



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

**Pennsylvania Department of Environmental Protection  
Bureau of Waste Management**

**Management of Fill Policy  
DEP ID: 258-2182-773**

**COMMENT RESPONSE DOCUMENT**

**November 2, 2019**

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## Glossary of Terms

<i>ABR:</i>	Acid-Bearing Rock
<i>Act 2:</i>	The Land Recycling and Environmental Remediation Standards Act, 35 P.S. §§ 6026.101 <i>et seq.</i> , and the regulations promulgated thereunder
<i>CFCL:</i>	Clean fill concentration limits. With the exception of PCBs and chloride, the concentrations of regulated substances that do not exceed the numeric values specified in Table 3 [Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil] and Table 4 [Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Soil] of Appendix A in 25 Pa. Code Chapter 250 (relating to administration of land recycling program). The applicable numeric limit is determined by comparison of the Generic Soil to Groundwater Value <sup>1</sup> with the Direct Contact Residential Value <sup>2</sup> and selection of the lower of the two values. For PCBs, the sum total of the concentration of all PCB aroclors (total PCB concentration) may not exceed 50 ppm. For chloride, the value obtained using the Synthetic Precipitation Leaching Procedure, (SPLP, SW-846, Method 1312) may not exceed the numeric value specified in Table 2 [MSCs for Inorganic Regulated Substances in Groundwater] of Appendix A in 25 Pa. Code, Chapter 250.
<i>Chapter 250:</i>	25 Pa. Code, Chapter 250 (Administration of Land Recycling Program)
<i>FAQs:</i>	Frequently Asked Questions
<i>Form FP-001:</i>	Form FP-001 – Certification of Clean Fill (2500-FM-BWM0008)
<i>Land Recycling TGM:</i>	DEP’s Land Recycling Technical Guidance Manual, Document No. 261-0300-101
<i>MoFP:</i>	Management of Fill Policy
<i>MSC:</i>	Medium-specific concentration
<i>RFCLs:</i>	Regulated Fill Concentration Limits. With the exception of PCBs, the concentrations of regulated substances that do not exceed the numeric values specified in Table 3 [Medium-Specific Concentrations (MSCs) for Organic Regulated Substances in Soil] and Table 4 [Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Soil] of Appendix A in 25 Pa. Code Chapter 250 (relating to administration of land recycling program). The applicable numeric limit is determined by comparison of the Generic Soil to Groundwater Value <sup>3</sup> with the Direct

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<sup>1</sup> Numeric values based on generic leaching modeling for soils at residential properties overlying used aquifers with total dissolved solids at concentrations less than or equal to 2500 mg/L.

<sup>2</sup> Direct contact numeric values for soils at residential properties.

<sup>3</sup> Numeric values based on generic leaching modeling for soils at non-residential properties overlying used aquifers with total dissolved solids at concentrations less than or equal to 2500 mg/L.

Contact Non-Residential Value<sup>4</sup> and selection of the lower of the two values. For PCBs, the sum total of the concentration of all PCB aroclors (total PCB concentration) may not exceed 50 ppm.

- SHS*: Statewide health standard established by Act 2 and implemented by DEP's Land Recycling Program
- SWMA*: The Solid Waste Management Act, 35 P.S. §§ 6018.101 *et seq.*
- TSCA*: Toxic Substances Control Act, 15 U.S.C. § 2601 *et seq.* (1976)
- WMGR096*: General Permit No. WMGR096, Beneficial Use of Regulated Fill as a Construction Material

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<sup>4</sup> Direct contact numeric values for soils at non-residential properties.

## COMMENTS AND RESPONSES

### NOVEMBER 8, 2018, PUBLIC COMMENT PERIOD

#### General Comments

1. **Comment:** What is the date of the current MoFP that the proposed revisions replace? I have copies of a policy, dated August 7, 2010, and a draft revised policy, dated December 20, 2014. Were the December 2014 proposed revisions ever finalized? (9)

**Response:** The proposed revisions to the policy, dated December 2014, were never finalized. This revised final policy replaces the previously effective version of the policy, dated August 7, 2010.

2. **Comment:** Many commentators stated support for the revisions proposed to the MoFP, particularly the following:
- a. Clarification to the policy's applicability to the use of fill within a project area or within the right-of-way for a project.
  - b. Clarification to the policy's applicability to fill that has been placed prior to the effective date of the policy.
  - c. Direct incorporation of the applicable Act 2 SHSs to ensure that the policy will incorporate the most current, scientifically defensible values to categorize fill materials.
  - d. Revision to allow historic fill to be used as clean fill, if demonstrated to meet the CFCLs through analytical testing.
  - e. Revision to include a definition of the term "project area."
  - f. Revision to include a procedure for performing a fill determination.
  - g. Inclusion of procedures for making a background determination for donor sites where fill contains regulated substances at concentrations in excess of the applicable CFCL or RFCL. (5, 6, 21, 22, 23, 36)

**Response:** DEP appreciates and acknowledges the comments.

3. **Comment:** A commentator cited the extensive work conducted between DEP and the Pennsylvania Aggregates and Concrete Association on DEP's Mine Reclamation Fill Policy and continued support for that effort and policy. (38)

**Response:** DEP appreciates and acknowledges the comment.

4. **Comment:** I am very concerned about the amount and quality of the dirt that is being brought into our residential community. I question why we are accepting dirt from other states that is too contaminated to be dumped there but is accepted in Pennsylvania. There are unanswered

questions about how the dumping along Greenview Drive will affect the drinking water in our neighborhood in the future. (1)

**Response:** DEP acknowledges the commentator's concern that unrestricted placement of contaminated fill in Pennsylvania may have a detrimental effect on drinking water quality. The purpose of the MoFP is to provide procedures for determining whether fill is "clean fill," as defined in the municipal and residual waste regulations at 25 Pa. Code § 271.1 and § 287.1, respectively, or "regulated fill," as defined in the final policy. Fill may qualify for use as clean fill by determining that it has not been subject to a release of a regulated substance. Fill that has been subject to a release of a regulated substance does not qualify for use as clean fill, unless it is demonstrated through appropriate sampling and chemical analysis that the regulated substances do not exceed the applicable CFCL or RFCL, as the terms are defined in the final policy.

DEP uses Act 2 and the regulations promulgated thereunder as a basis for determining the CFCLs and RFCLs. The CFCLs represent the numeric values established under Act 2 for residential exposure and the concentrations of various organic and inorganic substances that can be present in clean fill and remain protective of human health, in the event of direct contact with the fill and for the amount of substances that can leach from the fill and enter groundwater. The CFCLs are protective of human health under a residential exposure scenario as applied under Act 2. The CFCLs are the most stringent application of Act 2's SHSs and are derived using formulas that include many variables to estimate risk, including exposure assumptions such as route of exposure, frequency of exposure, duration of exposure, fate and transport assumptions such as organic carbon partitioning coefficients, as well as toxicity factors such as cancer slope values and reference dose thresholds. DEP worked with the Cleanup Standards Scientific Advisory Board established by Act 2 in developing the CFCLs and applying them in the MoFP. DEP updates toxicity values and the SHSs every three years so that the most recent science is available. Therefore, the use of clean fill in accordance with the final policy does not pose a health risk to nearby drinking water sources.

5. **Comment:** Our once pristine country road is now a muddy mess from the trucks leaving the dump's property. I'm sure the property value of the homes near the dump have been affected both by the sight of the mountain near the road and by the constant dust in the air caused by the dumping. Has anyone in DEP considered taking air samples during the summer? (1)

**Response:** Persons managing fill must comply with the fugitive emissions regulations under 25 Pa. Code, Chapter 123 (relating to standards for contaminants) issued under the Air Pollution Control Act, 35 P.S. § 4001, and all the applicable provisions of 25 Pa. Code §§ 123.1 and 123.2 (relating to prohibition of certain fugitive emissions; and fugitive particulate matter). Language has been added to the final policy to clarify that the above regulations must be satisfied.

The DEP Regional Office having jurisdiction over a site where clean or regulated fill is used has the authority to collect and analyze environmental samples. If activity is observed that is creating a potential air quality concern due to dust or odor, the appropriate DEP Regional Office can be contacted to investigate and appropriately address the observation. A list of DEP Regional Offices and counties served by each is attached to this document.

6. **Comment:** In the version of the policy issued in 2004, DEP established numeric standards for clean fill based on certain numeric values developed by DEP pursuant to the statewide health cleanup standard under Act 2. In particular, DEP based the numeric standards for clean fill on

the lower of the direct contact numeric values for soils at residential properties and the generic soil-to-groundwater numeric values for soils at residential properties overlying used aquifers with total dissolved solids (“TDS”) at concentration of 2,500 milligrams per liter (“mg/L”) or less. Under the regulations implementing Act 2, however, the cleanup standard for a regulated substance in soil at residential property overlying used aquifers under the SHS is based on the lower of (1) the direct contact numeric value and (2) the soil-to-groundwater numeric value which in turn is the higher of either the generic numeric value or a value based on 100 times the relevant groundwater medium specific concentration (“MSC”). By using only a portion of the regulatory tool box available under Act 2 to develop clean fill numeric standards, DEP is unnecessarily constricting the universe of fill materials that can qualify as “clean fill.” DEP has never articulated the technical basis for using a different approach for calculating clean fill standards than is used to determine the residential cleanup standards for soils under Act 2 (i.e., residential soil MSCs) other than that the differences in approach have yielded lower concentrations for certain clean fill numeric standards than the corresponding residential cleanup standards for soils under Act 2.

In the proposed revisions to the MoFP, DEP has indicated its intent to perpetuate the disparate approach adopted in 2004. There appears to be little technical or scientific justification for continuing to use the residential cleanup standards under the SHS of Act 2 on a selective basis to determine the appropriate clean fill numeric standards. The residential cleanup standards under the SHS are conservative standards that are designed to be protective of both human health and the environment. It is unclear why those standards should not suffice for purposes of helping to determine what qualifies as “clean fill” under the SWMA.

DEP should fully utilize the options available under Act 2 for developing clean fill standards, including utilizing the approach under Act 2 for determining relevant soil to groundwater numeric values rather than focusing only on the generic soil to groundwater numeric values. (8, 9, 14, 17, 18, 22, 32, 37)

**Response:** Historically, the limits imposed in Tables FP-1a and FP-1b in prior effective versions of the MoFP have been based on the SHSs contained in Chapter 250. Use of the SHSs from Chapter 250 was adopted by DEP during the 2004 revisions to the policy and the development of WMGR096. With few exceptions, the CFCLs are derived by choosing from Chapter 250 the lower of the residential direct contact numeric value and the generic soil-to-groundwater numeric value for each constituent expected to be in the material. The same procedure was followed for the concentration limits in WMGR096, except that the non-residential values were used. This method of selecting the concentration limits applicable to clean fill and regulated fill was established with significant involvement with and input from DEP’s Cleanup Standards Science Advisory Board and Solid Waste Advisory Committee. Both groups agreed that the approach was protective of human health and the environment and represented a conservative approach for classifying materials as clean or regulated fill. The method by which a person determines the applicable limit from Chapter 250 has not changed from the previously effective version of the policy.

The MoFP is intended to allow clean fill to be used in an unregulated manner. To accomplish this, CFCLs were established to ensure that the policy would be protective when fill is used in various scenarios. Regulated fill is only permitted to be used at non-residential, commercial, and industrial properties. Therefore, the Direct Contact Non-Residential MSC from Chapter 250 was used in deriving the RFCLs.

7. **Comment:** Requiring the use of the Act 2 Direct Contact Residential MSC in situations where the fill will be deposited at a commercial or industrial site is overly conservative. The Act 2 nonresidential MSC should be acceptable as the appropriate comparison criteria. (9, 10)

**Response:** The method of selecting the CFCLs and RFCLs was established with significant involvement with and input from DEP’s Cleanup Standards Science Advisory Board and Solid Waste Advisory Committee. Both groups agreed that the approach was protective of human health and the environment and represented a conservative approach for classifying materials as clean or regulated fill. The method by which a person determines the applicable limit from Chapter 250 has not changed from the previously effective version of the policy. To utilize fill that does not meet the CFCLs but does meet the RFCLs, the user must obtain coverage under WMGR096. See response to comment #6.

8. **Comment:** DEP is proposing to replace the numeric clean fill standards currently set forth in Appendix B of the MoFP (referred to as Table FP-1a – Chemical Concentration Limits for Organics and Table FP-1b – Chemical Concentration Limits for Metals and Inorganics) by incorporating by reference the selective categories of numeric values for soils at residential properties overlying used aquifers described above. The values in the MSCs are mandated by regulation to be revised every three years. This will lead to the CFCLs changing every three years upon the publishing of the final changes to Chapter 250. A review of the previous and draft MSCs show drastic changes. The uncertainty and frequency of changes to the clean fill standards will make planning and contracting extremely difficult for projects that span time lines that will cut across the periodic changes to the MSCs under Act 2 that are mandated.

If DEP incorporates references to the numeric values under Act 2 in the final policy, it is critical that the policy include “grandfathering” provisions to minimize project disruptions. The proposed policy states that the revisions to the policy do not apply to “fill that has been placed prior to the effective date of this policy, unless the fill is moved to another site or off the project right-of-way after the effective date of this policy.” On its face, this provision only “grandfathers” fill that has been used prior to the effective date of the MoFP in revised form. Presumably, the same rationale would apply to changes in the CFCLs that will occur on a periodic basis thereafter (i.e., fill material used in accordance with the standards applicable at the time of use will be protected even if the standards change in the future in a manner that would alter the classification of the fill material). If that is DEP’s intent, the final policy should expressly state it.

However, the grandfathering protections proposed by DEP do not go nearly far enough. Many projects involve the need to acquire and place fill material over the course of years to support redevelopment activities. As the CFCLs become more restrictive, fill that was acquired and moved in reliance on meeting the CFCLs then in effect may suddenly be reclassified as residual waste if the fill has not yet been fully used.

A better and fairer approach would be to allow fill that has been appropriately qualified as clean fill under Form FP-001 pursuant to the requirements in effect at the time that Form FP-001 is completed should be able to be used as clean fill regardless of how the CFCLs may change subsequently. Under the proposed version of the MoFP, completion of Form FP-001 provides an easily discernable point in time that can be used for purposes of “grandfathering” determinations.

It is incumbent on DEP to clearly address what impacts the proposed changes to the MoFP and subsequent periodic changes to the CFCLs will have in such circumstances and to confirm that all fill that has been certified as clean fill pursuant to Form FP-001 are grandfathered and maintain their classification as clean fill – whether they (1) have already been permanently placed, (2) are currently in temporary use (such as surcharge operations) or (3) are awaiting reuse in a stockpile. This confirmation is critical to the entire regulated community. (5, 13, 14, 16, 18, 22, 24, 25, 32, 37)

**Response:** As noted by the commentator, DEP updates the toxicity values and the SHSs utilized in Chapter 250 every three years so that the most recent science is available. In the past, timely updates to the policy have not always been made, making the limits in the policy inconsistent with the SHSs in Chapter 250. The finalized policy simply incorporates the SHSs in Chapter 250 by reference to avoid situations where the limitations imposed on organic and inorganic substances under the policy differ from those imposed in Chapter 250.

The final policy has been revised to highlight that the CFCLs in place at the time the fill determination is made should be used in determining whether fill qualifies as clean fill. Language was also added to clarify that the clean fill designation will be maintained regardless of whether the fill (1) has already been permanently placed, (2) is currently in temporary use (such as surcharge operations) or (3) is awaiting reuse in a stockpile. New CFCLs become relevant only when clean fill that has been used as such is subsequently moved to a new receiving site, project area or project right-of-way.

The following statement has been added to the Applicability section on page i, and Section A (relating to purpose and applicability) of the final MoFP:

This policy does not apply to fill that has been determined to be clean or regulated fill prior to the implementation of revised clean fill concentration limits or regulated fill concentration limits, unless the fill is moved to a new receiving site or off the project area or project right-of-way after the effective date of the revised limits.

The following language has been added to Section B of the final MoFP, relating to performing a fill determination:

For the purposes of completing the Form FP-001 for clean fill, the CFCLs in effect on the date of submission should be used to evaluate whether the fill can be used as clean fill.

9. **Comment:** The proposed policy attempts to rectify the difficulty of meeting the Act 2 SHSs, such as that for benzo(a)pyrene from historic burning of coal and exhaust, lead in urban areas, and naturally occurring metals in many areas, by providing an option to meet a background standard.

The background standard methodology appears consistent with the background standard in Act 2.

Performing a demonstration that meets the criteria of the proposed policy is a substantial activity to ensure that the guideline of the MoFP is followed, likely to the point of being cost prohibitive. For example, a demonstration that the constituent in question is within background levels of the donor site requires a minimum of 10 samples be collected from the fill and 10 samples from the

background reference area at the donor site. Assuming that the demonstration is successful, another background investigation must be performed at the receiving site to establish background levels for the constituent of concern and assure that the constituent of concern in soil at the donor site does not exceed background levels at the receiving site. The minimum number of samples required for this background demonstration on the receiving site is 20 samples: 10 from the receiving area and 10 from the background reference area at the receiving site. In short, a demonstration to approve one constituent as Clean Fill for the receiving site on the basis that it exceeded the Uncontaminated Fill threshold would require a minimum of 40 samples be collected and analyzed. That kind of cost and effort for constituents like arsenic, vanadium and thallium, which exceed background levels naturally at a high frequency in Pennsylvania soil, is overly burdensome and contrary to the objectives of the policy.

DEP should consider developing default background levels for the state or various regions within the state. There are a number of studies that can be referenced and could be used to support development of default background levels of naturally occurring constituents in fill and for compounds such as benzo(a)pyrene due to their ubiquitous nature in and around urban areas often with no known point source. Default background values from published literature have been accepted in the past by DEP.

Changes are needed concerning the 0.13 mg/kg CF/RF standard for benzene. This puts PennDOT at a long-term risk of repeatedly encountering soil at gas stations that has met Act 2 standards for a past completed UST Corrective Action yet is ineligible for management as either Clean Fill or Regulated Fill if hauled offsite. Requiring landfill soil as residual waste if it meets other Clean Fill eligibility requirements but shows benzene at 0.14 to 0.5 mg/kg, particularly at sites for which DEP has approved the RACR or Act 2 Final Report, should not be required.

DEP is losing consistency amongst its fill programs. DEP does not have one set of reliable statewide numerical limits to manage fill materials properly. Limits for arsenic and benzo(a)pyrene are set too low and conducting more background studies at individual sites is a waste of time and money. Ohio and New Jersey have taken urban background numbers into account. It should not be the responsibility of individual property owners and contractors to test sites all over the State because DEP has not set appropriate background numbers. (6, 8, 10, 19, 22, 23, 27, 29, 30, 32, 34, 35, 37)

**Response:** The commentators note that the background determination procedure in the policy provides an opportunity for fill to be used even if analytical testing reveals an exceedance of a CFCL or RFCL. The background determination procedure described in the policy states that an equivalent site evaluation be performed in conjunction with the background determination to ensure that fill containing a regulated substance at a concentration that may be widespread and routinely observed in an urban area is not transported to a rural area where the presence of that regulated substance is not observed as part of the background for that area. Because fill management under the policy can take place without needing to obtain a permit, is largely unrestricted and occurs with minimal oversight by DEP, the language in Section G of Appendix A has been retained in the final policy.

DEP has not fully evaluated the prevalence of scientific studies to determine whether default background values for substances can be established in the variety of Pennsylvania's geographical and environmental settings.

- 10. Comment:** The MoFP states clean fill can be generally used in an “unrestricted manner.” In 2010, the Form FP-001 was updated to require its submission for all projects and analytical to DEP. DEP’s implementation of the August 7, 2010, version of the MoFP has been extremely inconsistent. There has been variability between the manner in which each regional office applies and interprets the policy, as well as variation within a single regional office. While Clean Fill is to be unrestricted, some regions are involved in reviewing, commenting, and approving all clean fill packages while others have little to no involvement. This is contrary to DEP’s FAQs relating to the previously effective version of the policy, which did not recommend the issuance of approval letters and stated that DEP involvement would be limited to cases where a concern exists. The DEP regions need to be unified or this policy is bound to fail, after being so successful for 13 years. (14)

**Response:** The DEP regional offices receiving Form FP-001 submittals may review the submittals for compliance with the final policy. In doing so, DEP staff may identify deficiencies or request additional information to be supplied, which helps to ensure that fill determinations are made adequately and in accordance with the final policy. While DEP’s goal is to implement its regulations and policies consistently statewide, the regional offices must also consider the relevant site-specific circumstances in their interpretation and application of the regulations and policies. The level of review conducted by each regional office may vary between DEP regions or between similar projects in the same region, depending upon differing circumstances such as the level of public interest, history of compliance, or volume of fill used.

- 11. Comment:** One commentator expressed concern regarding the reliability of in-situ sampling performed on fill material, specifically at out-of-state sites where fill may be mixed with material from other sites prior to being transported into Pennsylvania as fill. The commentator advocates for the inclusion of a requirement that fill be tested at the receiving site prior to use to ensure that new contaminants were not mixed into the fill. (3)

**Response:** DEP believes that the use of in-situ testing procedures provided in the policy is more protective of human health and the environment than the procedures included in the previously effective version of the policy. The procedures for in-situ testing described in the final policy align with the requirements of Pennsylvania’s Land Recycling Program administered under Chapter 250, and they provide information about fill from a donor site that is more representative of the concentrations of regulated substances that may be present because the fill has not been blended with other fill prior to sampling, a practice which may ‘dilute’ the concentrations of regulated substances detected if the sampling occurs after the fill has been mixed with less contaminated material.

