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RE: Former Cibro Petroleum Terminal Site
Brownfield Cleanup Agreement W1-1075-05-09
Request for Formal Dispute Resolution

Dear Counselors:

I am in receipt of the Report and Recommendation of Administrative Law Judge ("ALJ") Susan J. DuBois in the above referenced matter. The Report, a copy of which is enclosed, addresses the request of Applicant Posillico Development Company at Harbor Island, Inc. ("Applicant") dated January 20, 2009, for formal dispute resolution under the provisions of the above referenced Brownfield Cleanup Agreement ("BCA").

The ALJ makes various recommendations for the resolution of the dispute between New York State Department of Environmental Conservation (Department) staff and the Applicant concerning the Applicant's May 2008 Final Remedial Investigation Report.

Final Determinations relative to the Dispute

I have considered the Report, the Applicant's request, including its attachments, Department staff's response, and applicable statutes and regulations. Based upon my review of the record, for the reasons stated in the Report and the following additional reasons, the following determinations are made relative to the instant dispute:

(a) The Applicant shall submit a Supplemental Remedial Investigation Work Plan ("SRIWP") within 30 calendar days of the date of this decision. Such SRIWP shall be submitted in accordance with Department Staff's position as stated in the four paragraphs that appear in Mr. Acampora's November 26, 2008 letter.

(b) The SRIWP may include an initial phase, as outlined in numbered paragraph (1) of Mr. Acampora's December 31, 2008 letter. However, such SRIWP shall provide for the additional phases necessary to complete the remedial investigation.

(c) The SRIWP shall provide for the identification of 30 semi-volatile organic compound (SVOC) tentatively identified compounds (TICs).

(d) The SRIWP shall provide for the analysis of soil samples, including the eight PAHs identified in Mr. Acampora's December 31, 2008 letter, as compounds for which to specifically test rather than as TICs, unless and until Department Staff determines that specific testing for these compounds is not necessary.

(e) The Soil Cleanup Objective (SCO) from 6 NYCRR 375-6.8(a) (Unrestricted use SCOs) would be used if one exists for the compound in question, and the more stringent of cleanup values found in the guidance documents (TAGM 4046 or Stars) would be used if the table in subdivision 375-6.8(a) does not include an SCO for the compound.

(f) In the event a cleanup value is not contained in 6 NYCRR 375-6.8(a) or either of the guidance documents (TAGM 4046 or Stars); then a soil cleanup objective is to be developed as provided in the Technical Support Document (see 6 NYCRR 375-6.9).

(g) Consistent with the manner in which the SCOs were developed and promulgated, if a cleanup objective is calculated pursuant to 6 NYCRR 375-6.9 and such calculated objective exceeds the maximum value set forth at 6 NYCRR 375-6.9(b)(2), then the maximum values set forth therein shall be used in lieu of the calculated objective(s). Further, to the extent that a compound is identified for which a value cannot be calculated for the Track 1 approach, then the Applicant can either (i) wait until such time as sufficient information is identified to allow an objective to be calculated which satisfies the Track 1 requirements for unrestricted use; (ii) use a default value of .33 ppm (which represents the lowest cleanup value for any of the SVOC compounds promulgated in 6 NYCRR 375-6.8(a); this value is also the contract required quantitation limit (CRQL)); or (iii) elect to propose a cleanup plan in accordance with a Track 4 approach pursuant to 6 NYCRR 375-3.8(e)(4).

(h) The ALJ recommended that Department staff involve a chemist in its review of analytical results from the first phase. Inasmuch as staff routinely involves the Department of Health in the review process, the specific requirement for a chemist to be involved is not necessary and is not included in this determination.

Discussion of Applicant's challenge
as it relates to the Department's authority

Applicant challenges the Department's authority to require a Brownfield Cleanup Program ("BCP") applicant conducting a Track 1 cleanup to develop SCOs" for contaminants not included in the tables of generic SCOs contained in regulation (see 6 NYCRR 375-3.8[e][1][v], referencing 6 NYCRR 375-6.8). Applicant argues that under the BCP Law (Environmental Conservation Law ["ECL"] article 27, title 14), the Department is authorized to establish SCOs for Track 1 sites only by regulation, and not through an Applicant in the BCP. Applicant further contends that requiring it to develop standards for contaminants that the Department has not included in the regulatory tables of SCOs is unreasonable. I disagree with both arguments.

