaned up areas

will result from these remedial programs." While this may be true in most cases, the draft regulations will have an adverse impact on future uses of rural sites for farming. The proposed Track 1 soil cleanup objectives, which by law must be safe enough for any future use, would not be safe enough for farming. Further, there is no way to ensure that such a restriction can be enforced, since Track 1 cleanups do not require an environmental easement. It is impossible to see into perpetuity what future uses a rural brownfield site may have. It is not inconceivable that farming might take place on a site that is cleaned up under "Track 1" standards and that, unknown to the farmer, food grown on such site will not be safe for human consumption. The DGEIS should acknowledge that excluding farms from the Track 1 unrestricted cleanup standards could have an adverse impact on agricultural use of sites in rural areas.

Response to F.5.4: See response to B.8.45, B.8.49 and D.8.10.

F.5.5 Comment: One commenter indicates the Draft Generic Environmental Impact Statement prepared in support of the proposed brownfield regulations fails to comply with the State Environmental Quality Review Act as it does not address the potential adverse environmental impacts to the environmental justice community. The Department ignores its own internal policies requiring a consideration of environmental justice issues when implementing the Environmental Conservation Law. (See Department policy CP-29, Environmental Justice and Permitting, (3/19/03).) The Draft GEIS should be revised to include a detailed analysis of the environmental justice concerns and impacts that would result from implementation of the proposed regulations, particularly in the areas described below where disparate impacts on environmental justice communities could occur.

Response to F.5.5: The DGEIS has been revised to address the issue of environmental justice areas noting that the proposed regulation serves to ensure that no particular racial or ethnic or socioeconomic group will be compelled to bear a disproportionate share of any negative environmental consequences resulting from the execution of State programs that the proposed regulation implements. Also, see response to A.12.