The policy notes that sampling and analysis be representative of the fill proposed for use. Perform the sampling and analyses in accordance with Appendix A of the final policy. The chemical analyses necessary to demonstrate that the fill meets the CFCLs or RFCLs are performed by a laboratory accredited under Pennsylvania’s Environmental Laboratory Accreditation Program, and the operator of the facility should inspect incoming loads of fill to ensure that it is consistent with the characterization performed. In addition, the policy prohibits the use of fill that has been blended, mixed or treated with the purpose of meeting a CFCL or RFCL that without being blended, mixed or treated would fail to meet the CFCLs or RFCLs.

To use clean fill, documentation should be submitted using Form FP-001 to the DEP Regional Office serving the county in which the clean fill will be used. The form compiles information

supplied by both the person supplying fill from the donor site and the person using the fill at the receiving site. Both the person making the fill determination and the person using the fill will sign the form and certify under penalty of law (18 Pa. C.S.A. § 4904) that the information provided is true and correct to the best of their knowledge, information and belief. There are criminal consequences for persons who falsify Form FP-001 that can be found at 18 Pa. C.S.A. § 4904. For these reasons, DEP has retained the procedures for in-situ testing in the final policy.

- 12. Comment:** The draft revisions to WMGR096, which were published in the *Pennsylvania Bulletin* on October 6, 2018, represent extensive modifications to the permit which include many additional and burdensome conditions relating to application requirements, reporting requirements, due diligence requirements, requirements for traffic studies, physical/chemical testing requirements, document retention requirements, as well as exclusionary language that impacts the overall use of the permit by the oil and gas industry and overall site development throughout the Commonwealth. As the MoFP and WMGR096 are closely linked, proposed revisions to both documents should be reviewed simultaneously and all comments on both proposals should be considered prior to finalizing either process, keeping in mind the legal limitations of both policy statements and general permit conditions. (22, 23)

**Response:** DEP received a significant level of public interest on the proposed modifications to WMGR096. Due to the volume and extensiveness of the comments received, as well as the short amount of time available to evaluate the comments prior to the expiration of WMGR096 on December 23, 2018, DEP renewed WMGR096 for one year so that the revisions to the MoFP could be finalized prior to incorporating any of the proposed revisions into WMGR096. Notice of this action was published in the *Pennsylvania Bulletin* on December 22, 2018, 48 Pa.B. 7784.

DEP is separately considering public comments received on the proposed revisions to WMGR096 and plans to re-notice proposed modifications to WMGR096 in the *Pennsylvania Bulletin* with another 60-day public comment period after the final MoFP is published and comments received on WMGR096 have been appropriately evaluated and addressed.

- 13. Comment:** On the standard elements page, page i of the policy, in the purpose section, states, “Regulated fill may not be used unless a SWMA permit has been issued to the person using the regulated fill.” The statement conflicts with the applicability section on the same page, which states, “Excavation, movement or reuse of fill within a project area or right-of-way of a project is not an activity that requires a SWMA permit.” The phrase “outside of the project area or right-of-way” should be inserted into the purpose section after the words, “may not be used.” (10)

**Response:** DEP has corrected the purpose statement on page i of the final policy to read, “Regulated fill may not be used **outside of a project area or right-of-way of a project** unless a SWMA permit has been issued to the person using the regulated fill.”

- 14. Comment:** On the standard elements page, page i of the proposed policy, the applicability section states, “This policy does not apply to fill that has been placed prior to the effective date of this policy, unless the fill is moved to another site or off the project right of way after the effective date of this policy.” Since a reference to Chapter 250 is included in the proposed policy’s definition of “uncontaminated,” and the standards that apply to clean fill may change every three years with Chapter 250, fill that was previously determined to be “clean fill” may not meet the standards established in the proposed policy revisions. DEP must address, that as of a

change to these tables, any material placed prior to those regulatory changes does not apply to the new limits unless the fill is moved to another site. DEP should also clarify how the changing limits will be practically applied. Is it now the responsibility of the property owner to prove the date of placement? The third and fourth sentence of this section are repetitive about the limitation for a right of way. (14)

**Response:** The intent of the final policy is to apply the applicable CFCLs or RFCLs that are in effect at the time the fill determination is made. Subsequent changes to the CFCLs and RFCLs do not affect fill determinations made prior to the implementation of revised CFCLs and RFCLs, unless the fill is moved to another receiving site, off the project area or off the right-of-way for the project after the date a revised CFCL or RFCL becomes effective. Language was added to clarify this point. Records relating to the use of clean fill should be maintained by both the donor site and the receiving site. Therefore, DEP believes that it will not be overly burdensome to determine when fill was used as clean fill and which numeric values apply to the fill determination. Refer to DEP's response to comment #8.

DEP disagrees with the commentator that the referenced sentences are repetitive. One sentence states that the policy does not apply to fill used within the same right-of-way, and the other describes activities that do not require a SWMA permit.

- 15. Comment:** DEP refers to this document as a policy, as such, this should be consistent throughout the document. On the standard elements page, page i of the policy, in the disclaimer section, the first sentence refers to the document as a guidance document. The words "guidance document" should be replaced with the word "policy". (22, 23)

**Response:** The language in the disclaimer is used in every DEP guidance document. The words "policy" and "guidance document" are used interchangeably throughout the MoFP. As such, the language has been retained in the final policy.

- 16. Comment:** The proposed policy revisions do not include any tables to reference the CFCLs or RFCLs (formerly Tables FP-1a/1b & Tables GP-1a/1b, respectively). We would recommend that tables be prepared to show the applicable CFCLs and RFCLs and posted on a dedicated DEP website with the link to the website referenced in the policy. It is understood that the CFCLs or RFCLs could change based on changes to the Act 2 standards; however, updated tables could be uploaded to the website as necessary. A flow chart would also be helpful to determine when the policy is applicable, when fill is considered clean fill versus regulated fill and when testing is necessary. FAQs regarding the policy should be posted on a dedicated PADEP website and the website link for the FAQs should be referenced in the policy. The FAQs posted to the website then can be continually updated and would be available to the public. (10, 18, 20)

**Response:** DEP plans to prepare tables for the CFCLs and RFCLs along with FAQs. These documents will be posted on DEP's website. DEP will not be developing a flow chart.

- 17. Comment:** When Act 2 was originally adopted, it was not intended to manage current spills and releases, whether intentional or not. Introducing substances (regardless of the concentration of those substances) to soil where those substances do not already exist, is still contamination. It seems that the movement of fill in the proposed revised policy, whether contaminated or not, is less restrictive? For example, historically, contaminated fill on a site was considered residual waste and as such could not be transported to another site (Act 2 or not) for storage, blending,

mixing, processing, use, etc. without first obtaining the appropriate residual waste permits. The proposed revised policy appears to relax those requirements, enhancing the original meaning of a site to project area and based on the concentration of contaminants in the soil? Regardless of what you call the fill, it still is a municipal or residual waste. As such it is always regulated as a waste. Residual waste can be granted a determination that substances are not a waste or through a co-product demonstration some exemptions from being regulated as a waste. Municipal Waste purposefully does not have such regulatory tools available and cannot be used as freely for fill as residual waste. (12)

**Response:** In accordance with the municipal and residual waste regulations at 25 Pa. Code §§ 271.101(b)(3) and 287.101(b)(6), a person or municipality is not required to obtain a permit for the use of soil, rock, stone, gravel, brick and block, concrete and used asphalt as clean fill, provided the material is uncontaminated. The policy provides guidance on making a fill determination to satisfy the criteria for using clean fill without a permit. Fill that cannot meet the criteria for the permit exception provided in 25 Pa. Code §§ 271.101(b)(3) or 287.101(b)(6) can only be used if a permit for the use of the fill is obtained.

The final policy does not make a determination as to whether the fill is a waste. As stated in Section A of the final policy, relating to purpose and applicability, depending on the manner in which it is generated, many items that can qualify for use as clean fill are waste. The language regarding the movement of fill between sites that are undergoing remediation under Act 2 was used in the previously effective version of the policy, dated August 7, 2010, and is not a new interpretation or reduction in requirements.

- 18. Comment:** The policies and procedures described in the document are intended to supplement existing regulatory requirements. The proposed policy uses the word “must” 53 times and “shall” 21 times to describe many of the recommendations. DEP should consider reviewing the areas where “must” and “shall” are used to define specific mandatory requirements and use “should” and “recommend” instead, as this provides more flexibility when there is not a specific requirement already in a statute or regulation. Otherwise, the mandatory nature of the policy runs the risk of crossing the line between permissible guidance and guidance that is functioning as regulation without being promulgated in accordance with the procedures imposed under Pennsylvania law.

The proposed revisions to the MoFP changes will have substantial impact to the Pennsylvania economy by increasing construction costs and reducing development. The nature of these changes has created a MoFP that is incredibly technical and outside of the original purpose of this policy. The proposed changes will drastically increase disposal of excess soils coming from construction projects that is now deemed “contaminated” at a cost of approximately \$80/ton. Other local construction projects needing fill will be forced to use crushed stone as the only source of clean fill available, adding another increase to costs across the industry sector. DEP policies on writing regulation and guidance require that changes should not diminish PA’s competitive economic advantage. DEP should take additional time to consider the proposed revisions, including stakeholder meetings or a more thorough examination by the Solid Waste Advisory Committee. Alternatively, DEP should prepare a new draft that is republished for public comment, or at a minimum, provide a grace period for compliance to allow stakeholders to thoroughly review, implement and train personnel on the revised policy. (13, 14, 15, 16, 17, 18, 22, 23, 24, 25, 29, 30, 31)

**Response:** Regarding the use of mandatory language in the proposed policy, the purpose of the MoFP is to provide DEP’s procedures for determining whether fill is “clean fill,” as defined in the municipal and residual waste regulations at 25 Pa. Code §§ 271.1 and 287.1, respectively, or “regulated fill,” as defined in the policy. Nevertheless, the Department has modified the policy as requested by the commenters. The policy provides guidance for making a fill determination to use clean fill without a permit. The policy is not a regulation and will be implemented as guidance. There is no intent on the part of the Department to establish regulatory requirements in this policy. Fill that cannot meet the criteria for the permit exception provided in 25 Pa. Code §§ 271.101(b)(3) or 287.101(b)(6) can only be used if a permit for the use of the fill is obtained. While some of the mandatory language has been revised in the final policy to allow flexibility in the development of sampling plans, background determinations and equivalent site evaluations, some of the mandatory language has also been retained in the final policy so that DEP can uniformly implement the burden of proof required to demonstrate that a person using the fill satisfies the permit exemption provided in the regulation. The policy sets up a framework within which DEP will exercise its administrative discretion in the future.

Much of the additional language that appeared in the proposed policy revision simply clarified existing interpretations and aligned the policy with existing regulations, and therefore, does not represent new requirements or interpretations. DEP believes that by revising some of the mandatory language relating to sampling plan development, background determinations and equivalent site evaluations, there will not be a significant cost increase associated with the implementation of the final policy.

DEP recognizes the need to work with stakeholders to understand the changes and will work with advisory committees and other organizations to educate members.

- 19. Comment:** The language of this draft policy would make it difficult to utilize soil testing conducted under a state or federal regulation and require retesting to perform a fill determination. Analytical results conducted under a state or federal requirement should be considered valid and usable in a fill determination. To not utilize these samples only increases costs while doing little to improve the characterization of the material. (13, 16, 24, 25)

**Response:** DEP agrees with the commentator that testing conducted under a state or federal regulation can be used as part of a fill determination as long as it meets the intent of the guidance and the laws and regulations of the Commonwealth. DEP does not believe that language in this policy inhibits the use of sampling conducted under state or federal regulations.

- 20. Comment:** In the past, there have been many public comments about the use of fill. There are many false statements that are made and not corrected, leading to a poor public image of the use of fill. This is a public image issue more than a significant statewide compliance issue. There have been public demands for state to state consistency in acceptable fill levels. The changes suggested in this draft do nothing to standardize the inconsistencies between DEP’s use of fill in clean fill, regulated fill, reclamation fill, and clean ups. (13, 24, 25)

**Response:** This guidance establishes the implementation of Pennsylvania laws and regulations and is consistent with other DEP guidance for the purposes developed. The guidance cannot address inconsistencies within the law or regulations or with federal law and other state statutes.

21. **Comment:** The current MoFP was written in conjunction with DEP’s Land Recycling Program. This draft has removed all reference to the Act 2 program while still maintaining many concepts. This can be problematic as the waste program does not contain guidance for these processes. (13, 24, 25)

**Response:** The previously effective version of the MoFP made one reference to the regulations that govern the Act 2 program, Chapter 250, in paragraph (d) of Appendix A, which states in pertinent part, “The minimum number of samples shall be determined in accordance with EPA approved methods on statistical analysis of environmental data, as identified in 25 Pa. Code § 250.707(e) (relating to statistical tests).” 25 Pa. Code § 250.707(e) relates to statistical tests that DEP will accept to demonstrate attainment of a SHS for remediation activities performed under the Act 2 program and lists five methods that can be used for the statistical treatment of data. Of the five methods listed in 25 Pa. Code § 250.707(e), only one is applicable to the use of fill. Therefore, the reference to Chapter 250 was removed from the final policy and replaced with references to methods of statistical evaluation that DEP can accept when statistics are used as part of a fill determination under the policy.

22. **Comment:** The proposed revised policy is written as though it was put together as pieces and not written as a flowing document. Though this is not a final version, a draft should be thoughtfully prepared and presented as though it was a final document. (13, 24, 25)

**Response:** DEP has drafted the guidance document with the intent of developing a clear understanding of how to implement the applicable Pennsylvania law and regulations. DEP has considered this comment during the preparation of the final guidance document.

23. **Comment:** A review of DEP’s compliance tracking database does not indicate a significant volume of violations and noncompliance with the current policy. If there is not a significant compliance issue, why is DEP enacting such sweeping changes? These extensive changes seem only to further complicate the issue. These changes will only limit the use of fill and increase the amount of fill improperly used by “bad actors.” These changes will do nothing to prevent “bad actors” from doing illegal things. (13, 16, 24, 25)

**Response:** DEP is modifying the previously effective guidance document, dated August 7, 2010, to correct the inconsistency between the current Act 2 SHSs and the 2010 guidance document and clarify other items that have been repeatedly encountered during implementation of the 2010 policy over the last nine years.

24. **Comment:** Clean Fill was always considered an unregulated material in current and previous versions of this policy. The proposed revisions now require clean fill to be reviewed and approved. This has now required all clean fill to be a regulated material with no established timeframe for response by DEP. DEP states its workload is too great for its staff but has now through policy significantly increased the workload. DEP needs to reconsider the proposed revisions for practical concerns as well as workload. (13, 24, 25)

**Response:** Neither the proposed policy revisions nor the final policy requires submissions of Form FP-001 to be approved by DEP. The form simply needs to be submitted to DEP prior to transporting the fill off of the donor site.

25. **Comment:** The purpose of the MoFP is to determine whether material is clean fill. If the material is clean fill, it may be used in an unregulated manner in accordance with the solid waste regulations. The changes to this policy make it impossible for a homeowner or private citizen to conduct a due diligence and make a determination. The cost of complying with this policy will increase at least four-fold. The complexity in making a fill determination will require professional involvement in the smallest jobs, and everything must be submitted to DEP for review. The amount of professional judgement required in the proposed policy will certainly increase DEP's workload, as differing points of view are evident. There is no lower volume limit to how or when this policy is to be applied, leaving no relief for small excavations. The vast majority of homeowners will not be able to understand or follow these procedures and will now carry the legal and financial burden of conducting these procedures.

The effect of these changes will greatly restrict the use of fill and greatly curtail redevelopment in the Commonwealth. Thousands of acres in Pennsylvania will immediately be rendered contaminated because some of the most common parameters found in populated areas are being drastically reduced. (14, 16)

**Response:** DEP disagrees with the commentator that the final policy language will be too difficult for persons to make a clean fill determination. Implementation of the final policy should not substantially increase the cost of compliance for small excavation projects and are not intended to require any additional subject knowledge. Due diligence in some instances is as simple as a visual inspection and a review of ownership and historic property use, while sites with more complex historical uses would need further investigation; neither situation represents anything new resulting from these revisions. The final policy continues to allow clean fill determinations to be made based on due diligence that shows no evidence of a release. The additional language regarding sampling and analytical testing is intended to clarify provisions from the previous policy.

### Definitions

26. **Comment:** The proposed revised policy provides a definition of "acid producing rock" which is excluded from the definition of "fill." The term "acid producing rock" is not utilized elsewhere in the draft technical guidance. DEP does not suggest a laboratory test method to evaluate if materials meet this definition, nor is a quantitative limitation or description provided to reference or assess materials against. Is there a standard or reference which DEP wishes the public to consider in determining if material(s) meet this definition, and thereby are excluded from the definition of "fill?" (7, 38)

**Response:** Pennsylvania's municipal and residual waste regulations at 25 Pa Code. §§ 271.1 and 287.1, respectively, define clean fill, in part, as inert solid material. Acid-producing rock reacts when exposed to air or water, and therefore, does not meet the regulatory definition of clean fill. In addition to presenting abrupt and adverse environmental concerns, exposed acid-producing rock can also have long-term damaging effects on highways and highway structures, including corrosion of concrete and steel structures; destabilization of cut slopes and fill slopes; ground heaving of structures and pavements; toxicity to roadside vegetation and aquatic life; and degradation of drinking water supplies. DEP has added Appendix B to the final policy to provide additional guidance and resources for determining whether fill contains acid-producing rock.

27. **Comment:** The draft policy defines an Act 2 site as where “...a notice of intent to remediate has been submitted...” If an Act 2 site is receiving or exporting fill, doesn’t DEP approve this action? Current language only requires a submission. (14)

**Response:** The definition of “Act 2 site” in the final policy mimics the definition provided in Act 2. DEP only uses the term “Act 2 site” in the policy when making reference to sites which are undergoing remediation to attain an Act 2 standard. The use of fill at an Act 2 site is not managed under the policy. Rather, the use of fill at an Act 2 site is dictated by DEP’s Land Recycling Program.

28. **Comment:** The proposed definition of “background” references the concentration “...not related to the release of a regulated substance...” Naturally occurring regulated substances should be considered background.

With respect to the definition of “background,” DEP has proposed to define that term as “[t]he concentration of a regulated substance, as determined by appropriate statistical methods, that is present at a site, but not related to the release of regulated substances at the site.” There is no need to include the clause “as determined by appropriate statistical methods” given the fact that DEP is addressing how background conditions are established in Appendix A to the proposed version of the MoFP. Moreover, as discussed above, it may be relatively easy to discern that a regulated substance is naturally occurring without the need to perform a formal statistical evaluation of sampling results. In addition, because the definition of a “release” included in the proposed MoFP is extremely broad, it may be useful to clarify in the last clause of the definition that the regulated substance at issue is not related to the release of regulated substances “from a specific point source or activity” at the site. The definition of “background” as revised would then read as follows: “The concentration of a regulated substance that is present at a site, but not related to the release of regulated substances from a specific point source or activity at the site.” (14, 32)

**Response:** The proposed definition of “background” mimics the definition of background provided in Chapter 250. While the presence of some regulated substances may be due to naturally occurring conditions at a site, there are situations where the presence of a substance that can also occur naturally is due to a release. By performing a background determination, fill that exceeds a CFCL or RFCL can still qualify as clean fill or regulated fill if the background determination shows that the presence of that substance is due to naturally occurring conditions at the donor site rather than a release.

DEP agrees with the commentator regarding the use of the phrase “as determined by appropriate statistical methods.” The definition of background in the final policy has been revised to read, “The concentration of a regulated substance that is present at a site, but not related to the release of regulated substances from a specific point source or activity at the site.”

29. **Comment:** The proposed policy revisions include a definition of “background reference area.” How does DEP presume that one gains access to “other” properties to determine background levels? What are the liabilities or liability protections which may be afforded to an owner of a site which is to be used as a background reference? In instances where neighboring property owners do not allow access to their site to collect samples, is it acceptable to determine background concentrations based on published values available from valid literature sources? Does DEP have a quantitative definition of, or can provide further explanation of, “close

proximity”? Suggest revising to read “closest proximity reasonably available.” (7, 10, 14, 15, 27, 35, 38)

**Response:** The definition of “background reference area” does not require that the sampling for the purpose of establishing background be performed on a separate property. Rather, the background reference area may be co-located on a property with the donor site, as long as it has not been affected by a release and meets one of the criteria described in the definition of “background reference area.”

Samples from the background reference area are used to make a background demonstration for the use of fill from the donor site and, as such, should only be analyzed for those regulated substances that exceed a CFCL or RFCL and for which a background determination is being made. If the background reference area is chosen in accordance with DEP guidelines, the presence of regulated substances in the background reference area is due to background conditions and thereby, demonstrated that they are not due to the release of a regulated substance. Therefore, there is no liability associated with the presence of a regulated substance at the background reference area and no need for liability protection for the owner of the property on which the background reference area is located.

The term “close proximity” is used in conjunction with the definition of background reference sample to indicate that the background reference area needs to be close enough to the donor site to reasonably establish that the soil in the background reference area is also representative of the soil at the donor site. If a suitable background reference area cannot be identified on the same property as the donor site, the closest suitable area able to be identified that meets the criteria in the definition of “background reference sample” should be chosen.