The BCP Law directs that all remedial programs under the BCP "shall be protective of public health and the environment" (ECL 27-1415[1]). The BCP Law further provides the Department with broad authority to create a multi-track approach for the remediation of contamination at sites subject to the BCP (see ECL 27-1415[4]). For sites proposed for Track 1 classification, the remedial program "shall achieve a cleanup level that will allow the site

to be used for any purpose without restriction and without reliance on the long-term employment of institutional or engineering controls, and shall achieve contaminant-specific remedial action objectives for soil which conform with those contained in the generic table of contaminant-specific remedial action objectives for unrestricted use developed pursuant to [ECL 27-1415(6)]" (ECL 27-1415[4]).

As noted by Applicant, the BCP Law directs the Department to develop generic SCOs in regulation (see ECL 27-1415[6]). However, the BCP Law provides that the tables of generic objectives initially developed are subject to on-going review and revision, with up-dates required every five years (see ECL 27-1415[6][c]). Up-dates to the initial tables are to be based upon, among other things, experience under existing State remedial programs (see ECL 27-1415[6][b][v]).

The circumstance that the BCP Law expressly recognizes that applicant-developed site specific SCOs (to modify existing SCOs based upon some limited site-specific parameters) may be used for Track 3 sites (see ECL 27-1415[6][b]), does not necessarily mean that applicant-developed SCOs are not available for Track 1 sites for those contaminants not yet included in the generic SCO tables. Moreover, and most importantly, the circumstance that a particular contaminant has not yet been included in a generic SCO table does not mean that a site containing such contaminants can be approved for treatment under Track 1 without the investigation and remediation of those contaminants. This is especially true given the high cleanup standard established by statute for Track 1 sites. The initial SCO tables contained in the current regulation consist of priority chemicals most commonly identified at contaminated sites (see Matter of Citizens' Envtl. Coalition v New York State Dept. of Envtl. Conservation, 57 AD3d 1279, 1281-1282 [3d Dept 2008]). The fact that a contaminant is not included on the initial SCO tables does not mean that the presence of that contaminant does not pose a threat to public health or the environment, or that a site containing such a contaminant may be allowed to be used for any purpose without restriction and without the use of long-term institutional or engineering controls (see ECL 27-1415[1], [4]).

The Department's practice of imposing the obligation to develop and implement site specific SCOs on an applicant is entirely consistent with the BCP Law. Under the BCP Law, the applicant is obligated to conduct site investigation, and develop and implement remedial work plans, subject to the approval of the Department (see ECL 27-1409[8]). Moreover, the BCP Law imposes the cost of investigation and remediation on the applicant, including those costs incurred by the State (see ECL 27-1409[2]). The regulatory requirement that applicants develop SCOs for contaminants not included in the tables of generic SCOs is entirely consistent with the statutory obligations imposed upon applicant (see 6 NYCRR 375-3.8[e][1][v]).

The site cannot be approved under the Track 1 program until all contaminants at the site, whether listed on the generic tables or not, are investigated and a remedial program developed that will achieve a cleanup level that will allow the site to be used without restriction and without institutional or engineering controls (see ECL 27-1415[4]).

Applicant's other arguments

I have considered the other arguments raised by Applicant, and to the extent not addressed above, find them unpersuasive.

Sincerely,

Dale A. Desnoyers

Dale A. Desnoyers, Director
Division of Environmental Remediation

Enclosure

ec: Louis A. Alexander, Assistant Commissioner
James T. McClymonds, Chief Administrative Law Judge
Susan J. DuBois, Administrative Law Judge

STATE OF NEW YORK : DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of a Remedial Program for Former Cibro Petroleum Terminal Site, Nassau County, under article 27, title 14 of the Environmental Conservation Law by Posillico Development Company at Harbor Island, Inc.	REPORT and RECOMMENDATION Index # W1-1075-05-09 Site # C130153 May 12, 2009

By letter dated January 20, 2009, Posillico Development Company at Harbor Island, Inc. ("Volunteer") requested formal dispute resolution. The request was made pursuant to an April 14, 2006 Brownfield Site Cleanup Agreement ("Agreement") concerning the former Cibro Petroleum Terminal Site located at 7 Washington Avenue, Village of Island Park, Nassau County. The Volunteer's January 20, 2009 correspondence included a written statement describing the issue in dispute, accompanied by copies of correspondence between the Volunteer and the Department of Environmental Conservation Staff ("DEC Staff") and other documentation ("Statement of Position").