- 30. Comment:** With respect to the definition of the term “background reference area,” two changes would be helpful. First, because of the broad definition of a release, the phrase in the introductory paragraph that states “is unaffected by a release” should be modified to read “is unaffected by a release of regulated substances from a specific point source or activity at the site.” Second, the explanatory sentence at the end of the definition should be truncated to remove the phrase “and not limited to the immediate vicinity of a specific highway or road.” This phrase in the context of airborne deposition of regulated substances such as lead or benzo(a)pyrene from motor vehicle usage is overly restrictive. Elevated levels of regulated substances along transportation corridors are very much a function of background conditions found in many urban and suburban areas. (32)

**Response:** The definition has been revised as suggested by the commentator.

- 31. Comment:** The proposed definition of background reference area requires samples to be located at the same depth and soil layer as the excavated material. DEP’s intent of similar conditions is understood, but this definition is rather specific for conditions that will need to be evaluated by an environmental professional. There are extensive variables that must be considered. (14)

**Response:** DEP disagrees with the commentator that the variables to consider in selecting a background reference area are extensive. There will be some instances where background can be easily established. For more complicated projects, an environmental professional may need to be employed. DEP believes that the definition of “background reference area” is written broadly enough to allow background determinations to be easily performed using common sense tactics

for small-scale excavation projects, while providing enough specificity to highlight the importance of fully comparing the background reference area to the donor site for larger, more complicated projects.

- 32. Comment:** This background reference area definition gives weight only to “atmospheric deposition” and not other ubiquitous uses of materials such as asphalt that lead to widespread effects such as levels of benzo(a)pyrene. To limit the possibility to atmospheric deposition and the parameters to lead and polynuclear aromatic hydrocarbons is extremely short sighted. Benzo(a)pyrene is a common contaminant due to the widespread use of asphalt in our environment. The remnant asphalt material mixed into soils cause widely varying results. Of course, there are other reasons for the presence of benzo(a)pyrene, but in the absence of a release, it is often due to asphalt. Used asphalt and RAP are allowed to be used. If the presence of benzo(a)pyrene is due to asphalt, there should be an exemption for its use. PAH contamination is more prevalent due to asphalt than atmospheric deposition. Is the benzo (a) pyrene parameter eligible for a background determination on sites where asphalt is/was present?

The background reference area definition further limits atmospheric deposition to not include motor vehicle exhaust if it is limited to the vicinity of a highway. This would mean that elevated levels of lead and PAHs along roadway projects are not clean fill. This change would greatly increase costs to the Commonwealth for all PennDOT and roadway projects. (14, 15)

**Response:** If fill is contaminated by asphalt pavement, the contamination is from a release and is not eligible for a background determination. The act of benzo(a)pyrene leaching out of used asphalt or RAP is considered a release. These releases should be treated just like any other release when making a fill determination. Benzo(a)pyrene contamination from a specific asphalt source would meet the definition of “release” in the MoFP. Fill that has been contaminated by a release from a known source is not eligible for a background determination. For example, contamination from asphalt pavement may only exist in the fill located closest to the surface, and therefore, potentially be removed and characterized separately from fill located deeper within the area to be excavated. If the deeper fill can be demonstrated to meet the CFCLs because the contaminants in the asphalt pavement have not migrated to the depth of the deeper fill, then it can be used as such provided the affected fill at the surface was managed separately.

The intent of the final policy is to allow the use of fill in situations where ubiquitous atmospheric deposition is the cause of contamination. Atmospheric deposition from a single source, such as a highway, should be treated just as any other type of release. Levels of lead and PAH’s above the appropriate numeric values would not meet the definition of clean or regulated fill. The policy amendments regarding atmospheric deposition do not cause material that would have been clean fill under the previous policy to be excluded from use as clean fill in the revised policy.

- 33. Comment:** The proposed policy defines clean fill as “...material used to level an area or bring an area to grade.” The addition of these words to the original definition can be a limiting factor depending on how this is defined. There are other uses for clean fill, and it seems pointless to list its uses. The original intent of this policy was that clean fill was unregulated by the SWMA and defining uses could jeopardize that. (14, 33)

**Response:** Both the municipal and residual waste regulations define clean fill as material “used to level an area or bring an area to grade.” The addition of the phrase to the definition of clean fill in the final policy simply aligns the policy definition with the regulatory definition, and

therefore, is not a new interpretation or new limitation to the manner in which clean fill can be used. The intent of the MoFP continues to be to provide guidance on using clean fill without a permit in accordance with the exception to permit requirements provided in 25 Pa. Code §§ 271.101(b)(3) and 287.101(b)(6).

- 34. Comment:** The definition of “clean fill” in the previously effective version of the MoFP states that “[t]he term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized.” In the proposed policy revisions, the language has been removed. This change is critically important because it precludes the use of clean fill for projects that involve activities in or on waters of the Commonwealth, even if such use has been authorized by an appropriate permit from DEP. If clean fill is not authorized for such use, then what is? The change that DEP has made would, for example, preclude the use of crushed stone or rip-rap to protect stream banks, and preclude the use of fill material to construct duly authorized stream encroachments under the Dam Safety and Encroachments Act (“DSEA”) and 25 Pa. Code, Chapter 105. It is hard to fathom that DEP intended to make such a dramatic change. It may be that DEP intended to suggest that clean fill can be used in an unrestricted manner provided it is not placed in waters of the Commonwealth because placement of clean fill in waters of the Commonwealth would typically trigger permitting requirements under the DSEA and 25 Pa. Code Chapter 105 (i.e., it would not be unrestricted). However, the change to the definition of “clean fill” goes much further and results in an outright prohibition on use of clean fill in waters of the Commonwealth under any circumstances. It is imperative that the phrase “unless otherwise authorized” be restored in the portion of the definition of “clean fill” discussing “materials placed in or on the waters of the Commonwealth.” (14, 32, 37)

**Response:** Both the municipal and residual waste regulations include in the definition of clean fill the statement: “The term does not include material placed into or on waters of this Commonwealth.” The additional phrase referenced by the commentator, “unless otherwise authorized,” does not appear in the regulatory definition of clean fill. The removal of the phrase from the definition of clean fill in the policy simply aligns the policy definition with the regulatory definition, and therefore, is not a new interpretation or new limitation to the manner in which clean fill can be used. The MoFP is not suited to make determinations on whether or not clean fill can be placed in or on waters of the Commonwealth, and removal of the phrase “unless otherwise authorized” does not restrict other mechanisms for allowing this type of use for similar material such as permits issued under the DSEA or 25 Pa. Code, Chapter 105. Rather, placement of fill in waters of the Commonwealth cannot be adequately managed under the MoFP. The language has been retained in the final policy.

- 35. Comment:** For many years, dredged material that is uncontaminated has qualified as clean fill. In the proposed version of the MoFP, however, DEP has expressly removed dredged material from the universe of materials that can qualify as “clean fill.” Moreover, it does not appear that dredged material even falls within the proposed definition of “fill.” By contrast, the proposed definition of “regulated fill” (which is classified as a waste under the SWMA) encompasses “dredged material” as defined in 25 Pa. Code §§ 271.1 and 287.1, essentially classifying all dredged material as a waste under the SWMA. While some dredged material may be sufficiently contaminated that it does not satisfy the clean fill standards, a significant amount of dredged material will meet the clean fill standards. Moreover, in portions of Pennsylvania, dredging activities are a primary source of sand and gravel used in the construction industry. DEP has offered no explanation for its abrupt departure from the long-standing manner in which dredged material has been handled. To reclassify all dredged material as a waste under the SWMA

eliminates a resource that can be effectively and safely used as clean fill and creates a waste stream that otherwise would not exist. We strongly request that DEP revert to its prior approach and allow dredged material to qualify as clean fill if it meets the clean fill standards. (4, 8, 14, 16, 17, 18, 22, 23, 26, 27, 29, 30, 32, 37, 38)

**Response:** DEP agrees with the commentators. The definitions of clean fill, fill and regulated fill have been revised in the final policy to allow dredge to be used as clean fill if it meets the definition of clean fill. A limit for chloride has also been added to limit the amount of soluble chloride that can be encountered in dredge from marine sources.

- 36. Comment:** Definitions in the proposed policy revisions are different than definitions in the SWMA and DEP regulations. For example: Clean fill definition has added language that I assume is only valid pursuant to the use of this policy? If this is true, then the definitions as used in law and current regulation should be stated first and any additional language valid for this policy's use should be identified as such and in a separate paragraph. (12)

**Response:** The definition of "clean fill" has been reworded. The first sentence mirrors regulatory definitions in 25 Pa. Code §§ 271.1 and 287.1. Additional language to explain how the policy applies to clean fill is also provided.

- 37. Comment:** The definition of composite sample is overly confusing, it does not define or explain the differences between "area-wide" or "long-term" compositing that are introduced in the definition. It defines two specific types of composites but does not suggest that there are others that would be recognized. These are not referenced specifically in Appendix A as composite types and the information seems extemporaneous. (14, 33)

**Response:** The definition of "composite sample" has been revised in the final policy to read, "A sample collected across a spatial range that typically consists of a set of discrete samples that are combined or "composited." A composite sample should not be confused with a discrete sample that is created from multiple increments taken at a single location to obtain a sample of the desired size, shape and orientation."

- 38. Comment:** The proposed policy revisions define "discrete" sample as being derived from a single location, and then adds that a discrete sample can be composed of more than one "increment." These definitions appear contradictory and "increment" is not defined in the draft policy. (6, 10, 14)

**Response:** The definition of "discrete sample" was revised for clarification, and a definition for the term "increment" was added to the final policy.

- 39. Comment:** A donor site is defined as the site where the fill originates and "multiple donor sites may be identified on a single property." This policy does nothing to define how this determination will be made. This definition also references property rather than project area which is further defined in the policy. (14, 34)

**Response:** The term "property" in the definition of "donor site" has been replaced with the term "project area" in the final policy. Multiple donor sites may be identified in the process of performing fill determinations. For instance, if fill in one portion of a project area meets the

CFCLs and fill in another portion meets the RFCLs, the two portions of the project area could be considered different donor sites.

- 40. Comment:** The proposed changes to the definition of environmental due diligence and requirements do not allow reviewers to know if the fill is clean or not. Proof of the due diligence should be provided to the reviewers for confirmation. (4)

**Response:** Documentation of the environmental due diligence is to be submitted with the Form FP-001, as described in Section B of the policy.

- 41. Comment:** The proposed policy does not provide clarity regarding who should perform environmental due diligence. (6)

**Response:** DEP does not intend to limit who can perform a fill determination and will accept written documentation of the due diligence performed from either the person who is proposing to provide fill from the donor site or the person proposing to use fill at the receiving site. In some instances, it may be in the interest of the donor site; at other times, the receiver of the fill may have more interest in having the fill characterized for a particular end use.

- 42. Comment:** The method, ASTM E1527-13, referenced in the definition of environmental due diligence provides a definition of an Environmental Professional that could be used in the clean fill policy. (6)

**Response:** DEP agrees that the definition of “environmental professional” in ASTM E1527-13 can be useful in assisting persons making a fill determination in accordance with the policy. However, DEP does not want to limit who can perform environmental due diligence in the final policy. A definition of “environmental professional” was not added to the final policy.

- 43. Comment:** The proposed version of the MoFP includes an expanded definition of “environmental due diligence.” This definition as drafted focuses on whether “a donor site has been affected by a release of a regulated substance.” The focal point of environmental due diligence instead should be on whether fill material from a donor site has been affected by a release of a regulated substance. Such a change will ensure that the language in the definition appropriately focuses on the fill material itself.

The last sentence of the proposed definition of environmental due diligence suggests that collecting samples and performing analytical testing is “part of” environmental due diligence. Under the existing version of the MoFP, environmental due diligence and sampling activities represent distinct tasks as opposed to one being a subset of the other. We recommend that the last sentence either be modified to clarify the distinct nature of environmental due diligence and sampling activities or removed altogether (given the fact that Appendix A stands on its own). (14, 32, 34, 37)

**Response:** DEP agrees with the commentators; analytical testing is not always part of environmental due diligence. The first sentence in the definition of environmental due diligence has been revised in the final policy to state, “Investigative techniques used to determine whether fill from a donor site has been affected by a release of a regulated substance.” The last sentence in the proposed definition of environmental due diligence has been removed from the final

policy, and language was added to clarify that analytical testing can be used in lieu of a review of ownership and historical property use.

- 44. Comment:** The proposed definition of due diligence includes “procedures outlined in ASTM standard E1527 13 as an investigative technique. ASTM E1527 13 is the standard for conducting Environmental Site Assessments (Phase I). As all the other defined investigative techniques would be considered parts of a Phase I, is it DEP’s intent that all MoFP due diligences must be conducted to the level of a Phase I Environmental Site Assessment? (14)

**Response:** DEP does not intend to require a Phase I Environmental Site Assessment to be performed as part of the environmental due diligence for all fill determinations made in accordance with the MoFP. The ASTM E1527-13 procedure is provided as an example of the many investigative techniques that can be used when performing environmental due diligence. It is not required that every technique provided as an example in the policy’s definition of environmental due diligence be used for each fill determination.

- 45. Comment:** The proposed definition of environmental due diligence also mandates that due diligence must include a visual property inspection, and a review of ownership and historical use, at a minimum. In addition, the proposed definition mandates that a single investigative technique may not be used. It is unclear whether this latter requirement is necessary given the requirement to perform a visual property inspection and a review of ownership and historical use (at least two separate investigative techniques). While we agree that a visual property inspection and a review of ownership and historical use are important and meaningful elements of environmental due diligence in most instances, there may be circumstances where those steps are not warranted. For example, if utility work is being performed in the middle of a street in Harrisburg or Philadelphia, understanding the ownership history of the property might not be terribly meaningful. We suggest that the definition of environmental due diligence provide a modicum of latitude for professional judgment on the part of the environmental specialists who should be performing environmental due diligence.

For city streets and right of ways, a review of ownership and historical property use as part of environmental due diligence would be a very large undertaking, as many city streets and right of ways have been in use as such for centuries. The change could also cause an undue burden to utility companies, requiring substantial investigative work to look for historical impacts where there is no reason to believe they exist. The requirement applies to all projects where any amount of fill is removed - regardless of the nature of the property or the project. The proposed new standard also raises several questions as to what a “review of ownership and historical property use” entails. For example, it is unclear how broad and extensive the review would need to be, what records would be required, and what type of information would trigger further investigation.

DEP should consider an exception or limited review for streets and right of ways, or where there is a small volume of fill being removed (e.g., under ten (10) cubic yards) and no indications of contamination. Additionally, the scope of the historical review should be defined to a limited period of time. (14, 18, 28, 34)

**Response:** DEP intends for environmental professionals to use professional judgement in performing the environmental due diligence, including the minimum step to review the historic use and ownership of the donor site. DEP intentionally did not specify a method by which this

review is conducted so that the scope of the review needed could be determined based on site-specific conditions and knowledge. The review of historic use and ownership of the donor site can be as simple as knowledge from the property owner or local municipality. Therefore, it will not always require a detailed audit of records. The Form FP-001 simply provides that the person performing the fill determination describe the procedures used for environmental due diligence, and it only requests the submission of records in cases where analytical testing is done as part of environmental due diligence. DEP believes that in most cases the minimum step to conduct a review of the historic property use and ownership is not overly burdensome. However, the definition of environmental due diligence has been modified to provide flexibility and professional judgement in the performance of environmental due diligence, as suggested by the commentators.

- 46. Comment:** DEP has added a new definition for the term “fill” in the proposed version of the MoFP. This definition comes on top of definitions for “clean fill,” “regulated fill,” and “historic fill.” There appears to be little to be gained from the new definition of “fill” and it injects needless confusion into the MoFP. The two fundamental classes of fill material that need to be retained are clean fill and regulated fill with historic fill potentially falling into one or the other of these two categories. If the primary purpose of the definition of “fill” is to provide a vehicle for excluding reclaimed asphalt pavement, naturally occurring asbestos, mine spoils and acid-producing rock from the universe of materials that can qualify as clean fill or regulated fill, those exclusions can be added to the definition of clean fill and regulated fill. (32)

**Response:** The definition of fill was intended to clarify that other wastes not identified in the exception to permit requirements provided in 25 Pa. Code §§ 271.101(b)(3) and 287.101(b)(6) are not able to be used as fill under the policy. The definition has been retained in the final policy.

- 47. Comment:** The definition of fill excludes acid-producing rock from placement in direct contact conditions is understandable but allowing proper handling of these materials with deep placement outside of direct contact in non-residential settings seems appropriate. The proposed policy requires these materials are managed as waste. The policy would not apply if exposed within a right of way, but these materials should be properly managed as well.

It is assumed that the term “mine spoils” is excluded because DEP has a separate policy for fill used at an active permitted non-coal mine site. Unfortunately, this causes problems for fill material at unpermitted former mine sites. Spoil is defined as “overburden and reject material” which would include soil and rock rejected based upon original mining purpose. There are many properties in the Commonwealth that were formerly mined for iron ore and rock that would be impacted. Therefore, excluding mine spoils from the definition of fill eliminates the use of topsoil, soil, clay, rock, etc. from use as fill. We suggest the removal of the term “mine spoils” from the definition of Fill. (14)

**Response:** The items referenced by the commentator have been excluded from the definition of fill because they cannot be adequately managed under the MoFP. The waste regulations provide other opportunities for management of these types of materials, including coproduct determinations or permits issued pursuant to the SWMA. An Appendix B has been added to the final policy that provides guidance on the management of acid-producing rock during environmental due diligence. Refer to DEP’s response to comment #26.

48. **Comment:** The definition of “fill” is unnecessarily limiting because there are other uses for the materials defined as fill other than to level an area or bring an area to grade. It should not be the intent of the policy to limit the use of these materials in the manner that it has, particularly when it is applied to clean fill. Fill should be the material itself and not defined by the manner that it is used. (14, 33)

**Response:** The first sentence stating, “material used to level an area or bring an area to grade,” has been deleted from the definition of fill. However, the municipal and residual waste regulations define clean fill as material “used to level an area or bring an area to grade.” Refer to DEP’s response to comment #33.

49. **Comment:** In the proposed definition of historic fill, iron or steel slag that is separate from residuals is excluded from the definition of historic fill, if it is a coproduct, as the term is defined in 25 Pa. Code § 287.1 and satisfies the requirements of 25 Pa. Code § 287.8. Does iron or steel slag, therefore, require that a formal coproduct determination be conducted? (9)

**Response:** The policy is not intended to apply to current generation blast furnace, iron and steel slag, as the term is defined in the SWMA, that is excluded from the definition of residual waste, as the term is defined in the SWMA, nor does it require the completion of coproduct determinations for iron or steel slag that is a residual waste. However, any iron or steel slag that is not a residual waste, or is separate from residuals, and for which a coproduct determination has been completed, is no longer historic fill and must be managed in accordance with the applicable sections of 25 Pa. Code Chapter 287, including §§ 287.1, 287.8 and 287.9.

50. **Comment:** DEP has attempted to clarify the status of “historic fill” in the proposed changes to the MoFP. Under the proposed requirements relating to “historic fill,” analytical testing is mandated to qualify “historic fill” as clean fill. The proposed requirements then provide that only historic fill that is a conglomeration of soil, rock, stone, gravel, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such may qualify as clean fill, provided that the analytical results meet the clean fill standards.

If sampling is necessary and the sampling results that are obtained demonstrate that historic fill meets the clean fill standards, the historic fill should qualify as clean fill without the additional limitations regarding the composition of the historic fill. The sampling results are the yard stick for measuring whether the use of historic fill poses any unacceptable risks to human health and the environment. This issue is incredibly important given the widespread presence of historic fill throughout many of the urban areas in Pennsylvania. Historic fill tends to coincide with “urban land units” as defined in geologic terms. “Urban land units” are commonly found in areas that were developed many years ago which may have involved the historical use of fill materials. Sampling results represent an objective measure of the characteristics of historic fill. To include additional requirements relating to the composition of the historic fill as DEP is proposing to do (i.e., an “eye test”) simply introduces a level of needless subjectivity that is extremely hard to apply and is unwarranted. DEP should authorize historic fill to be used as clean fill provided that sampling results from the historic fill meet the clean fill numeric standards. (32, 37)

**Response:** DEP revised the limitation placed on the use of historic fill as clean fill. DEP recognizes that historic fill, as the term is defined in the policy, is a conglomeration of materials but excluded the use of historic fill containing primarily slag, ashes from the residential burning

of wood and coal, incinerator ash, and coal ash because these items are not included in the items listed in 25 Pa. Code §§ 271.101(b)(6) and 287.101(b)(3) as materials that can be used as clean fill without a permit.

- 51. Comment:** The proposed modifications to the MoFP include a new definition for the term “project area” which is generally quite helpful, particularly for projects involving excavation, movement or reuse of fill that occurs within a single parcel. The proposed definition of project area limits a project to “activities within a property boundary.” Earth disturbance activities and construction projects are often not limited to a single property boundary making this verbiage highly limiting. The language should remove reference to property. It is also unclear how this definition may apply to linear projects such as utility line work that may involve large numbers of small properties. Such linear projects are very similar in characteristic to road construction projects and other types of activities that occur within delineated rights-of-way. We suggest that DEP clarify that linear projects such as utility line work can be considered to involve activities within a “project right-of-way” for purposes of determining the applicability of the MoFP to such projects. (14, 32, 34, 37)

**Response:** The term “property” has been removed from the definition of “project area” in the final policy. Refer to DEP’s response to comment #39. Language has also been added to clarify that linear projects, such as utility line work, are considered activities within a project right-of-way for purposes of determining the applicability of the final policy.

- 52. Comment:** The definition for PCB is simply the name and not a copy of the definition as found in 287.1. (14)

**Response:** The definition of PCB has been updated in the final policy to include the definition from 25 Pa. Code, § 287.1.

- 53. Comment:** The proposed definition of Release states includes the phrase, “...in a manner not authorized by the Department.” While the phrase is not new text, it does carry new weight in relation to the incorporation of MSCs from Chapter 250 that will change every three years. Language is needed in the policy to waive the material placed prior to a limit change as being clean fill and not just at the issuance of this policy. (14)

**Response:** Language has been added to the Applicability section on page I to address the commentator’s concern. Refer to DEP’s response to comment #8.

- 54. Comment:** The proposed definition of Uncontaminated or Uncontaminated Material states, “Fill unaffected by a release of a regulated substance...” Naturally occurring regulated substances should be considered uncontaminated as it has not been affected by a spill or release. (14)

**Response:** Regulated substances that are present due to naturally occurring conditions are not the result of a release, and therefore, the presence of those substances does not cause fill to become contaminated. Some substances that occur naturally can also be present in the environment because of a release, and therefore, some naturally occurring substances appear as regulated substances pursuant to Chapter 250. Persons conducting a fill determination need to perform environmental due diligence to decide whether or not the fill has been subject to a release. If the fill has not been subject to a release, then the presence of regulated substances in

the fill can be demonstrated to be present due to background conditions at the donor site. Refer to DEP's response to comment #38.

- 55. Comment:** In reference to the exception for PCBs in the definition of "Uncontaminated" or "Uncontaminated Material," PADEP has created the following exception to the definition of uncontaminated material for PCBs:

For PCBs, the sum total of the concentration of all PCB aroclors (total PCB concentration) may not exceed 50 ppm. Fill containing a total concentration greater than 2 ppm requires further evaluation, in accordance with the instructions provided in Section B.1.c of this policy."

Several commentators note that the reference to Section B.1.c in the above language is incorrect; the reference should be to Section B.1.e. (2, 14, 33, 38)

**Response:** DEP agrees with the commentators. The reference has been corrected in the final policy.

- 56. Comment:** The proposed definition of "Uncontaminated or Uncontaminated material" states, "For PCB's, the sum of the concentration of all PCB aroclors (total PCB concentration) may not exceed 50 ppm." However, when comparing concentrations of specific aroclors to the values specified in the tables, a total PCB concentration in excess of 50 ppm is possible if multiple PCB aroclors are present in the same sample. Is it DEPs intent to exclude PCB containing materials based upon total concentrations, notwithstanding the individual aroclor concentration limitation? (7, 38)

**Response:** The CFCLs for the individual PCB aroclors remain effective in the final policy. The limit on the total PCB concentration is in addition to the CFCLs imposed for each PCB aroclor. Therefore, fill managed in accordance with the final policy may not contain a PCB aroclor that exceeds the CFCL for that aroclor, and the sum total of all PCB aroclors detected in the fill may not exceed a concentration of 50 ppm.

- 57. Comment:** The proposed definition of "Uncontaminated or Uncontaminated material" states that fill containing a total PCB concentration greater than 2 ppm requires further evaluation, in accordance with Section B. Section B states, "Fill containing a concentration of total PCBs greater than 2 ppm may not be managed under this policy unless written approval from EPA has been received prior to DEP review." Has DEP confirmed that EPA has the capacity or willingness to respond in writing and that such correspondence can or will be received within the time frames typical of construction and site development schedules? There appears to be no program in place between EPA and DEP to provide timely answers when low levels of PCBs are detected in fill.

The CFCLs or RFCLs are below 2 ppm for some aroclors and above 50 ppm for others. Is it DEPs intent to require notice and/or exclude materials from qualifying as clean fill, even though the fill meets the most stringent CFCL or RFCL referenced in the policy? If a limit on the total PCB concentration is enforced under EPA's TSCA program, it is appropriate that only soils with PCB concentrations greater than 50 ppm require approval in accordance with EPA's definition of PCB-containing waste.

DEP should continue to work with EPA toward a more practicable solution for addressing fill containing PCBs than the approach that is currently proposed. From the perspective of the regulated community, it is incumbent on both EPA and DEP to come up with a workable solution that does not leave the regulated community facing competing standards and requirements. The risk-based approach for addressing PCBs in fill endorsed by DEP is a much better approach than the brittle approach advanced by EPA. (7, 18, 27, 29, 30, 33, 34, 37, 38)

**Response:** DEP worked with representatives of EPA’s TSCA program in formulating the language in Section B.1.e of the final MoFP. EPA’s TSCA program has no delegation authority to the states. Therefore, Pennsylvania cannot implement the TSCA program on behalf of EPA. Fill that complies with the CFCLs or RFCLs is not exempt from the requirements under EPA’s TSCA program, and if the fill contains a total concentration of PCBs greater than 2 ppm, a determination will be made by EPA to verify whether the fill can be used.

58. **Comment:** We suggest that the policy provide definitions for “clean fill concentration limits (CFCLs)” and “regulated fill concentration limits (RFCLs)” when referring to the numeric values for clean and regulated fill throughout the policy, as these terms have become known throughout the industry and would be more easily recognized and understood. (10)

**Response:** DEP agrees with the commentator. Definitions for “clean fill concentration limits (CFCLs)” and “regulated fill concentration limits (RFCLs)” have been added to the final policy.

59. **Comment:** The Department has included two new definitions in the proposed policy for “reclaimed asphalt pavement” and “used asphalt.” Under the proposed policy, reclaimed asphalt pavement (“RAP”) does not qualify as “fill” (and therefore cannot be clean fill) while used asphalt can qualify as clean fill. Used asphalt is defined as “[I]arge pieces, greater than one inch in size, of bitumen and inorganic materials from the demolition of bituminous pavement. The term does not include RAP.” Used asphalt can break into pieces that span many different sizes. RAP is a distinct material typically generated in very specific ways such as by milling road surfaces. To impose a size limit of greater than one inch for asphalt pieces to qualify as used asphalt is impractical. It is sufficient to exclude RAP from the universe of used asphalt. (32, 37)

**Response:** DEP has revised the definition of used asphalt to read, “Pieces of bitumen and inorganic materials from the demolition of bituminous pavement. The term does not include ‘reclaimed asphalt pavement,’ as the term is defined in this policy.”

### **Section A, Purpose and Applicability**

60. **Comment:** Section A of the proposed policy states on page 1 that the policy does not apply to the, “Movement or use of fill within a project area or right-of-way of a project.” For roadway and bridge projects, where the owner (PennDOT or PTC) is reusing fill within the contiguous roadway right-of-way, is it correct to assume that such a project is exempt from this policy? (10)

**Response:** The commentator’s statement is correct; instances where fill is moved or used within a project area, as the term is defined by the policy, or the right-of-way for the project, is not subject to the final policy.

61. **Comment:** Section A of the proposed policy itemizes, on page 1, four activities that are not applicable to this policy. We suggest that Reclaimed asphalt pavement should be listed here as well as it follows an industry wide coproduct issued by DEP. (14)

**Response:** The following statement has been added as a bulleted item in Section A (relating to purpose and applicability) of the final policy: Use of reclaimed asphalt pavement in accordance with DEP’s industry-wide coproduct determination.

62. **Comment:** Section A of the proposed version of the MoFP states that “[d]epending on the manner in which it is generated, clean fill may be a ‘waste,’ as that term is defined in the municipal and residual waste regulations . . . .” The meaning and intent behind this statement is missing. If material that would otherwise qualify as clean fill is disposed of (such as by directing the material to a disposal facility), that material would qualify as a waste. However, the proposed definition of clean fill builds into it the construct that clean fill only includes materials that are “used” for certain purposes. This definitional scheme thus appears to separate material that qualifies as clean fill from material that might otherwise be disposed. Moreover, we note that in general terms, whether a material qualifies as a waste typically turns on what happens to the material after it is generated rather than the manner in which it is generated. Given the confusion that the sentence in question creates, we suggest that it be removed. (14, 32)

**Response:** Pennsylvania’s waste regulations provide definitions of municipal and residual waste that are based on the manner in which the waste is generated. In general, municipal waste results from the operation of residential, municipal, commercial or institutional establishments and from community activities. Residual waste results from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility. Some materials that can qualify as fill, such as brick, block and concrete from construction and demolition activities, are municipal waste because of the manner in which they were generated. The municipal waste regulations provide an exception to the permitting requirement to use certain municipal waste as clean fill in 25 Pa. Code § 271.101(b)(3). A similar provision exists in the residual waste regulations. Therefore, DEP maintains that many materials that can qualify as clean fill are also wastes. The use of these wastes does not require a permit, provided that it complies with the permit exception in 25 Pa. Code §§ 271.101(b)(3) or 287.101(b)(6), as applicable. The language has been retained in the final policy. Refer to DEP’s response to comment #17.

### **Section B, Procedure for Performing a Fill Determination**

63. **Comment:** Section B of the proposed policy requires that a fill determination be made prior to transporting the fill from the donor site. This presents a logistics challenge when roadway work is being conducted in rights-of-way and other locations with limited ability to stage fill while environmental due diligence activities are performed. DEP should allow these materials to be transported to a staging area away from the construction work to avoid disruption of traffic patterns, unsightly fill piles in residential areas, potential erosion issues, and general nuisances associated with stockpiled materials in public areas, or as an alternative DEP could develop a general permit that would allow utilities to remove excess trench spoils from its rights-of-way and temporarily store it offsite. (8, 17, 18, 19)

**Response:** The definition of project area includes road maintenance work. In the final policy, DEP has also added linear projects such as utility work to the definition of project area. DEP has

also clarified throughout the final policy that a fill determination needs to be completed before fill is moved to a receiving site. Temporary staging of fill off of a project area or right-of-way for a project area prior to completion of the fill determination should comply with the applicable provisions of 25 Pa. Code, Chapter 299, Subchapter D, relating to storage of residual waste. Fill that is not affected by a release of a regulated substance may be managed as clean fill without testing; however, a fill determination needs to be made prior to combining fill from multiple project areas at the temporary staging location. Clean fill may not be mixed with regulated fill at the temporary staging area. Fill that necessitates testing to complete the fill determination should be segregated from other fill at the temporary staging location until the fill determination is completed.

- 64. Comment:** In Section B, relating to procedure for performing a fill determination, many of the conditions specified in “[Step] 1, Determine Eligibility” require environmental due diligence that is not specified in the procedure until “[Step] 2, Perform Environmental Due Diligence.” As written, the due diligence policy does not require pre-testing unless a visual and property history inspection indicates that such testing is necessary. However, prior to engaging in due diligence, the policy also states that federal toxicity and PCB levels may not be exceeded if the fill is to be used under the policy. Therefore, testing would be required regardless of the due diligence requirements, which defeats the purpose of the revised due diligence approach. How does PADEP harmonize these approaches? Further clarification is required from DEP regarding whether testing and other requirements under this policy would be applicable to receiving quarries. DEP should explain in this policy how this determination is made between the USEPA and DEP and the anticipated timeframe for the review and approval. (10, 18, 22, 23, 34)

**Response:** The determination under TSCA for fill containing greater than 2.0 mg/kg PCBs is not conducted between EPA and DEP. Persons intending to use fill that may be subject to regulation under TSCA should seek approval directly from EPA prior to performing a fill determination under the final policy. Documentation of that approval should be submitted to DEP on the Form FP-001. DEP cannot comment on the timeframe necessary for EPA to conduct its evaluation.

Language has been added to Section B.1 of the final policy, relating to procedure for performing a fill determination, to clarify that testing for PCBs is only necessary when the environmental due diligence indicates that the fill may have been subject to a release of PCBs.

- 65. Comment:** Section B.1.a specifies that the material must meet the definition of “fill.” If the definition of “fill” is eliminated as described above, there will no longer need to be a separate requirement for the material to meet the definition of “fill” as set forth in Section B.1.a. (32)

**Response:** Refer to DEP’s response to comment #46.

- 66. Comment:** Section B.1.b provides that the material may not contain regulated substances that were “intentionally released.” This requirement injects the need to try to ascertain the state of mind of a person that may have been responsible for a release of regulated substances that occurred many years ago. Such an exercise is unlikely to be fruitful and is wholly unnecessary. The issue has no relevance to the question of whether the fill material is safe to use as either clean fill or regulated fill. If DEP determines that regulated substances were intentionally released, it has ample authority to penalize the offending actor. Although seemingly obvious, I

wonder if the DEP should define “Intentionally released” if the language is retained in the final policy. (10, 14, 20, 32)

**Response:** The reference to regulated substances that are “intentionally released” comes from language found in the previously effective version of the MoFP, dated August 7, 2010. DEP intended to disqualify soils that have been affected by deliberate acts intended to circumvent waste and anti-pollution laws from being considered for fill. Releases that have been remediated and that have attained an Act 2 cleanup standard can be considered for use as fill provided they meet all eligibility criteria and are not incompatible with the exposure and land use controls established within the final report and, if applicable, the environmental covenant.

- 67. Comment:** Section B.1.c contains a prohibition on blending, mixing or treating for the purpose of meeting the definition, or applicable limits, of “uncontaminated material,” “clean fill” or “regulated fill.” The prohibition on blending, mixing or treating is already included in the definitions of “clean fill,” “regulated fill,” and “uncontaminated material.” There is little to be gained by repeating it again. (32)

**Response:** DEP intends to make it abundantly evident that the practice of blending, mixing or treating for the purpose of meeting an applicable CFCL or RFCL is not permitted for fill used under the final policy.

- 68. Comment:** Section B.1.d of the proposed MoFP requires that material that will be used as clean fill or regulated fill not exhibit a characteristic of toxicity as determined pursuant to 40 C.F.R. § 261.24 (relating to whether a material is a characteristic hazardous waste). To determine whether a material exhibits a characteristic of toxicity pursuant to 40 C.F.R. § 261.24, it is often necessary to sample the material using the Toxicity Characteristic Leaching Procedure (“TCLP”). Under the hazardous waste program, generator knowledge can also be used to make a hazardous waste determination. It is unclear how DEP envisions the proposed requirements of the MoFP in this regard to be implemented. Under the current version of the MoFP, sampling of fill material that is performed typically focuses on obtaining total concentrations of regulated substances based on the premise that if the fill material qualifies as clean fill, the probabilities are remote that the fill material would at the same time qualify as hazardous waste. Because the numeric standards for regulated fill are in many instances higher than the clean fill standards, there is a somewhat greater chance that regulated fill might exhibit the characteristic of toxicity. If this is the crux of DEP’s concern, we suggest that the issue be dealt with in the revisions that are under consideration to General Permit WMGR096 governing the beneficial use of regulated fill and leave the working presumption in place that fill material that qualifies as clean fill is not a characteristic hazardous waste. (7, 14, 32, 34, 37, 38)

**Response:** Whether fill is eligible to be managed as clean or regulated fill, is determined under the criteria set forth in Section B.1. Criterion B.1.d states that the fill “not exhibit a characteristic of toxicity, as determined by 40 CFR § 261.24 (relating to toxicity characteristic).” Fill exhibits the characteristic of toxicity if, using EPA Method 1311 referenced in the “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, the TCLP extract from a representative sample of the fill contains any of the contaminants listed in Table 1 of 40 CFR § 261.24 at a concentration equal to or greater than the respective value given in that table.

The toxicity characteristic is only to be evaluated when environmental due diligence indicates that the fill may have been affected by a release of a regulated substance, and the released substance is included in Table 1 of 40 CFR § 261.24. In accordance with Method 1311, the solid phase is extracted with an amount of extraction fluid equal to 20 times the weight of the solid phase; based on this fact, the maximum leaching concentration that can be achieved for a contaminant is  $\frac{1}{20}$  of the total concentration. Therefore, if the total concentration of the substance exceeds the TCLP limit for that substance in Table 1 of 40 CFR § 261.24 by a factor of 20 or more, the potential toxicity of the fill should be evaluated either by performing the TCLP test or providing additional description of the fill, indicating that the substance is bound in the matrix and will not leach at a characteristically toxic amount. Conversely, if the total concentration of the substance exceeds the TCLP limit for that substance in Table 1 of 40 CFR § 261.24 by a factor less than 20, such that the TCLP limit for the substance could not possibly be exceeded, Method 1311 does not need to be performed for the fill determination.

- 69. Comment:** Throughout the Policy, DEP states that if environmental due diligence reveals that fill has been impacted by a release, analysis should be carried out for all regulated substances that are suspected to be associated with the release. DEP should not require an analysis larger than what is necessary and/or the entire parameter list. Completing an analysis for the entire parameter list for which clean fill standards exist is extremely burdensome and time consuming and almost impossible to accomplish given the manner in which analytical laboratories typically function and the standardized lists of parameters that are typically used by laboratories (such as standard lists of volatile organic compounds). The majority of the time, sampling parameters should be a limited list based on the constituents of the regulated substances that are released. It is acceptable practice that if an environmental professional has completed a Phase I Environmental Site Assessment of a property and determines that there are recognized environmental conditions at the site, that the EP develops a work plan for completing a Phase II Environmental Site Assessment, including the development of a sampling parameter list based on the recognized environmental conditions. These processes follow standards established by the American Society for Testing and Materials. It is important that the policy follow similar guidelines because of the unwarranted financial burden for analytical testing of the entire clean fill certification list. Some flexibility is necessary in developing an appropriate parameter list on a site-by-site basis.

It would be more accurate, and lawful, to state that analysis should be carried out for only regulated substances known and/or suspected to be present due to a release. It is unreasonable to test for regulated substances that have not been released on the subject property.

One of the significant issues with implementation of the current MOF Policy is that some regulators have interpreted the policy to require sampling of all constituents outlined in Tables FP-1a and FP-1b in order to make a determination whether the fill meets Clean Fill thresholds. This is a cost-prohibitive and unproductive activity for all users of this policy. DEP should make it abundantly clear that analysis to make a determination whether the fill qualifies as “uncontaminated” should be carried out for regulated substances either known to be present based on-site investigations or suspected to be present based on results of environmental due diligence investigations. (22, 23)

**Response:** DEP agrees with the commentators. The policy does not state that users of fill analyze for all of the regulated substances for which a CFCL or RFCL exists. The definition of “uncontaminated” states, “analysis should be carried out for all regulated substances suspected

due to a release,” meaning that only those regulated substances that are suspected to be present in the fill due to the type of release indicated by the environmental due diligence should be analyzed. For clarity, the statement has been revised in the definition of “uncontaminated” and paragraph B.2.b of the final policy to read, “analysis should be carried out for only those regulated substances that are suspected to be present in the fill.”

- 70. Comment:** EPA finds the language in subparagraph B.1.e, including the requirement for written approval from EPA, acceptable as written except that it should specify EPA Region 3 approval. (2)

**Response:** Subparagraph B.1.e of the final policy has been revised to state, “Fill containing a concentration of total PCBs greater than 2 ppm may not be managed under this policy unless written approval from EPA’s Region 3 has been received prior to DEP review.”

- 71. Comment:** In many if not most instances, environmental due diligence is the first step in performing an evaluation of whether fill material qualifies as clean fill. As the proposed version of the MoFP makes clear, environmental due diligence may be sufficient, by itself, to determine that fill material qualifies as clean fill. There are, however, circumstances where an entity may wish to proceed directly with sampling the fill material to evaluate whether the fill material meets the clean fill numeric standards. For example, utility projects may involve hundreds of small properties. It may be far more efficient to conduct sampling of fill material that is generated from such projects than to engage in environmental due diligence of the type contemplated under the proposed MoFP at each of the myriad properties. Nothing in the proposed MoFP appears to constrain the option of proceeding directly to sampling of the fill material that is being generated in order to determine whether the fill material qualifies as clean fill. Expressly clarifying that this option exists for those who wish to invoke it would be very helpful. (32, 34)

**Response:** DEP agrees with the commentators. Section B has been revised to clarify that fill can be tested to demonstrate compliance with the applicable CFCL or RFCL in lieu of conducting the other facets of environmental due diligence. See DEP’s response to comment #43.

- 72. Comment:** In Section B.2, the last sentence on page 2 of the proposed policy discusses the use of historic fill as clean fill. Historic fill is defined in the policy and the continuance of this quoted sentence contradicts the definition. This sentence must be removed as there is no need to have multiple definitions of historic fill. One potential way to address the issue of historic fill in urban areas such as the City may be to create a general permit for utilities in the City, with limited random sampling as an option to “spot check” trench spoils. (10, 14, 19)

**Response:** The sentence referenced by the commentator has been revised in the final policy. For historic fill to be used as clean fill, the historic fill first is limited to a conglomeration of soil, residuals and fill. Second, the historic fill is tested to confirm that it meets the definition of uncontaminated. Historic fill, as the term is defined in the final policy, may contain additional wastes, such as coal ash, incinerator ash, ash from the burning of wood and coal, or slag. Historic fill composed primarily of these additional wastes may not be used as clean fill but may qualify for use as regulated fill. Refer to DEP’s response to comment #50.