In response, DEC Staff submitted its own Statement of Position on February 6, 2009.

Section XIV of the Agreement provides the process for resolution of disputes regarding certain notifications provided by DEC Staff during implementation of the remedial program. The present dispute involves DEC Staff's August 15, 2008 disapproval of the Volunteer's May 2008 Final Remedial Investigation Report ("RIR").

Under this dispute resolution process, the Volunteer may request informal negotiations with DEC Staff in an effort to resolve the dispute. A thirty day period is allowed for the informal negotiations. If those negotiations do not resolve the dispute, the Department's position is binding unless the Volunteer files with the DEC Office of Hearings and Mediation Services (OHMS) a request for formal dispute resolution. In the latter process, both parties submit their Statements of Position. OHMS may conduct meetings, in person or by telephone conference, and request additional information from either party if this would facilitate a resolution of the issues. OHMS then prepares and submits a report and recommendation to the Director of the

DEC Division of Environmental Remediation who issues a final decision resolving the dispute.[1]

The informal dispute resolution process concerning the Volunteer's May 2008 RIR involved several issues, all but one of which were resolved between the parties prior to the Volunteer's request for formal dispute resolution. The parties agreed to several extensions of the thirty day informal negotiation period. The September 30, 2008 letter from the Volunteer's consultant to DEC Staff states that certain issues that were resolved and that require supplemental investigation would be addressed in further detail in a Supplemental Remedial Investigation Work Plan ("SRIWP") or in the beginning of the Remedial Action Work Plan ("RAWP"). The one issue that remains in dispute is referred to in the parties' correspondence as "Laboratory Analysis/Evaluation of Tentatively Identified Compounds (TICs)."[2]

DEC Staff is represented in this dispute by Alali M. Tamuno, Esq., of the DEC's White Plains office. The Volunteer is represented in this dispute by Linda R. Shaw, Esq., of Knauf Shaw, LLP, Rochester.

On February 17, 2009, the dispute was assigned to Administrative Law Judge (ALJ) Susan J. DuBois, the undersigned, to review the parties' Statements of Positions. On February 25, 2009, I telephoned Ms. Tamuno and Ms. Shaw about scheduling a conference call to clarify what specific questions are in dispute

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[1] This dispute resolution process pre-dates the process established in the amendment of part 375 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR part 375") that became effective on December 14, 2006.

[2] The DEC's draft Technical Guidance for Site Investigation and Remediation, designated as "DER-10," defines "Tentatively Identified Compound" as: "a non-targeted compound detected in a sample using a GC/MS [gas chromatography/mass spectrometry] analytical method which has been tentatively identified using a mass spectral library search. An estimated concentration of the TIC is also determined." DER-10 defines "Targeted compound" as: "a hazardous substance, hazardous waste, or pollutant for which a specific analytical method is designed to detect that potential contaminant both qualitatively and quantitatively." (DER-10, at 32-33).

on the remaining issue, and to ask whether additional documents[3] exist that might need to be considered although they were not included in the statements of position.

A conference phone call took place on March 3, 2009. During the call, both Ms. Shaw and Ms. Tamuno stated they would need to ask the technical staff from their respective parties to respond to some of the questions I posed. Ms. Tamuno proposed having a second conference call with the technical staff involved. I went through the questions I had during the first conference call so that the representatives of the parties would be able to discuss these with their technical personnel prior to the second conference call. Later on March 3, I sent to counsel for the parties a summary of the questions; I sent them a corrected version of the summary on March 9, 2009.

As of the March 3, 2009 conference call, it appeared that the dispute concerned the following: how to determine the endpoint values to which test results will be compared, particularly for compounds that do not have a specific soil cleanup objective ("SCO") in any of several DEC documents and for which toxicity data is not available; whether test methods are available for testing for tentatively identifying semi-volatile organic compounds ("SVOCs") including 8 polycyclic aromatic hydrocarbons ("PAHs"); whether the testing must identify 30 SVOC TICs or 20 SVOC TICs; and whether testing for the 8 PAHs listed in a December 31, 2008 letter from DEC Staff are in addition to the 30 (or 20) SVOC TICS or are part of the 30 (or 20) SVOC TICs.