**73. Comment:** To make the proposed Policy internally consistent, the phrase “Except as provided elsewhere in this policy” should be inserted at the beginning of Section B.2.b.i-iii. (29, 30)

**Response:** The phrase has been inserted at the beginning of Section B.2.b.i-iii.

**74. Comment:** The focal point of environmental due diligence should be on whether fill material from a donor site has been affected by a release of a regulated substance. Section B.2 of the proposed policy uses wording that improperly expands the target for environmental due diligence. In two places, the proposed policy draws the target as “evidence of a release or possible release of a regulated substance at or near the donor site” and in one place, the proposed text also refers to the target as including whether “historic use of the donor site indicates the possibility of a release of a regulated substance.” Is it DEPs intent that any “recognized environmental condition” per the ASTM standard E 1527 13 would then necessitate sampling and characterization of fill materials per Appendix A of the technical guidance document? We believe that it is extremely important to retain consistency and clarity in the language describing the objective of environmental due diligence - i.e., to determine whether fill material from a donor site has been affected by a release of a regulated substance. Accordingly, Section B.2.b should be revised by replacing the unfocused language described above. (7, 27, 32, 38)

**Response:** Subparagraph B.2.b has been revised as suggested by the commentators.

**75. Comment:** Paragraph B.2 of the final policy, the last sentence of the first paragraph, states, “...release of a regulated substance at or near the donor site...”. The word “near” should be defined to indicate a distance. The word “near” is again referenced in 2b. Does “near” mean adjacent, within a distance, or many other possibilities? This again is a situation demonstrating the numerous variabilities in conducting this work that should be left to the environmental professional to evaluate. (10, 14)

**Response:** The term “near” in subparagraph B.2 of the final policy has been deleted. Refer to DEP’s response to comment #74.

**76. Comment:** Section B.2.b.ii uses the phrase, “may be managed.” This phrase is too lenient. DEP should use the word “must” or “shall.” (14)

**Response:** The phrase, “may be managed,” in subparagraph B.2.b.ii refers to a person’s opportunity to use fill when analytical testing reveals that it contains one or more regulated substances at concentrations that exceed the CFCLs but are at or below the RFCLs and coverage under WMGR096 has been obtained. The same fill may also be disposed of in a landfill or used in a remediation project under Act 2. It is not mandatory for a person to obtain coverage under WMGR096 and use fill that exceeds the CFCLs as regulated fill.

**77. Comment:** The Draft Policy requires testing for historic fill but does not provide any guidance for screening parameters. Under Section B of the proposed MoFP, some analytical testing would be necessary to demonstrate that historic fill meets the definition of uncontaminated, irrespective of findings of the environmental due diligence, but it is not explicitly stated what analysis should be performed or is required. The proposed language in this policy could be interpreted that analysis must be performed for all regulated substances in Chapter 250. We recommend adding screening parameters for historic fill, such as the screening parameters provided in Appendix C of DEP’s guidance document titled, “Use of Reclamation Fill at Active Noncoal Sites,”

Document No. 563-2000-301. Use of the same screening parameters will provide further uniformity across the construction industry. We suggest that this interpretation should be specifically stated in both the MoFP and WMGR096. (6, 22, 23)

**Response:** DEP agrees with the commentators that a list of screening parameters would be helpful to determine whether the historic fill meets the definition of clean fill. DEP has included a screening list in the final policy; however, testing should also include any additional parameters that are suspected to be present based on historical review and records. Clarification has also been added to the final policy regarding additional testing that may be necessary to use historic fill as clean fill.

- 78. Comment:** Section B of the proposed policy requires testing to be performed on historic fill. In accordance with the definition of “Uncontaminated or Uncontaminated Material,” the historic fill could include iron and steel slag. If the iron or steel slag in the historic fill is a “coproduct” as defined in 25 Pa. Code 287.1, it is not included in the definition of “Uncontaminated or Uncontaminated Material,” and therefore, does not require testing. Is this correct? (9)

**Response:** Iron or steel slag that is determined to be a coproduct or is not a residual waste as the term is defined in the SWMA, no longer meets the definition of fill and should be managed in accordance with the residual waste regulations, including sections 25 Pa. Code §§ 287.1, 287.8, and 287.9. Refer to DEP’s response to comment #49.

- 79. Comment:** Section B.2 of the proposed policy states in the second sentence on page 2, “Except for historic fill, analytical testing of the fill is not required unless...” seems to imply that testing of historic fill is required. Is analytical testing required in all cases to determine if historic fill is eligible for reuse, even if due diligence does not indicate a release occurred? (10)

**Response:** Historic fill, as the term is defined in the final policy, is material that was deposited over 30 years ago and often consists of a mixture of waste and materials that can qualify as fill, making it difficult to determine whether a release had affected the fill. Therefore, DEP is allowing historic fill to be used as clean fill in accordance with the policy, if it is screened for a subset of regulated substances that are commonly associated with historic fill to gauge whether it can meet the definition of “uncontaminated.”

### **Section C, Management of Regulated Fill**

- 80. Comment:** Paragraph C.2 refers to the receiving site as “being remediated.” Some Act 2 sites, particularly those remediated as a Special Industrial Area, might benefit from eligibility to receive regulated fill after the site is remediated but is still being redeveloped. Also, subparagraph C.2.a should specify donor versus receiving site. (10)

**Response:** The language referenced by the commentator does not preclude the use of regulated fill on a previously remediated Act 2 site. Remediated Act 2 sites are currently able to receive regulated fill after the site is remediated, provided coverage under WMGR096 is obtained. DEP has corrected the language in subparagraph C.2.a of the final policy to read, “Regulated substances contained in the fill are incorporated into the notice of intent to remediate and the final report for the remediation taking place at the receiving site.”

**81. Comment:** To make the proposed policy internally consistent, the phrase “Except as provided elsewhere in this policy” should also be inserted at the beginning of Section C.2 c. (29, 30)

**Response:** The phrase has been inserted at the beginning of paragraph C.2.c.

**82. Comment:** Section C of the proposed policy is a repeat of the third paragraph in Section A and should be condensed to remove repetitive language. This section should also reference the right-of-way exemption. (14)

**Response:** DEP acknowledges that some of the language in Section C repeats the language of Section A. The language has been retained in the final policy due to the number of questions DEP receives on the interplay between the MoFP, WMGR096, and remediation activities taking place under the Act 2 program. The language relating to regulated fill used within a project area or project right-of-way has been added to Section C of the final policy in accordance with the commentator’s suggestion.

**83. Comment:** The currently effective version of the policy, dated August 7, 2010, acknowledges that regulated fill can be beneficially used, if the materials and the proposed activities for the fill meet the conditions of WMGR096. Section C of the proposed policy also acknowledges that a person or municipality interested in obtaining coverage under WMGR096 must apply for a permit in accordance with the application instructions in WMGR096, but no timeframes are discussed for permit approval. DEP should provide an anticipated timeframe for review and approval of applications for coverage under WMGR096 to ensure there is a clear connection between the use of the general permit and the policy. The concern is based upon the belief that many site developers are not aware of these extensive revisions proposed to the policy and, because of that along with DEP’s capabilities, DEP will know how fill material is managed across the state or accurately track fill movement activities throughout the state and give appropriate approvals in a timely manner, resulting in many delays that will put projects behind by many months, if not years. (22, 23)

**Response:** DEP’s timeframes for the review of applications for coverage under a waste general permit are outlined in DEP’s Policy for Implementing DEP’s Permit Review Process and Permit Decision Guarantee, Document No. 021-2000-301. The processing timeframe for a determination of applicability under WMGR096 is 86 business days.

#### **Section D, Management of Clean Fill**

**84. Comment:** The proposed policy has removed the language “...may be used in an unrestricted or unregulated manner under this act and regulations,” from Section D. As DEP has purposefully removed this language, is it intended that clean fill is restricted or regulated under the SWMA? This would be a complete change in interpretation of this policy. (14)

**Response:** The MoFP was developed to provide guidance on the use of fill without a permit, in accordance with the requirements of 25 Pa. Code §§ 271.101(b)(3) and 287.101(b)(6), and therefore, is regulated under SWMA. The referenced language has been removed because there are restrictions on the use of clean fill, including the use of clean fill in permitted mine land reclamation and the requirements imposed by 25 Pa. Code, Chapters 102 and 105. The removal of the phrase, “...may be used in an unrestricted or unregulated manner under this act and regulations” is not intended to impose additional regulations.

**85. Comment:** Section D of the proposed policy lists materials that must be removed prior to demolition. The list states only friable asbestos. This is taken to mean that non-friable asbestos is acceptable in construction or demolition that is to be used as clean fill. Non-friable asbestos is allowed to remain in C&D material that is sent to processing facilities for recycling and reuse. Other materials such as paint coatings and mastic are acceptable as long as they do not contain lead paint. (14)

**Response:** The second paragraph of Section D attempts to illustrate that materials that do not meet the definition of clean fill should be removed prior to demolition. The paragraph lists examples of wastes that should be removed from items intended for use as clean fill during demolition activities; the list is not all-encompassing.

**86. Comment:** The MoFP is finally being updated to include the requirement to submit the Form FP 001 and related documents to DEP. Previously only the form was updated to require submission. Hopefully this change will remove the variable application of the requirement to submit as some receiving sites are not being required to follow the requirements in the form. (14)

**Response:** DEP acknowledges the comment.

**87. Comment:** The MoFP is now requiring the submission of the Form FP 001 and related documents. The policy states that the FP-001 form must be submitted “prior to transporting clean fill.” Therefore, upon submission, the material may be utilized as clean fill without DEP’s concurrence. In addition, there is absolutely no recognition regarding timing to give an applicant certainty as to when fill material may permissibly be moved and used. (14, 22)

**Response:** The commentators are correct. Form FP-001 submittals do not require DEP approval. The policy merely states that Form FP-001 be submitted to DEP. Persons intending to use the fill do not need to wait for DEP’s response to the submission.

**88. Comment:** When the FP-001 form was updated in 2010 it was a significant improvement to gathering the information required to document the clean fill determination. However, there seems to still be gaps in this form that should be included. The policy states Section 1 & 2 should be completed by the person making the determination at the donor site. Typically, there are third parties making the determination that should be documented. We suggest Section 1 should be completed by the donor site ownership with signatures. Section 2 should be completed by the person/company making the clean fill determination with signatures, this may be same as receiving or donor site or a third party. Section 3 should be completed by the receiving site ownership with signatures. The FP-001 form should also require the attachment of the due diligence to determine if sampling is/not required. (14)

**Response:** DEP acknowledges the comment. While updates to the Form FP-001 are outside the scope of the policy, DEP intends to make changes to the form to align its language with the final policy language. In that effort, DEP will consider the suggestion made by the commentator.

**89. Comment:** The proposed policy indicates that Form FP-001 must be completed whether or not testing is required. This policy change appears to allow for better documentation of movement of fill. As due diligence packages, sample data and plan sets required elsewhere in the draft

policy can be voluminous, DEP should consider development of an online submission of Form FP-001 in order to streamline completion of the form, thereby increasing the likelihood of complying with this policy. How does DEP intend to enforce failure to submit the Form FP-001? Does DEP intend to respond or acknowledge that the submissions are received and/or reviewed? (6, 7, 38)

**Response:** DEP agrees with the commentator and has developed an electronic submission platform for the FP-001. Language regarding electronic submission of the Form FP-001 has been added to the policy.

Since the Form FP-001 does not require DEP approval, electronic submission of the form will trigger a confirmation of receipt to be emailed to the submitter.

- 90. Comment:** The proposed policy requires that Form FP-001 be completed when using clean fill, where the previously effective version of the policy only requires submission when using fill that has been affected by a release and is tested to show that it meets the clean fill limits. For the utility industry, this will result in a tremendous increase of paperwork for day to day operations that require excavation at numerous locations every day due to water main breaks and other projects throughout the distribution network. DEP should maintain the current practice of requiring the form only when using fill that has been affected by a release and is tested to show that it meets the clean fill limits.

Will DEP be using the forms to track the placement of clean fill? Will DEP be compiling a database that would be accessible to the public? DEP should give industry the assurance that it will have adequate resources in place to manage all of the submittals and track the activities of site developers before imposing the type of broad requirements that are envisioned. If this is not the case, it is unclear what benefits the increased levels of paperwork will have, particularly with respect to protecting human health and the environment.

DEP has no legal authority to impose these obligations related to Clean Fill.

If it is the intent of DEP to (1) subject all Clean Fill to a required determination and (2) be provided with documentation of the findings of the determination by submittal of the Form FP 001, then the clause at the end of Section D, which requires the donor site and the receiving site to make such information available to DEP upon request, is redundant. DEP would already have the information from the submission of Form FP-001.

DEP should consider establishing a “de minimis” threshold for submittal of Form FP-001. For projects that generate less fill than the “de minimis” threshold (e.g. <3,000 cubic yards as provided in the checkbox in FP-001) or when sampling/analysis are not deemed necessary, the submittal requirement should be eliminated. This would lighten the administrative burden on PADEP to review and manage thousands of documents for projects with minimal or no risk to the environment. If the policy is not modified from the proposed language, the requirement to complete and submit Form FP-001 for all instances of clean fill generation and use would result in a significant burden. (8, 10, 17, 22, 23, 29, 30, 31, 37)

**Response:** The instructions to Form FP-001 do not limit the submission of the form for projects under a certain size or for fill that necessitate analytical testing. Rather, the instructions indicate that the form is to be submitted in each instance where a fill determination is made under the

policy. Therefore, the language in the final policy does not represent a new requirement or a change to existing interpretations or procedures. The final policy language aligns with the existing form's instructions.

There is growing public interest in the use of fill in Pennsylvania, including the location of the donor site, location of the receiving site and the purpose of its use. DEP is committed to tracking the use of clean fill using the Form FP-001. The form provides DEP with basic information about the clean fill in the event that a complaint or inquiry is received regarding its use. Please note that Form FP-001 is not required when fill is used within the same project area or project right-of-way. DEP has retained the proposed language in the final policy.

- 91. Comment:** The last paragraph on page 4 and the second paragraph on page 5 in Section D of the proposed policy states that Form FP-001 is submitted to DEP by the owner of the receiving site. It would be in PennDOT's best interests if PennDOT or its contractors could do so as well, if the receiving site owner is agreeable. (10)

**Response:** DEP does not object to the commentator submitting a Form FP-001 to the appropriate DEP Regional Office in addition to the submission from the owner of the receiving site.

- 92. Comment:** The second paragraph on page 5 in Section D of the proposed policy states that "copies of all laboratory reports...shall be attached to Form FP-001." Currently, only data from fill sampling conducted in accordance with Appendix A is attached to Form FP-001. The proposed policy implies that site characterization sample results would need to be attached as well, e.g. from a PennDOT Phase III ESA. This should be clarified. (10)

**Response:** The language referenced by the commentator refers to site characterization that is required by cleanup or remediation activities that are being overseen by a local, state or federal regulatory program. A typical Phase III environmental site assessment that is performed in conjunction with a real estate transaction would not be required to accompany the Form FP-001, unless it was required by a cleanup or remediation activity performed under the jurisdiction of a local, state or federal regulatory program.

- 93. Comment:** Oppose the need for the user of fill to maintain records regarding the fill. The obligation should rest with the party offering material as fill. The party utilizing the fill should not be responsible for completing Form FP-001. (5)

**Response:** The completed Form FP-001 is written certification, by both a representative of the donor site and a representative of the receiving site, that the fill being transacted is clean fill. Both parties have a role in the certification process, and therefore, both should retain the record. The provision for the receiving site to maintain records of the fill determination is not a new provision. The Form FP-001, which has been in place prior to DEP's proposal of the draft revisions to the policy, instructed users of fill to maintain records regarding its certification as clean fill.

- 94. Comment:** Section D of the proposed policy states, "prior to the movement of fill to a receiving site, either the person proposing to provide fill from a donor site or the person proposing to receive the fill shall determine whether the fill is clean fill or regulated fill pursuant to this policy." Why would the responsibility to determine whether the fill is clean not squarely fall

upon the responsibilities of the generator/donor site? DEP seeks fill determination information for projects with export required in the NPDES filings, which would undoubtedly be the responsibility of generator/design professional. (7, 27, 38)

**Response:** DEP does not intend to limit who can perform the fill determination. In some instances, it may be in the interest of the donor site, and other times the receiver of the fill may have more interest in having the fill characterized for a particular end use. Refer to DEP's response to comment #41.

- 95. Comment:** The proposed guidance seems to only contemplate a specific donor site sending fill directly to a receiving site. It does not contemplate materials that are co-mingled at a recycling facility. Therefore, the proposed guidance does not adequately account for recycling facilities that accept materials from multiple sources and processes and comingles those materials. Once fill that has already been determined to be clean fill is comingled, it becomes impossible to then provide a Certification of Clean Fill as required in Form FP-001 to a subsequent receiving site. Given the number of shipments into recycling facilities and the need to process and store the clean fill until shipment, it is impracticable to list material from each donor site as contemplated in the proposal. For recycling facilities sending co-mingled fill to a receiving site, the requirement to list each donor site from which the co-mingled fill originated and include its characterization should be replaced with a self-certification that due diligence or analytical testing was performed, and the material meets the definition of clean fill. Alternatively, DEP should modify the proposed definition of donor site to include a recycling facility that accepts, processes, and stores fill rather than the original source location of the material.

A simpler process for clean fill used as sub-base in roadway projects should also be included. Sub-base under roads involves no continued human exposure and thus any risk associated with the material is minimal or non-existent. Given the risk level with this use of clean fill there is less of a need to fill out FP-001 forms or for that form to be maintained by the donor site for five years. (11)

**Response:** Based on the brief process description provided in the commentator's remarks, the facility described receives only fill that has been demonstrated to be clean fill and processes the clean fill by sizing and sorting based on physical specifications. The clean fill is marketed and sold for use in construction applications.

The main concern expressed by the commentator is the burden in complying with the request to submit and maintain a Form FP-001 for each source of incoming fill and supply information to the receiving site for each order of outgoing fill. If the facility acts as the receiving site for incoming clean fill and submits a completed Form FP-001 to DEP, it has complied with the documentation provisions for the incoming clean fill. If the operation acts as the donor site for outgoing clean fill and retains copies of the completed FP-001 documents that were previously submitted for the incoming clean fill, the operation has complied with the documentation provisions for the outgoing clean fill. Since all incoming fill, and subsequently all outgoing fill, has been demonstrated to be clean fill, the facility only needs to submit the Form FP-001 for each source of incoming clean fill and retain that same FP-001 to comply with the documentation provisions contained in the policy.

## Appendix A, Sample Collection and Analytical Testing Protocol for Performing Environmental Due Diligence

96. **Comment:** One of the proposed changes listed in the *Pennsylvania Bulletin* notice was the inclusion of sampling plan guidance. While guidance on the data quality objectives is important, each sampling situation is vastly different with numerous variables. This variability requires an environmental professional interpretation and decision making to plan for the most effective sampling. The actions of preparing a sampling plan were already being conducted by most larger operations using environmental professionals to summarize thousands of pages of work. This level of requirement for even the simplest sampling activity will remove the ability for homeowners to conduct the work and will require expensive consulting work.

Appendix A, Section A of the proposed policy contains extensive new requirements mandating that sampling plans be prepared in advance of conducting sampling to determine whether fill material qualifies as clean fill. While DEP states that “[t]he level of complexity and detail needed in the sampling plan are directly related to the size, scope and level of complexity of the donor site,” other portions of Section A of the proposed version of Appendix A undercut the flexibility that this statement is intended to convey. Section A contains numerous requirements that must be met in any sampling plan, even for very small and simple projects. Moreover, these requirements may be extremely difficult and cumbersome to implement for linear projects such as utility work that involve numerous properties. We support requirements to ensure that accurate and representative sampling is performed. At the same time, we encourage DEP to provide for flexibility in the paperwork that is now being mandated as a precursor to such sampling. DEP should review Section A of the proposed version of Appendix A to ensure that the flexibility DEP apparently endorses in the development of sampling plans is actually realized in the requirements that are mandated in that portion of Appendix A. (14, 32)

**Response:** The sampling plan guidance included in the final policy is intended to provide a framework for performing a fill determination when analytical testing is used. The methods outlined in Appendix A represent options for obtaining representative samples. The goal of the sampling is to identify and quantify the extent of contamination in an accurate and precise manner that represents the entire volume of fill in a statistically significant manner. In some cases, this is simple enough to be performed by a homeowner. In other cases, an environmental professional may be necessary. DEP has reviewed Section A of the final policy to ensure that flexibility in the development of a sampling plan is provided.

97. **Comment:** Does the sampling plan need to be submitted to DEP? Approved? Authority to devise and implement a sampling plan should be conducted by an environmental professional, familiar with the project site. (15)

**Response:** DEP agrees with the commentator that in many instances, especially large complex donor sites with identified areas of contamination, an environmental professional who is familiar with the project site should develop and implement the sampling plan. When analytical testing is used as part of environmental due diligence, the sampling plan should be attached to Form FP-001 along with copies of the analytical testing that is submitted to DEP. This request has been clarified in Section D of the final policy. Neither the sampling plan nor Form FP-001 requires DEP approval.

**98. Comment:** Oppose the use of SW-846 and the RCRA Waste Sampling Draft Technical Guidance (EPA 530-D-02-002) for the development of a sampling plan. These documents were not intended for this type of application and are overly complicated for this application, and it is improper to reference a draft guidance. The EPA website states that this document "...was proposed as a replacement for the current sampling guidance in Chapter 9 of SW 846. The Agency received public comments, which are still under review and consideration." The draft is from 2002 and still has not been finalized leading one to believe the Agency could not satisfy the public comment. A more proper citation would be the Pennsylvania Land Recycling Program Technical Guidance Manual, 253-0300-100, as it is a final state guidance and the program that was the basis for the MoFP. (5, 14, 15, 37)

**Response:** In accordance with 25 Pa. Code §§ 287.1 and 287.2(c), respectively, contaminated soil is included in the definition of waste, and management of contaminated soil is subject to Article IX of Pennsylvania's waste regulations (relating to Residual Waste Management). The EPA's publication, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, also known as SW-846, and the *RCRA Waste Sampling Draft Technical Guidance, EPA530-D-02-002*, provide procedures for developing sampling plans that are statistically valid. Both references have applicability to solid waste and contaminated environmental media. SW-846 is referenced as guidance for sampling and statistical treatment of data in the previously effective version of the policy. The *RCRA Waste Sampling Draft Technical Guidance* provides additional detail on sampling and statistical evaluation. Therefore, DEP retained the references to SW-846 and the *RCRA Waste Sampling Draft Technical Guidance*.

It is noted that analytical testing is only necessary when environmental due diligence indicates that the fill has been subject to a release. For fill to qualify for use as clean fill, determine whether it is uncontaminated as the term is defined in the policy. Fill can meet the definition of "uncontaminated" by one of the following methods:

- a. Determining through environmental due diligence that it has not been subject to a release, or
- b. Demonstrating through sampling and analysis that although the fill has been subject to a release, the regulated substance is not present at a concentration exceeding the CFCL.

**99. Comment:** In Section A of proposed Appendix A, on page 6 in the first paragraph, DEP states that where there is a disagreement between the procedures outlined in the Appendix A and the referenced United States Environmental Protection (USEPA) documents, the procedures contained in this Appendix shall be followed. USEPA methods have been accepted and published prior to this Policy and should be accepted by PA DEP, even if they differ. As stated within the Policy, the intent is for this document to be a guide and not a requirement. The MSC recommends that the Department accept USEPA methods as well as the methods outlined in the Policy. Moreover, the Department has developed procedures described in the Land Recycling Technical Guidance Manual that are relevant to certain of the protocols set forth in Appendix A (such as random sampling and statistical tests), and the Policy should allow those procedures, as applicable, to be used. (22, 23)

**Response:** DEP agrees that the USEPA documents are good reference materials and provide guidance on how to characterize materials. SW-846 and the *RCRA Waste Sampling Draft Technical Guidance* were developed for use with a variety of waste and therefore, are not

tailored for use in characterizing fill. The Land Recycling TGM provides information on how to adequately characterize a site in preparation for cleanup activities performed pursuant to Act 2. It includes information on vapor intrusion and groundwater monitoring that would not be appropriate for a fill determination. Appendix A was developed specifically for use in making fill determinations under the MoFP and pulled relevant concepts and language from the Land Recycling TGM. Therefore, Appendix A should be followed.

- 100. Comment:** Appendix A, Section A, bulleted item number four, of the proposed policy requires the collection of samples "...in no case less than eight samples." The use of the word samples can cause difficulty as the policy allows for only 2 composite samples for less than 125 cubic yards of material. It is understood that the 2 composites samples are composed of 8 grab samples. The current language can be confusing or used legally to argue incorrect sampling. As the term "samples" is used throughout rather than aliquot, possibly use the term "discrete." (14)

**Response:** Appendix A, Section A, bulleted item #4 has been revised to clarify that a minimum of eight discrete samples or two composite samples are necessary.

- 101. Comment:** The proposed policy requires that fill be characterized to represent the entire volume of fill. Is this to mean that it must be a continuous sample through every foot vertically or horizontally? There has been comment before if samples do not contain every foot over the depth. The issue is sampling where the homogeneous depth of fill to be characterized was 10 feet and samples were 0-2 feet and 8-10 feet. This is an example of interpretation that is required to be performed by an environmental professional. (14, 15)

**Response:** DEP agrees with the commentators. The sampling procedures for in-situ fill do not request every foot of vertical depth or horizontal interval to be sampled.

- 102. Comment:** Section A of Appendix A, in the third paragraph at the top of page 7, in the second bullet, requires that physical characteristics (i.e.: dry bulk density, permeability, etc.) of the fill be evaluated. This seems to go beyond determining whether material meets the definition of clean or regulated fill. Is this really necessary and if so, what is the purpose of this evaluation? These physical characteristics have little to do with the analytical acceptability and are more relevant to construction and use of the fill. Physical testing should not be required as part of a chemical characterization and fill determination. The physical information required should only be related to identifying different types of fill or potential for releases that may need to be identified separately. Physical sampling such as listed should be reserved for construction specifications of the project where the fill will be utilized. (10, 14, 15, 29, 30, 33)

**Response:** The purpose of the sampling plan is to characterize the fill. Areas having distinct or differing physical properties may also have different chemical properties. Identifying physical differences in the fill facilitates sampling and characterization in a representative manner. The policy has been revised to clarify that the language referenced by the commentator refers to examples of physical characteristics that should be considered in the development of a sampling plan.

- 103. Comment:** Section A of Appendix A, requires a summary of existing information and sampling. Existing sampling can be relevant for characterizing the material and can be utilized in making the determination and material volume approval. Is it the intent of DEP that any existing information, even if appropriately conducted as per the policy, is not allowed to be utilize in the

determination? The depth and information required to make a clean fill determination in the draft policy is far beyond the ability of a homeowner or property owner. The level of information that is required to be reviewed, summarized and presented parallels the detail required in a Phase I Environmental Assessment for just the fill. What if we don't have information? The section references information that must be documented including cross-sections. Does this imply that a PA-Licensed Professional Geologist would be required to oversee this process since it would involve geologic interpretation? (10, 14, 34)

**Response:** The policy does not require oversight by a Pennsylvania-licensed professional geologist. It is also not DEP's intent to prohibit the use of previously performed testing in making a fill determination. Rather, the inclusion of previously conducted sampling should be identified, and its relevance or bearing on the remaining sampling needed should be described in the sampling plan. There may be instances where the fill determination is made based entirely on a previously conducted site characterization. DEP is requesting that this information is provided to DEP along with the Form FP-001 submittal in instances where analytical testing is necessary to demonstrate that the fill meets the definition of "uncontaminated."

Analytical testing is not necessary when environmental due diligence indicates that the fill has not been affected by a release. DEP believes that most homeowners or owners of small residential properties will not need to use analytical testing as part of the environmental due diligence. For those instances where a homeowner's or small property owner's environmental due diligence indicates evidence of a release, it is likely that the volume and depth of fill can be adequately characterized without employing an environmental professional. For more complicated projects, an environmental professional may be needed.

- 104. Comment:** The Sampling Plan Development requires documentation of previous work. The verbiage states "...information must be documented..." and goes on to provide an extensive list of items. The item list uses the verbiage "and" rather than "or". These items will not always be required to document the information in a fill determination and should not be required if not necessary. These decisions should be made by the environmental professional conducting the work.

The sampling and analysis requirements of the MoFP should remain unchanged from the version currently in effect, except a provision should be added to allow for alternative, scientifically credible sampling plans prepared by a Pennsylvania Licensed Professional Engineer or Geologist for review and approval on a case-by-case basis by DEP. (14, 29, 30)

**Response:** The language in Section A of Appendix A relating to documentation of existing information is based on language in the Land Recycling TGM. DEP has modified the language referenced by the commentator to read, "Document this information by written descriptions of site conditions, supported by maps, cross-sections, site diagrams, or other descriptive, graphical, or tabular illustrations necessary to characterize the site conditions."

- 105. Comment:** Section A of proposed Appendix A states, in the sixth paragraph on page 7, "...represent the total collection of possible sampling units that can be drawn." The statement is confusing. This paragraph also allows for the use of probability sampling and authoritative sampling, but the next sentence requires bias sampling to identify "hot spots". There is no definition of "hot spot". The policy states that areas should be samples more frequently than

others which conflicts with the concept that the entire volume of fill must be represented. This again requires significant judgement that must be conducted by professionals. (14)

**Response:** The referenced passage was revised in the final policy to eliminate the first sentence and reorder the remaining sentences to emphasize the following key points:

- a. Probability sampling is utilized to characterize the material as a whole.
- b. Some sites may require additional, more focused, sampling to evaluate problem areas.

**106. Comment:** Section A of Appendix A, states, "...For fill containing PCBs at any concentration, samples used to quantify the PCB concentration in the fill must be collected in accordance with EPA's Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)." The MoFP defines fill as "soil, stone, rock, gravel, used asphalt, and brick, block or concrete from construction demolition activities that is separate from other waste and recognizable as such." EPA's SOP for sampling porous surfaces is applicable to concrete, brick, asphalt, cement, sandstone, limestone, unglazed ceramic, wood, wall plasterboard, low density plastics, rubber, caulking and other PCB suspected soft porous surfaces. The EPA SOP for sampling porous surfaces is not applicable to soils. The statement should be replaced with, "For fill containing PCBs at any concentration, soil samples must be collected and analyzed in accordance with 40 C.F.R. Part 761, Subpart N and R." (2, 14, 15, 32, 33, 37)

**Response:** The sampling protocols identified in 40 C.F.R. Part 761, Subparts N and R, are significantly different from the protocols identified in Appendix A of this MoFP. Therefore, the reference to methodology for sampling PCBs has been removed from Appendix A, Section A in the final policy. Language was added to Section B.1.e of the final policy that directs users of fill that contains PCBs at concentrations exceeding 2 ppm to contact EPA for guidance on acceptable procedures for sampling an analysis.

**107. Comment:** Previous guidance provided by a regional office has been that fill stored in piles was not acceptable for sampling. As stockpiling is a normal procedure in construction, we are glad to see guidance allowing determinations to be conducted on stockpiles.

Also, it will be unlikely to have distinct strata after material has been excavated and stockpiled. The excavation process generally homogenizes material, unintentionally. (14, 15)

**Response:** DEP acknowledges the comment.

**108. Comment:** Different sampling procedures for soil piles and in situ soils are presented in the new MoFP. According to the new MoFP, soil piles should be sampled via stratified random or simple random sampling protocols. Additional clarification should be provided in the MoFP on how random sampling protocols should be implemented for soil piles. In addition, we believe that when there is the potential for impacted soils (based on Environmental Due Diligence and/or field observations) that biased sampling, rather than random sampling, will be more appropriate. Proposed Section B of Appendix A references Section 5.3 of the RCRA Waste Sampling Draft Technical Guidance. Based on the discussion in this paragraph about simple random and stratified random sampling, the reference should be 5.2.1 & 5.2.2. The Section 5.3 reference was for composite sampling and should be referenced as well as later paragraphs discuss composite sampling. This section should reference grab and composite sampling. (14, 18)

**Response:** Appendix A, Section A of the final policy states, “Probability sampling should be used to characterize the fill as a whole. Some sites may require additional, more focused sampling, such as authoritative sampling, to evaluate problem areas, such as localized areas that are suspected to contain the highest levels of regulated substances, or “hot spots,” or areas that may require further evaluation.” The manner in which a storage pile is sampled should be based on what is known about the fill in the pile. These factors should be considered when developing a sampling plan in accordance with Appendix A. Section B of Appendix A references SW-846 and the *RCRA Waste Sampling Draft Technical Guidance* as resources for performing simple random or stratified random sampling. The reference to Sections 5.3 of the *RCRA Waste Sampling Draft Technical Guidance* has been revised to 5.2.1 and 5.2.2.

- 109. Comment:** Can depth samples be collected via test pits excavated into the stockpile or must an auger be used? Is a PID meter required to identify the samples most likely to contain the highest concentrations of VOCs? These instruments can be quite costly and not readily available to a homeowner. (15)

**Response:** Section B of Appendix A, relating to sampling procedures for fill stored in piles, does not require an auger to be used. Sections B and C of Appendix A, relating to sampling procedures for fill stored in piles and sampling procedures for in-situ fill, respectively, do not require the use of a PID meter to field screen samples most likely to contain the highest concentrations of VOCs.

- 110. Comment:** Appendix A, Section B states, “The sampling and subsequent analysis of fill stored in piles may be performed by collecting composite or discrete samples, unless the samples are being used to quantify the concentration of PCBs in the fill.” Section B must include a statement that directs the reader on how to sample piles for the presence of PCBs. The sentence needs to be included, “Sampling and analysis of piles for PCBs must comply with 40 CFR Part 761, Subpart R.” In addition, the reference to PCBs in the following sentence should be removed: “The sampling and subsequent analysis of fill stored in piles may be performed by collecting composite or discrete samples, unless the samples are being used to quantify the concentration of PCBs in the fill.” (2, 32)

**Response:** The sampling protocol identified in 40 C.F.R. Part 761, Subpart R is significantly different from the protocols identified in Appendix A of this MoFP. The phrase, “unless the samples are being used to quantify the concentration of PCBs in the fill,” has been removed from the referenced statement. Language was added to Section B.1.e of the final policy that directs users of fill that contains PCBs at concentrations exceeding 2 ppm to contact EPA for guidance on acceptable procedures for sampling an analysis.

- 111. Comment:** Section B of Appendix A discusses the sampling requirements for volatile organic compounds (VOCs). If VOCs are not considered a concern based on the environmental due diligence, is testing for VOCs required? If no, this should be clarified in Section B. (10)

**Response:** If environmental due diligence shows evidence of a release, testing may be required to determine whether the fill meets the definition of “uncontaminated.” Analysis should be performed for all regulated substances that are suspected based on the nature of the release indicated by the environmental due diligence. If VOCs are not suspected based on the release indicated during environmental due diligence, then testing for VOCs is not necessary. Clarifying

language has been added to the definition of “uncontaminated” and Section B.2.b of the final policy. Refer to DEP’s response to comment #69.

- 112. Comment:** Appendix A Section B discusses the use of Teflon lined pails. This requirement is not listed in either of the reference guidance documents. Teflon is a chemically inert material that may be used but is highly uncommon in the sampling pails. (14)

**Response:** The use of a Teflon-lined pail is not necessary under the policy. Rather, the statement cited by the commentator suggests the use of a Teflon-lined or stainless-steel pail in which to mix the sample prior to transferring the sample to an appropriate container for analysis. Teflon and stainless-steel devices are widely used for sample collection because neither material will contaminate the sample. The language has been retained in the final policy.

- 113. Comment:** As described in paragraph B.1 of Appendix A, composite samples are to be made up of four discrete samples each. Is this the minimum number of discrete samples for a valid composite sample? (15)

**Response:** Section B of Appendix A, relating to sampling procedures for fill stored in piles, requires that composite samples be comprised of four discrete samples. The use of four discrete samples for each composite is neither a minimum nor maximum; it is the number of samples to be used when using composite samples for a fill determination. The procedures for using composite samples described in paragraph B.1 of Appendix A comes from language in the previously effective version of the policy, dated August 7, 2010, and does not change the manner in which the policy was previously implemented.

- 114. Comment:** The sampling frequency listed in Appendix A Section B.1 dictates the sampling frequency requirements. For volumes exceeding 3,000 yards, each additional 3,000 yards or part thereof requires a sample frequency equal to the first 3,000 yards (3 composites or 12 grabs). There is no discussion as to when the volume of sampling can cease. The Department Question & Answer document does address that sampling frequency can be reduced if one can demonstrate the contamination is uniform.

For Appendix A. B.1.d., would DEP consider revising and specifying collection of four additional discrete samples and one grab for each additional thousand cubic yards of materials versus using intervals of 3,000 yards which would require 12 discrete samples?

The format for Appendix A Section B.2 has changed from that of B.1. This should be uniform to reduce any confusion. The reference in B.2.b should be to B.1.b to include field screening this can be resolved by reformatting. (7, 14, 38)

**Response:** DEP’s FAQs relating to the MoFP reference paragraph (d) of Appendix A in the previously effective version of the policy. The language has been replicated in Appendix A, Section E of the final policy and provides a mechanism to statistically validate the use of a reduced number of samples.

Paragraph B.1.d of Appendix A has been revised as follows in the final policy:

For each additional 1,000 cubic yards of fill or part thereof over the initial 3,000 cubic yards, collect four additional discrete samples (plus one grab sample for VOCs). Composite and analyze the four discrete samples in accordance with SW-846.

Paragraph B.2.a of Appendix A has been revised as follows in the final policy:

For up to 125 cubic yards of fill, collect and analyze a minimum of eight discrete samples (plus two grab samples for VOCs). For volumes of fill greater than 125 cubic yards and up to and including 3,000 cubic yards, collect and analyze a minimum of 12 discrete samples (plus three grab samples for VOCs). For each additional 1,000 cubic yards of fill or part thereof over the initial 3,000 cubic yards, collect and analyze a minimum of four additional discrete samples (plus one grab sample for VOCs).

The formatting and reference to the entirety of subsection B.1 have been retained in the final policy to capture the field screening and sampling provisions for VOCs depending on the volume of fill that is subject to a fill determination.

- 115. Comment:** The last sentence of proposed Appendix A, Section C's first paragraph is poorly written. The term "multiple zones of contamination" is not defined. This again would require professional judgment to determine. Please consider allowing Environmental Professionals to apply their expertise rather than restrictive ambiguous language. In addition, multiple zones of contamination can be present due any number of reasons beyond the manner in which fill was "placed," as many reasons may have nothing to do with placement of fill but mechanism of release on in situ fill. The remainder of the sentence is a run on and needs rewritten. (14)

**Response:** The term "multiple zones of contamination" is not intended to be a defined term. Multiple zones of contamination may be created from two unrelated releases of different chemicals on opposite corners of very large property. In other instances, more releases, or overlap between releases, may elevate the difficulty of determining the extent of each zone. Persons performing environmental due diligence should use professional judgement when determining the extent of each individual zone of contamination and conducting sampling activities to characterize a donor site. Language was added to the first paragraph of Appendix A, Section C in the final policy to clarify that there are many mechanisms that can cause multiple zones of contamination. The added language is intended to provide examples to illustrate the point that individual zones of contamination should be contemplated separately during environmental due diligence; they do not necessarily represent the only mechanisms for creating multiple zones of contamination.

- 116. Comment:** Section C of Appendix A on page 9 states in the second paragraph, "a method of random sampling, such as simple random, stratified random sampling, should be chosen based on knowledge of the donor site as set forth in SW-846 or the RCRA Waste Sampling Draft Technical Guidance, EPA530-D-02-002. Apart from known hot spots, which may require further sampling and analysis, the donor site should be divided into a three-dimensional grid. Each grid cube should be the same size and shape and have equal volumes of fill." The word "or" should be inserted between the sampling types listed. The sampling protocols from the Land Recycling Program Technical Guidance Manual issued by DEP provide a process for conducting random sampling. References to the Land Recycling Program Technical Guidance

Manual should be supplied here instead of EPA SW-846 or the RCRA Waste Sampling Draft Technical Guidance.

It is agreed that the grids should all be of equal or very similar volume however, each grid site cannot be the same size and shape as donor site limits and boundaries are not symmetrical and could require unique shapes to assure all volumes are similar. This is also true when depth of excavation throughout a site vary. For clarity the sentence should read “Each grid cube should have equal or similar volumes of fill.” (14, 32, 33)

**Response:** The word “or” has been added to Appendix A, Section C, as suggested by the commentator. The mandatory language has also been removed from the referenced sentence. Simple random and stratified random sampling have been included as suggestions in the final Sections B and C of the final policy. Refer to DEP’s response to comment #108. The referenced language has been amended to allow for irregularities in size and shape of the donor site limits and boundaries.

In accordance with 25 Pa. Code 287.1 and 287.2(c), respectively, contaminated soil is included in the definition of waste, and management of contaminated soil is subject to Article IX (relating to Residual Waste Management). The EPA’s publication, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, also known as SW-846, and the RCRA Waste Sampling Draft Technical Guidance, EPA530-D-02-002, provide procedures for developing sampling plans that are statistically valid. Both references have applicability to solid waste and contaminated environmental media. SW-846 is referenced as guidance for sampling and statistical treatment of data in the previously effective version of the policy.

25 Pa. Code § 250.707(e) references various EPA documents and federal hazardous waste regulations at 40 CFR, Parts 264 and 265 (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities; and interim status standards for owners and operators of hazardous waste treatment, storage, and disposal facilities). Of the five methods listed in 25 Pa. Code § 250.707(e), only one is applicable to the use of fill. Therefore, the reference to Chapter 250 was removed from the final policy and replaced with references to methods of statistical evaluation that DEP can accept when statistics are used as part of a fill determination under the policy. Refer to DEP’s response to comment #21.

- 117. Comment:** Section C of the proposed version of Appendix A prohibits use of composite samples to characterize in-situ fill. The rationale for this prohibition is not provided. In-situ fill materials are essentially the same as stockpiled materials, with the “pile” existing in the subsurface. In the same way that composite samples can be collected from a soil stockpile, the collection of composite samples can be collected from a soil stock pile, the collection of composite samples for in-situ fill should be allowed. In-situ sample locations can still be selected randomly, as described in the proposed version of the MoFP. The samples can then be composited as described in Section B.1. of Appendix A. If DEP has a concern that composite sample results may be influenced by the matrix or layer in which the sample is collected, such concerns can be otherwise addressed by specifying the manner in which discrete samples are collected to form the composite sample. In many cases, the consistency of in-situ fill may be similar to fill contained in a stockpile. Additionally, once the fill is excavated from the donor site and placed at the receiving site, DEP should recognize that these actions will create a more homogenous stratum of fill, consistent with a soil stockpile. By prohibiting the use of composite sampling for in-situ materials, the costs of sampling will increase dramatically. DEP should

allow the collection and compositing of in-situ samples from uniform soil material, such as the same soil stratum, as evaluated by the professional performing the sampling (i.e. professional geologist or environmental professional defined in ASTM E1527-13). Also, Section C states that “additional sampling may be necessary based on site specific conditions” but the statement is not further explained. The statement should be removed from the policy. (6, 7, 14, 15, 32, 34, 37, 38)

**Response:** The procedures in the final policy relating to in-situ sampling and evaluation of analytical results from samples collected in-situ are based on the procedures under Chapter 250, in which discrete samples are collected. Aligning the sampling procedures accepted under Chapter 250 with those in the MoFP allows DEP to ensure that large excavation projects are adequately characterized prior to excavation and reuse. DEP maintains that if the purpose of the in-situ sampling is to characterize a release at the donor site, discrete samples should be collected and analyzed using a focused sampling technique, such as authoritative sampling. Localized areas that are known or suspected to contain levels of regulated substances that exceed the CFCLs or RFCLs, whichever is applicable, should be managed separately from remaining fill that is intended to be excavated and transported to a receiving site.

DEP has revised Section C of Appendix A to allow for the use of composite samples when the purpose of the in-situ sampling is to confirm that fill remaining after a release has been characterized meets the CFCLs or RFCLs, whichever is applicable. There are instances when additional sampling may be necessary. For example, visual inspection may identify the presence of more distinct areas of fill than required sampling points. If this were the case, the minimum number of samples would not be adequate. The need to conduct additional sampling is evaluated by an environmental professional based on circumstances observed at the site.

- 118. Comment:** Appendix A, Section C does not include sampling requirements of in situ fill for PCBs. Sampling requirements of in situ fill for PCBs should be included in the fill policy. The following sentence needs to be included: “Sampling and analysis of in situ fill for PCBs must comply with 40 C.F.R. Part 761, Subpart N.” (2)

**Response:** The sampling protocol identified in 40 C.F.R. Part 761, Subpart N is significantly different from the protocols identified in Appendix A of this MoFP. Since fill containing PCBs at concentrations exceeding 2 ppm cannot be managed under the policy unless approval is given by EPA, language was added to Section B.1.e of the final policy that directs users of fill that contains PCBs at concentrations exceeding 2 ppm to contact EPA for guidance on acceptable procedures for sampling an analysis.

- 119. Comment:** Proposed Section C of Appendix A, in the last paragraph at the top of page 10, references the number of samples required for in-situ testing and refers to paragraph B.2 of Appendix A. If the donor fill is to be excavated to more than one depth, are additional samples required or is the number of samples required based solely on the overall total volume of fill to be excavate. Are the environmental professionals performing the site characterization the individuals responsible for determining if additional sampling is necessary?

The reference to frequency in this paragraph is confusing. Frequency can mean the number of samples per a unit, with unit being either volume, space or time. The frequency and placement of samples should be handled as per the sampling method. Certain methods would not evenly space sampling points as per design. It is believed the intent was that all depths and area of fill is

to be characterized by sampling. This concept does not mean that every portion of the proposed donor fill is sampled, but rather characterized by samples representative of all portions. (10, 14, 15)

**Response:** The number of samples is based on the total volume of fill to be removed from the donor site but should also be representative of each depth in excavation. Environmental professionals performing a site characterization should decide if additional samples, beyond what is identified in the policy, are necessary to meet data quality objectives and perform an adequate fill determination. The decision to conduct additional sampling is often based on site-specific conditions.

Use of the word “frequency” in the referenced paragraph refers to the number of samples needed for the volume of fill being characterized. The referenced language necessitates that the sampling account for varying depths of fill and is representative of the fill at the varying vertical depths associated with the excavation; it does not state that an excavated area that is twice as deep as another necessitates twice as many samples simply by virtue of it being twice as deep. DEP agrees with the commentators that the policy does not require samples to be evenly spaced or that every portion of the donor fill is sampled. The policy language is intended to provide that the donor site be characterized by samples that are representative of all portions of the fill.

- 120. Comment:** Proposed Section D of Appendix A, Section D references Table GP 1a & b of WMGR096. Is WMGR096 going to have a static limit table? The proposed policy incorporates the numeric values from Chapter 250 by reference. Shouldn't the two types of fill have their limits determined in the same fashion? The recently proposed WMGR096 updated the limits based on the same method for determining clean fill limits except for the use of the non-residential numbers. For years DEP stressed the need for consistency, yet here we are again inconsistent between clean and regulated fill which are both different than reclamation fill. (14)

**Response:** DEP intends to remove Tables GP-1a and b from WMGR096. A definition of regulated fill concentration limits (RFCLs) has been added to the final policy that incorporates the limits applicable to regulated fill by reference. Reference to Tables GP-1a and b have been removed from Appendix A, Section D.

- 121. Comment:** Does paragraph D.3 of proposed Appendix A apply to discrete samples collected for VOC analysis? (15)

**Response:** Paragraph D.3 of Appendix A does not apply to grab samples collected for VOC analysis. Grab samples collected for VOC analysis are evaluated in accordance with paragraph D.2 of Appendix A.

- 122. Comment:** DEP is proposing that all discrete samples be evaluated using the 75%/2x rule, where 75% of the sample results do not exceed the most stringent standard, and no sample result may exceed 2x the applicable limit in WMGR096. Elsewhere in the proposed policy it states that fill containing concentrations of regulated substances greater than the limits provided in WMGR096 are waste. Perhaps the intent is that the results not exceed 2x the most stringent standard? This also brings up the question as to how DEP assumes that the higher sample results would be viewed by a receiving site in consideration of their site use, or tolerance for potential environmental liabilities. This means that we would be sending confirmed waste out as clean fill. Why was the 75%/2X rule chosen over the 75%/10X rule? The 10X rule is listed in the

Act 2 Technical Guidance Manual for soil based statistical procedures, while the 2X rule is for groundwater. (7, 14, 15, 34, 38)

**Response:** The commentators reference the procedure described in Appendix A, paragraph D.3, relating to evaluation of data, in which the analytical results from discrete samples are compared to the CFCLs or RFCLs. The language of proposed Appendix A, paragraph D.3 was copied from Appendix A, subparagraph (c)(iii) of the previously effective version of the policy, dated August 7, 2010, and does not represent a change in the implementation of the policy. Appendix A, paragraph D.3 applies to both regulated fill and clean fill, even in cases where the regulated fill or clean fill are waste. While all analytical results from discrete sampling are evaluated against the CFCLs or RFCLs, only 75% of the results need to meet the respective CFCLs or RFCLs. Up to 25% of the sample results may exceed the established CFCLs or RFCLs, provided that none of the results show a concentration of regulated substances that is more than twice the CFCLs or RFCLs. This flexibility in the evaluation of data allows persons to exclude outlying or anomalous sample results. The final policy has been revised to clarify that for clean fill, 75% of the results may not exceed the CFCLs, and no result may exceed twice the CFCL. For regulated fill, 75% of the results may not exceed the RFCLs, and no result may exceed twice the RFCL.

Persons using regulated fill should review the fill determination and evaluate whether the fill can be accepted based on the construction project authorized by the coverage issued under WMGR096. All regulated fill is waste that is authorized for beneficial use as a construction material under WMGR096. Therefore, DEP does not anticipate an environmental liability concern on behalf of persons receiving regulated fill since the authority to beneficially use waste has been granted through the issuance of coverage under WMGR096.

- 123. Comment:** Proposed Appendix A, Section E is similar to the Appendix A, paragraph (d) of the previously effective version of the policy. One omission is the sentence, “Sampling shall be random, and representative of the material being sampled.” Why was this sentence removed? Can the 95% UCL of the arithmetic mean be equal to the appropriate numeric limit for clean or regulated fill to be handled as such? Or must it be less than the limit, as indicated? (14, 15)

**Response:** Section E in Appendix A contains procedures for the alternate evaluation of data and does not contain any procedures relative to sampling methods. The policy provides guidance on sampling in Sections A-C of Appendix A. The referenced statement is unnecessary in Section E of Appendix A and, therefore, was deleted. The calculated 95% UCL of the arithmetic mean should be below the appropriate numeric limit for clean or regulated fill, as indicated in the policy. The language referenced by the commentator is located in Section E of Appendix A in the final policy and from language in the previously effective version of the policy, dated August 7, 2010.

- 124. Comment:** Section E of the proposed Appendix A states as follows: “The calculated 95% UCL of the arithmetic mean must be below the appropriate numeric limit for clean or regulated fill. Persons intending to use this method for the treatment of data must determine a minimum number of samples in accordance with SW-846 and the RCRA Waste Sampling Draft Technical Guidance, EPA530-D-02-002.” The Land Recycling Program Technical Guidance Manual issued by DEP provides a process for the statistical evaluation of sampling results. References to the TGM should be supplied here instead of EPA SW-846 or RCRA Waste Sampling Draft Technical Guidance. (14, 32)

**Response:** Refer to DEP's responses to comments #98, 99, and 116.

- 125. Comment:** The citation of 25 PA Code 250.707(e) was removed from the Alternative Evaluation of Data section of the proposed policy. It was replaced with RCRA Waste Sampling Draft Technical Guidance EPA530 D 02 002. Why would the PADEP remove a PA Regulation reference with a federal draft technical guidance document? (14)

**Response:** 25 Pa. Code § 250.707(e) references various EPA documents and federal hazardous waste regulations at 40 CFR, Parts 264 and 265 (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities; and interim status standards for owners and operators of hazardous waste treatment, storage, and disposal facilities). Of the five methods listed in 25 Pa. Code § 250.707(e), only one is applicable to the use of fill. Therefore, the reference to Chapter 250 was removed from the final policy and replaced with references to methods of statistical evaluation that DEP can accept when statistics are used as part of a fill determination under the policy. Refer to DEP's response to comment #21.

- 126. Comment:** Appendix A Section E.6 requires statistical testing be done individually for each "parameter of concern." Statistical evaluation is done only for a parameter where a single or multiple sample result exceeds a limit. The term "parameter of concern" is what parameters are being tested for based on the due diligence. (14)

**Response:** DEP agrees with the commentator. The language has been adjusted in the final policy.

- 127. Comment:** Section F of proposed Appendix A references, "SPLP, SW846 Method 1312," which is the analytical method for analysis. This reference replaced "SPLP, per Technical Guidance Manual 253 0300 100/May 4, 2002/Page II 26 27" which appears in the previously effective version of the policy. The previous reference identifies how the SPLP results should be evaluated and the language included in the final policy. The 25 Pa Code, Chapter 250 does not list an Appendix A in the online version, in other documents the tables are just listed as Chapter 250 Tables xxxx. Section F of proposed Appendix A, in the second sentence, references Tables 3 & 4 from 25 Pa. Code, Chapter 250 which are related to soil standards not groundwater standards. The correct reference should be Tables 1 & 2 for comparing SPLP results to the groundwater MSC. The reference also needs to be further clarified as what groundwater MSC is appropriate as the tables have multiple options. It is assumed the reference for alternative clean fill evaluation should also include "Table 3B or Table 4B; Used aquifers, TDS<2500, Residential". If this is being applied for Regulated Fill the reference would be to non-residential. (10, 14)

**Response:** Additional detail regarding the use of SPLP data in conjunction with the total concentration data to establish an alternative soil-to-groundwater value have been provided in Appendix A, Section F of the final policy. Therefore, reference to the Land Recycling TGM is not necessary. The reference to Tables 3 and 4 has been corrected in Appendix A, Section F of the final policy to reference Tables 1 and 2, which provide MSCs applicable to regulated substances in groundwater. Clarifying language has been added to Section F of the final policy to describe how SPLP results are compared to Tables 1 and 2 to establish an alternative soil-to-groundwater value. Appendix A of 25 Pa. Code, Chapter 250 is included in the online version of Chapter 250 at [www.pacode.com](http://www.pacode.com).

- 128. Comment:** Under the SPLP alternative evaluation, the use of “uncontaminated” may be misleading. It is understood that if the soils meet the SPLP alternative evaluation it is acceptable as meeting the limits of clean or regulated fill. Stating it is uncontaminated would limit the evaluation to only clean fill. The use of “uncontaminated” may be basis for a challenge as this is an alternative evaluation with results exceeding the normal limits.

Proposed Section F also contains a fifth item that does not appear in the previously effective version of the policy requiring the determined alternative soil to groundwater value be compared to the direct contact residential value with the lower of the two becoming the limit. This was not included in the current policy. Also, the reference to compare to “direct contact residential value” would not allow this alternative evaluation method to be applied for regulated fill. (14)

**Response:** The procedure for using SPLP in the previously effective version of the policy, dated August 7, 2010, is incomplete because it does not provide the final step in the evaluation process, where a person compares the alternative soil-to-groundwater value to the direct contact numeric value in Tables 3 or 4 of Appendix A in Chapter 250. The addition of subparagraph F.5 in the final policy simply completes the previously used language. The added language does not change the manner in which the policy was previously implemented or intended to apply to the SPLP evaluation. The alternative soil-to-groundwater value obtained through the use of SPLP always required comparison to the direct contact numeric value and selection of the lower of the two values. Clean or regulated fill cannot exceed the applicable direct contact numeric value for any parameter. Appendix A, Section F has been revised in the final policy to clarify its applicability to regulated fill.

- 129. Comment:** Section F of proposed Appendix A is unclear regarding how the alternate soil-to-groundwater value is used in determining whether the fill is uncontaminated. It states that if all samples result in a passing SPLP level, the alternative soil-to-groundwater value will be the total concentration corresponding to the highest SPLP result. What if all the regulated substances analyzed result in non-detect SPLP values? (9)

**Response:** Appendix A, Section F of the MoFP provides guidance on utilizing the SW-846 Method 1312 to establish an alternative soil-to-groundwater value. SPLP is designed to determine the mobility of both organic and inorganic substances present in soils and waste. The value for the SPLP represents the concentration of a regulated substance in site-specific soil that does not produce leachate containing a regulated substance in excess of a groundwater MSC identified in Tables 1 or 2 of Appendix A in Chapter 250. If the sample of highest total concentration, yields a SPLP result that is less than the applicable groundwater MSC, then the alternative soil-to-ground water value is that total concentration. If all SPLP results are non-detects and the reporting limit is less than the applicable groundwater MSC, the alternative soil-to-ground water value is the highest total concentration for which a corresponding SPLP analysis was carried out.

- 130. Comment:** In the revisions to the MoFP (Section F of Appendix A), DEP has expressly endorsed the use of the Synthetic Precipitation Leaching Procedure (“SPLP”) as an alternative mechanism to demonstrate that fill material can qualify as clean fill. We strongly support this change. SPLP is an extremely useful tool for determining the propensity of regulated substances to leach from a particular fill matrix. The results from testing using SPLP can be used to show that the fill material will not pose an unacceptable risk to groundwater quality. In many

instances, SPLP testing will provide a far more accurate measure of the propensity of regulated substances to leach from a particular material than will an evaluation of the total concentrations of regulated substances in the material. For example, regulated substances may be present in concrete materials but be bound to the materials so the constituents of concern pose no threat to groundwater. In this circumstance, SPLP analysis may be critical to evaluating the actual potential for fill material to pose a risk to groundwater. Moreover, the SPLP approach incorporates a level of conservatism as the SPLP leachate is compared directly with the applicable groundwater standard under Act 2 for the particular regulated substance. This method excludes attenuation, dispersion or dilution that would otherwise naturally occur in the environment.

We note that in the proposed provisions relating the use of SPLP, DEP has mandated that at least ten samples be collected from the proposed fill material. For consistency purposes, we suggest that eight samples are sufficient for volumes of fill less than 125 cubic yards.

We also suggest that DEP make changes to the procedures for comparing sampling results obtained using SPLP to total concentrations of regulated substances in those samples. Four sample results will allow the data to be best fit using linear regression on a graph of total concentrations versus SPLP results. The intersection of the resulting line with a “passing” SPLP value will yield a total concentration result that can be used to establish the alternative soil-to-groundwater numeric value. (32)

**Response:** Regarding sampling provisions for less than 125 cubic yards of fill, DEP has revised Appendix A, Section F in the final policy as suggested by the commentator. Regarding use of linear regression to establish an alternative soil-to-groundwater value, the relationship between the total concentration and SPLP may not be linear. Therefore, the use of linear regression was not incorporated in the final policy.

- 131. Comment:** For what volume of fill do the ten samples (4 highest totals for SPLP), as described in this guidance, represent? Or, do the ten samples represent all material on a perspective site for alternative soil to groundwater value determination? (15)

**Response:** A minimum of ten samples are used to establish an alternative soil-to-groundwater value using SPLP. If contamination is relatively uniform over the extent of the donor site, it is possible that ten samples evaluated pursuant to Appendix A, Section F of the final policy may be used for the entire donor site. In other circumstances, more than ten samples may be needed to establish an alternative soil-to-groundwater value.

- 132. Comment:** Section G of proposed Appendix A is a new section for background demonstration and equivalent site evaluation. This new section itself is 6 pages or over 1/3 of the policy. The entire background determination and site equivalency procedures are extremely technical and require an immense amount of professional judgement in order to attempt to comply. There have been other ways to allow for natural background that have been successful over the last 13 years.

Requiring the equivalent site evaluation is inappropriate in that it may preclude using unimpacted fill (which does not exceed background) at a receiving site with lower background concentrations. Can previously imported fill at largescale filling operations (receiving site) be considered when making a background determination for the equivalent site evaluation? Proposed G.3.a.viii states that imported fill cannot be sampled for this determination however,

G.3.a.ii states that the area sampled at the receiving site must be comparable to where the donor fill will be placed at the receiving site. In the case of these filling operations, donor fill will be placed on previously received donor fill. This goes far and above the intent of the policy, which is to prevent contaminated material from being moved to an uncontaminated site.

This level of evaluation is wrought with decision making that will be questioned by DEP. There already is considerable inconsistency to fill evaluations based on the summary of the massive information obtained on a site. The certification by environmental professionals should be considered to resolve these issues. (14, 15, 29, 30)

**Response:** In accordance with the final policy, a person intending to use fill at a receiving site would only need to conduct the equivalent site evaluation when it is indicated that the potential donor fill has been subject to a release, and the analytical testing shows that a CFCL or RFCL has been exceeded. If the exceedance is believed to be unassociated with the suspected release, a person has the option to perform a background determination to demonstrate that the exceedance is part of the naturally occurring background for that substance at the donor site. Once a successful background determination is conducted, the equivalent site evaluation is also performed to preclude elevated concentrations of or new regulated substances from being deposited at the receiving site. Therefore, the objective of performing the equivalent site evaluation is to compare the substances of elevated background in the potential donor fill to the naturally occurring background at the receiving site. To exclude all naturally occurring background from comparison in the equivalent site evaluation defeats the purpose of the evaluation and would allow the comparison to be performed using regulated substances resulting from a release. For receiving sites requiring large amounts of fill, this practice could allow contamination to steadily and significantly increase over time. Persons wishing to use fill that does not meet the CFCLs or RFCLs and either cannot demonstrate that the exceedance is due to background or that elevated or new regulated substances will not be placed at the receiving site if the fill is used at that site may apply for a permit under the SWMA to use the fill in the intended manner or submit a notice of intent to remediate under DEP's Act 2 program.

The previously effective version of the MoFP, dated August 7, 2010, does not contain a procedure for determining background. DEP published a list of FAQs relating to the 2010 version of the policy that provided the following information on background:

**1. Question: If there is no spill or release on rock but testing indicates exceedance of Table FP-1. Is material clean fill, regulated fill or waste?**

Answer: Such a situation would generally apply only to inorganics and not to organic regulated substances. If due diligence shows that there are no spills or releases, and testing reveals higher concentrations for one or more inorganics on Table FP-1, then this may be due to natural conditions in the rock. This should be verified with data from the literature or from chemical analysis in the area where the fill material originates. Such rock can be used as clean fill as long as it complies with other regulations such as Chapter 102 and 105.

2. **Question: Under the Fill Management Policy, how is background defined? After fill is placed, can the level of regulated substances in it be used as the background level for future fill placements?**

Answer: The background provision of Condition 7 applies to the substances on Table GP-1b (inorganic substances). Background is the concentration of a substance present on a site before beneficial use activities occur under the general permit. This is intended to be the concentration before any placement of fill has occurred. Credit cannot be taken for concentrations in any fill that has previously been placed under the general permit. For any fill placement, either the first time or multiple times at a receiving site, either the higher of the values in Table GP-1 or the receiving site background will be the ceiling concentration.

3. **Question: How can I determine if arsenic concentration on a property are from natural sources, area wide deposition, or the result of a release?**

Answer: The following guidance was developed by the arsenic workgroup and presented in the Land Recycling Program Enhancements Report:

When screening for arsenic, a remediator should compile a site history, document the type of soil and include a review of aerial photographs of the property and surrounding area at a frequency that will allow a historical perspective of site activities back to the 1930s or to the earliest available time frame. This review process is often referred to as a Phase I Assessment. Upon completion, areas should be grouped into either (Level A) non-agricultural use or not influenced by close-by incinerators or coal-fired power plants or (Level B) atmospheric deposition potential or orchard/land application potential. Then the following soil sampling strategy should be applied:

- A. Level A: One sample location should be taken per 5 acres. At each sample location, three (3) discrete samples should be obtained at the following depth intervals: 0-2 inches, 2.5 to 3 feet, and 5 to 6 feet. All samples should be run for RCRA metals and other potential constituents of concern identified in the site history research. Do not use alconox rinse of sampling tools, instead use only acid wash decontamination procedures. A minimum of four sample locations and associated samples are needed for each designated Level A area. If exceedances are discovered, the remediator goes to Level B.
- B. Level B: One sample location is taken per acre. At each sample location, three (3) discrete samples obtained at the following depth intervals: 0-2 inches, 2.5 to 3 feet, and 5 to 6 feet. Biased sample locations should be taken in areas of potential concern, i.e. - the end of planted rows, mixing areas, tool sheds, and surface water low points. All samples should be run for RCRA metals and other potential constituents of concern identified in the site history research. Do not use alconox rinse of sampling tools, instead use only acid wash decontamination procedures.

A review of the results of this screening process would conclude that:

- Elevated concentrations of arsenic only at the surface interval would occur from atmospheric deposition or from a lead arsenate application.
- Uniformly rising and falling lead/arsenic concentrations would result from lead arsenate application.
- No decrease in arsenic concentration with depth, potentially an increase with depth, would indicate natural background arsenic.

In those areas where elevated arsenic concentrations are identified, the remediator then completes horizontal and vertical delineation per the TGM. The remediator may then select any of the Act 2 standards to clean up this property.

The final policy formalizes a procedure for making a background determination and expands the use of the background determination beyond what DEP previously provided in its FAQs. Therefore, Section G was retained in the final policy.

- 133. Comment:** Will a professional paper, written by an accredited source with appropriate peer review, suffice as a means for determining background, as it has in the past? (14, 15, 35)

**Response:** The purpose of the background demonstration is to provide statistically relevant evidence that the presence of a regulated substance in the soil of a donor site at the reported concentration is part of the soil matrix of the donor site and not resultant of a release. Selection of an appropriate background reference area requires close consideration of physical, geologic, and hydrologic characteristics of the donor site. Once selected, sampling and analysis should be carried out in a manner that is statistically valid and consistent with the methodology used for the fill determination at the donor site.

Previously collected background data published by an accredited source with appropriate peer review may be considered, provided the information is sufficiently focused and contains the level of detail on the area used to determine background necessary to legitimately compare it to the donor site. The description of the sampling and analysis performed should be detailed enough to provide statistical validity.

Statewide surveys typically provide insight regarding the level of variation in background concentrations around the state; however, they often lack the level of sample intensity necessary to establish a statistically valid background concentration for specific locations.

- 134. Comment:** The procedures in Section G of Appendix A to the proposed version of the MoFP describe how background conditions can be integrated into fill determinations. The level of complexity in the procedures proposed by DEP, including the need to secure access to offsite “background reference areas” for sampling, will almost certainly mean that those procedures are rarely if ever invoked. The proposed MoFP should be revised to incorporate a more streamlined and straightforward set of procedures, recognizing that the background approach will likely be used predominantly in moving fill material from one location to another in highly developed areas.

One suggested mechanism for streamlining the background approach may be to allow the reuse of background reference concentrations within similar locations. For example, historically urbanized areas are likely to have similar background concentrations of PAHs and metals for the reasons discussed previously. If a regulated entity were to perform background sampling in accordance with the MoFP, the background concentrations that were determined could be re-used for subsequent fill determinations for material excavated from the same general area. DEP could review the background concentrations and sanction their use subject to appropriate areal and temporal restrictions, for example by publishing the background sampling results on the Management of Fill website. This suggested approach would provide tremendous benefit to regulated entities in areas where background concentrations of regulated substances are elevated and access to background reference areas is difficult to obtain, which is often the case within the major cities of the Commonwealth. (15, 32, 37)

**Response:** DEP does not object to the reuse of background reference concentrations within similar locations. One background reference area can be used to perform a background determination for multiple donor sites, provided it meets the definition of background reference area and the provisions of Appendix A, Section G in the final policy for each donor site. DEP does not believe that the final policy precludes the use of a single background determination being applicable to a larger geographic area. Clarifying language has been added to Section G of Appendix A in the final policy. DEP will publish area-wide background determinations on its website as suggested by the commentator.

- 135. Comment:** To the extent the receiving site is undergoing remediation under Act 2 in part through the beneficial use of regulated fill, the definitions of “Background” and “Background Reference Area” should be modified to include the concentration of constituents permitted to remain in place at the receiving site, as is the case for regulated fill managed under Condition 7 of WMGR096. Sites undergoing remediation through Act 2 have been extensively studied to determine the site’s conceptual model including geologic and hydrogeologic setting, the fate and transport of materials to remain on site, and the potential exposure pathways for in-place material that are being addressed under the approved remediation plan. As required under Act 2, there can be no remaining exposure pathways for exposure to onsite materials that pose an unacceptable risk to human health and the environment. Therefore, there is no benefit from excluding the consideration of the receiving site background concentrations for comparable material that has already been deemed acceptable to remain in place. Such exclusion, however, will generate substantial cost in the form of reduced material availability to complete Act 2 remediation projects at these sites. We therefore recommend the proposed MoFP incorporate the current WMGR096 definition of “Background Concentration” (Condition No. 7 of the current General Permit) for Act 2 remediation sites beneficially using regulated fill where it “is defined as the concentration of a substance that is present at the site before beneficial use activities occur under this permit.” (29)

**Response:** DEP agrees with the commentator that sites undergoing remediation through Act 2 have been extensively studied to determine the site’s conceptual model, including geologic and hydrogeologic setting, the fate and transport of materials to remain on site, and the potential exposure pathways for in-place material that are being addressed under the approved remediation plan. The definition of “background” in the policy is the same definition used in the Act 2 program, and the procedures described in the policy for establishing a background concentration are the same as those used in Chapter 250. Remediation conducted under the purview of the Act 2 program is fundamentally different from the use of fill in accordance with the MoFP

because the receiving site on which clean fill used does not undergo a review as does sites that are remediated under the Act 2 program. The geologic and hydrogeologic setting, fate and transport of materials to remain on site and potential exposure pathways for in-place material that are being addressed under the approved remediation plan are not evaluate when using clean fill in accordance with the MoFP.

DEP is separately considering public comments received on the proposed revisions to WMGR096, which authorizes the use of regulated fill as a construction material.

- 136. Comment:** The fourth sentence of the first paragraph in Section G or proposed Appendix A is an extreme run on and should be divided into 2 sentences. (14)

**Response:** It is assumed that the commentator intended to identify the third sentence of the first paragraph in Section G, Appendix A in the comment. The sentence has been revised in the final policy.

- 137. Comment:** Section G of proposed Appendix A states that generally only naturally occurring metals, lead, and some ubiquitous organics from atmospheric deposition are eligible for background determinations. Why list them if this is not an exclusive list. If it is proven to be background, why isn't any parameter applicable? Scholarly research lists metals, PCBs, PAH, chlordane, dieldrin, lindane, dioxins, furans, toxaphene, & hexachlorobenzene and more. The language in paragraphs G.1 and subparagraph G.3.a relating to selection of a background reference area for purposes of performing the background demonstration and equivalent site evaluation limits widespread, ubiquitous contamination to urban areas. Why the limitation? Areas other than urban areas can also be affected by widespread, ubiquitous contamination such as atmospheric deposition. If urban area is to be used, then how is it defined? (14, 22)

**Response:** DEP does not intend to limit the substances for which a background determination may be made. The list identified by the commentator in Appendix A, Section G is provided to identify examples of substances that are widely accepted to have a ubiquitous presence in urban areas. DEP disagrees with the commentators that the policy's definition of background reference area is limited to urban areas. Subparagraph ii. of the policy's definition of background reference area states, "For purposes of this definition, 'atmospheric deposition' refers only to the ubiquitous, widespread deposition of regulated substances from the air that is incapable of being traced to a specific point source or multiple point sources." The term "urban" appears in the definition twice. Both uses of the term "urban" appear in subparagraph ii. and are used in an example provided to illustrate the meaning of the term "atmospheric deposition." The language has been retained in the final policy.

- 138. Comment:** Regulated fill permitted sites with background levels exceeding the permit limits should be required to go through a permit modification for any acceptance limit change due to background levels. (14)

**Response:** If a site permitted under WMGR096 has background levels higher than the RFCLs, a permit modification would not be required since the RFCLs in the general permit apply to all persons authorized to use regulated fill under WMGR096. When a permittee under WMGR096 proposes to receive regulated fill that meets the RFCLs at a site having a background higher than the RFCLs, a background demonstration or equivalent site evaluation is not necessary. In

instances when a permittee proposes to receive regulated fill that exceeds a RFCL, the permittee would need to demonstrate:

- a. The exceedance at the donor site is due to background at the donor site, through a background demonstration, and
- b. The exceedance is not greater than background at the receiving site, through an equivalent site evaluation.

Both demonstrations would be made in accordance with Appendix A, Section G of the MoFP and submitted to DEP with the new source submittal required by WMGR096.

- 139. Comment:** The proposed policy requires a donor site background determination and a receiving site equivalent site evaluation that will make it relatively impossible to successfully complete. The “like on like” concept would prove to be impossible unless the two sites were all but identical. Simply being a different location will nullify any determination.

The requirements of this section will also make the background determination costlier than the disposal option, especially for small projects and homeowners. DEP is already well aware of naturally occurring concentrations found in soils that will exceed the clean fill limits. Since the inception of the policy there has been a successful system in place to compare naturally occurring background and should continue. (14, 15)

**Response:** DEP disagrees with the commentators that a successful background determination and subsequent equivalent site evaluation are impossible to complete. Rather, the procedure provides an opportunity to use fill in ways that were not available in the previously effective version of the policy. Refer to DEP’s response to comment #130. The equivalent site evaluation is similar to requirements imposed by other state programs. DEP believes that the background determination coupled with the equivalent site evaluation applies flexibility to the use of fill where it would otherwise be precluded from use, while providing an appropriate level of protection to public health, safety and the environment that is legitimized through documentation to demonstrate that fill exceeding a CFCL can be managed responsibly without a permit pursuant to the policy, and fill exceeding a RFCL can be adequately regulated under the terms and conditions of WMGR096. The language was retained in the final policy.

- 140. Comment:** What type of samples are appropriate for this determination, discrete or composite? (15)

**Response:** Sampling to determine background of regulated substances is based on the background determination procedures established by Chapter 250. Therefore, analysis of discrete samples would be appropriate to obtain a statistically valid result.

- 141. Comment:** Define “urban area” in reference to performing a background demonstration. (15)

**Response:** “Urban area” is only used as an example, and therefore has not been defined in the final policy.

**142. Comment:** Please define and quantify the term “considerable distance.” (15)

**Response:** “Considerable distance” was purposefully left unquantified or defined to allow for the use of site-specific considerations and professional judgement. Depending upon the extent of the contamination, the nature of the contaminant and other site conditions, a “considerable distance” can vary from site to site.

**143. Comment:** Proposed Section G of Appendix A only references the Form FP-001, implying that the equivalent site evaluation can only apply to clean fill. If the proposed equivalent site evaluation is meant to apply to both clean fill and regulated fill, the policy should be revised to reference both clean fill and regulated fill standards in Section G. (14)

**Response:** Section G of Appendix A was originally intended to apply solely to the use of clean fill. DEP revised the language in this section so that it is applicable to both the use of clean fill and regulated fill.

**144. Comment:** According to pertinent parts of subparagraphs G.1.a-h and G.3.a.i-viii in proposed Appendix A, the background reference area that complies with the following conditions must be selected:

- a. It must be free of a regulated substance from any release.
- b. It may not be located immediately next to or within the area of a point source.
- c. It may not be an area of added or imported fill.
- d. It may not be a location where industrial or other contaminant generating activities are known to have taken place.
- e. In cities, preference must be given to vacant land that has not received imported fill, naturally wooded areas, parks, or large residential lots.
- f. It may not be a location near known air deposition sources.

If the verbiage “any release” is included in the policy, no reference areas would be allowed.

The phrase, “located immediately next to or within the area of a point source,” is difficult to define and requires professional judgement to make such a decision. If the sampling point chosen for the background reference area is not affected by the point source, then there should not be a requirement for distance.

Areas of added or imported fill are too limited since many developed areas of Pennsylvania have had some level of fill imported to the area. Furthermore, imported clean fill would not affect a background determination. The absolute exclusion will cause significant difficulties in performing a background evaluation.

Excluding a location where industrial or other contaminant generating activities are known to have taken place would immediately prohibit all industrial and many commercial properties from being utilized.

It is understandable why the requirement to give preference to vacant land that has not received imported fill, naturally wooded areas, parks, or large residential lots was included. However, the requirement is not practical. Property within a city has likely had some level of fill in the last 200 years, it is more uncommon to find one that hasn't. Naturally wooded areas are only describing a current condition, and not the historical use which is what should be of concern. Over the years there have been many parks found to be contaminated and required remediation.

A location near a known air deposition source is impossible to define. There is no definition of "air deposition source" provided in the policy and the term "near" is subjective. There are many factors related to the distance an air deposition source would affect soils. These include stack emission, stack height, surrounding terrain, and many more. Simply stating "near" would exclude many urban environments.

These determinations should be made by a professional when evaluating a site and not be listed as rigid exclusion. (14, 15)

**Response:** DEP intends for environmental professionals to use their judgement in choosing an appropriate background reference area. The provisions of paragraph G.1 and subparagraph G.3.a of the proposed revised policy were intended to describe circumstances in which a background reference area could not reasonably be chosen (i.e., if the background reference area is located immediately next to or within the area of a point source, demonstrating that the background reference area is not affected by a release from that point source may be difficult).

Paragraph G.1 and subparagraph G.3.a have been revised in the final policy to be consistent with the definition of background reference area. Persons performing a background determination and equivalent site evaluation submit documentation to DEP relating to the determination, including information such as the identification and location of point sources, the proximity of identified point sources to the background reference area, identification of areas of imported fill other than imported clean fill, etc., in accordance with the procedures for submitting a Form FP-001 outlined Section D of the policy, relating to management of clean fill.

- 145. Comment:** Appendix A Section G.2 states that the methods of analysis must be the same, "where appropriate." As there are required methods for analysis, they should be the same and not just when appropriate. This wavering language would again require additional judgement. (14)

**Response:** The phrase, "where appropriate," has been removed from paragraph G.2 of Appendix A in the final policy.

- 146. Comment:** The proposed policy expands the number of samples and sample locations required to establish background levels. In the proposed policy, DEP indicates that the minimum should be 10 samples from a receiving site and a minimum of 10 samples from a donor site to establish background conditions in addition to the samples required based on the volume of material to be classified. No technical or statistical basis is provided by DEP for what would be a 2 1/2 time sample frequency increase. The cost for testing fill to confirm that it meets the definition of clean fill could rise from five to 16-fold (from about \$2/ton to \$10-42/ton). What is basis for the minimum of ten samples required to evaluate a background determination? For the donor site, why is 10 samples required if a lesser amount would be required to classify the fill in accordance

with this policy? As it says a minimum, is there to be a relative number compared to volume of fill? Is the number of samples at background and donor site relative to volume to be removed at donor? Is background number of samples to represent the same volume as donor? (5, 14, 27, 29, 30)

**Response:** The guidance on performing a background demonstration and subsequent equivalent site evaluation is provided in Appendix A, Section G as a means for establishing a statistically valid background concentration for a regulated substance that is based on the requirements for establishing background contained in Chapter 250. The language in paragraph G.2 of Appendix A, relating to background sampling, analysis and evaluation of data, are based on the requirements of 25 Pa. Code § 250.707(a)(1), relating to statistical tests. The ten samples are taken from the background reference area, as opposed to the donor fill area, and therefore are independent of the volume of fill to be displaced. The language has been retained in the final policy.

DEP has revised Section G of Appendix A to allow alternative methods to be utilized if a demonstration is provided to DEP that the alternative method is as effective as or an improvement over the methods described in Appendix A, Section G.

- 147. Comment:** Appendix A Section G.3.a requires the receiving site be sampled using probability sampling. Why is this single sampling method required? There are many sampling methods that may be appropriate. Based on the conditions in this section, probability sampling might not be viable as there are many restrictive conditions that would lead to not all parts being characterized. (14)

**Response:** Paragraph G.3 provides that areas of known or suspected contamination are eliminated from the area chosen to determine background at a receiving site. A form of biased sampling may be an appropriate method of identifying areas of known or suspected contamination. Once those areas have been removed from the sampling area, probability sampling should be used to establish background for the receiving site. DEP does not believe that the policy prohibits the use of biased sampling to eliminate areas of known or suspected contamination.

- 148. Comment:** The language in subparagraph G.3.a.iii relating to selection of a background reference area for purposes of performing the equivalent site evaluation states that the receiving site background sample area must not differ from the donor site, including physical, chemical or biological characteristics, geologic characteristics, hydrology, and soil sampling depth. Subparagraph G.3.a should not require comparison to the donor site because the two sites will always vary significantly. No weight or measure is given to “significantly” which will cause differences in opinion between DEP and the person selecting the background reference area.

The background reference area for the receiving site cannot be compared to the donor site for the characteristics identified because a receiving site and donor site are different locations. The topography has little comparison value to the fill in removing or importing. The hydrology has little to do with the chemical comparison of the fill but is more relative to the operational and permitted removal or importation. The issue of hydrology should be controlled by the other permits needed for the placement of fill such as the NPDES permits. The depth of soil sampling is not important as to physical number, but rather that it is native uncontaminated soils or relative

distance to potential contaminants. A direct relation of soil sample depth would serve no purpose in comparing sites.

When trying to prove the presence of a regulated substance is due to background conditions at the site, why is the statement made that “The ideal background reference area is a location that only differs from the donor site by the absence of the source that released the regulated substance?” Assuming the regulated substance is due to background, there would be no presence of a release at the donor site, unless of another substance. This statement is unnecessary. (14, 15, 22, 29, 30)

**Response:** The language in subparagraph G.3.a.iii has been revised in the final policy to specify that a background reference area chosen for the purposes of establishing background at the receiving site, as part of the equivalent site evaluation, should be compared to the area where donor fill is proposed to be placed at the receiving site.

The statement referring to similarity between the background reference area and the donor site assumed that the analysis and any identified exceedance would only have been performed if the environmental due diligence indicated evidence of a release. The sentence has been revised to read, “The ideal background reference area is a location that only differs from the donor site by the absence of the source that released the regulated substance, if such a source exists.”

- 149. Comment:** Appendix A Section G 3.b is where there should be discussion on comparing the donor site background determination levels with the receiving site background levels. The overly restrictive language in the previous parts should be removed and comparisons of the levels should be evaluated. (14)

**Response:** DEP agrees with the commentator. Subparagraph G.3.b is where the procedure for comparing the concentration of regulated substances that exceed a CFCL in the donor fill to the background concentration of the same regulated substances observed at the receiving site is located.

- 150. Comment:** If an equivalency evaluation has determined the levels of parameters on the receiving site do not exceed the clean fill limits then a background determination of a site would be pointless. There will be issues as the clean fill limits change every three years. There is no language that states that if a site equivalency evaluation (receiving site background) demonstrates levels below the clean fill limits, that the clean fill limits are still applicable. This is important with the changing numbers. (14)

**Response:** A background determination or an equivalent site evaluation is not necessary for concentrations of regulated substances in donor fill that are below CFCLs. A person intending to use fill at a receiving site should conduct the equivalent site evaluation when it is indicated that the potential donor fill has been subject to a release, and the analytical testing performed to confirm that the potential donor fill meets the CFCLs shows that a CFCL has been exceeded. If the exceedance is believed to be unassociated with the suspected release, a person has the option to perform a background determination to demonstrate that the exceedance is part of the background at the donor site. Once a successful background determination is conducted, the equivalent site evaluation is also performed to preclude elevated or new contamination from being deposited at the receiving site. If the same regulated substances identified in the potential donor fill that exceed the CFCLs are – through the evaluation of data procedure described in the

equivalent site evaluation – determined to be below CFCLs in the background reference area of the receiving site, then donor fill could not be used at that receiving site. Please note that only the substances detected in the donor fill that exceed a CFCL or RFCL are compared in the equivalent site evaluation. Additionally, the data evaluation procedure in the equivalent site evaluation allows for the statistical treatment of data, meaning that some sample results from the donor fill may exceed some of the background sample results from the receiving site, provided that one of the following criteria, as described in subparagraphs G.3.b.i and ii of Appendix A, are satisfied:

- a. The highest measurement from the donor fill is not greater than the highest measurement from the receiving site.
- b. If an alternate statistical approach is used that either 1) maintains the false-positive rate for a set of data at or below 0.05 for non-parametric and parametric methods, or 2) maintains the censoring level for each non-detect result as the assigned value randomly generated that is between zero and the primary quantitation limit for parametric statistical methods.

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Allegheny, Beaver, Cambria, Fayette, Greene, Somerset, Washington, Westmoreland

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### *Northwest Regional Office*

Armstrong, Butler, Clarion, Crawford, Elk, Erie, Forest, Indiana, Jefferson, Lawrence, McKean, Mercer, Venango, Warren

230 Chestnut Street  
Meadville, PA 16335-3481  
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