The second conference call took place on March 19, 2009. About an hour prior to the time scheduled for the call, Ms. Shaw transmitted by e-mail two lists of chemicals and soil cleanup objectives.

The following persons participated in the March 19, 2009 conference call on behalf of the parties. On behalf of the Volunteer: Ms. Shaw; Michael Posillico and Ellis Koch (of the Volunteer); and David Glass and Jennifer Miranda (of TRC Engineers, Inc.). On behalf of DEC Staff: Ms. Tamuno; Chittibabu Vasudevan, James Harrington and Guy Bobersky (of the DEC Division of Environmental Remediation, Albany); and Walter Parish, Robert Stewart and Nick Acampora (of the DEC Division of Environmental

[3] Written descriptions of test methods, and a letter the existence of which was suggested by a date in a footnote in the Volunteer's Statement of Position.

Remediation, Stony Brook). In addition, Susan J. DuBois, of the DEC OHMS, participated in the conference call.

At the start of the conference call, DEC Staff objected to consideration of the lists that Ms. Shaw had sent by e-mail, on the basis that the lists had not been submitted before and that DEC Staff had not had time to review them. Based upon statements by Ms. Shaw and Mr. Posillico, it was unclear to me whether the lists represented the Volunteer's summary of what it thought it had been asked to do by DEC Staff, or the Volunteer's position concerning the soil cleanup objectives that should be used, or a combination of both. I stated that trying to discuss the lists, as opposed to the questions from the earlier conference call, would probably create confusion rather than reduce it. I also stated that if both parties wished to discuss the lists further after the conference call, and to postpone completion of the present report by a week or two to see if the lists resolve the dispute, the parties should notify me that they wished to proceed in this way. During the conference call, DEC Staff stated that the informal dispute resolution process had already taken place for an extended period and that further discussion would not be productive. As of the date of this report, the parties have not notified me that they are engaging in further discussion, so I am transmitting the report to the Director of the Division of Environmental Remediation.

Background

The following summary is taken from DEC Staff's Statement of Position:

> "In March 2005, the Volunteer submitted a Brownfield Cleanup Program ('BCP') application relative to an approximately 11.6 acre property located at 7 Washington Avenue, Village of Island Park, Nassau County, New York and identified on the Nassau County Tax Map as Section 43, Block 381, Lots 35, 36, 102, 314, 328 (the 'Site'). The Site is the location of the former Cibro Oil Terminal site facility. A BCP Agreement relative to the Site, Index No. W1-1075-05-09, was executed by the Department and the Volunteer, dated April 14, 2006 (the 'Agreement'). The Agreement included an intended use of the Site as 'Industrial'...
>
> "In October 2006, the Department conditionally approved a Pilot Test of the proposed remedial system to address petroleum contamination on the Site pursuant to the Agreement...

> "The Site, the location of a former major oil storage facility ('MOSF') known as the Cibro Oil Terminal ('Cibro Terminal'), is located in an urban setting characterized by dense residential, commercial and light industrial development. The Site is situated along the sensitive shoreline of the Wreck Lead Channel/Reynolds Channel and is bounded by a residential neighborhood to the north and west. The marine water body is utilized by both commercial and recreational boating traffic and fishing by area residents. The Site is approximately 7 feet above mean sea level and occupies approximately 11.6 acres at the southern end of 'Harbor Isle.' Groundwater is approximately 4 to 6 feet below ground surface (ft bgs)." (DEC Statement of Position, at 1 and 2).

DEC Staff described efforts that another company (Blue Island Development, LLC, "Blue Island") made in 2000 and 2001 to remediate and re-develop the site for residential use. DEC Staff stated that, on information and belief, Blue Island is an entity related to the Volunteer. Blue Island withdrew its request to re-zone the site from industrial to residential in March 2004; in June 2004, Blue Island advised DEC Staff that Blue Island would change its proposal and submit a new Remedial Action Work Plan.

According to DEC Staff's Statement of Position, "[i]n March of 2005, the Volunteer [not Blue Island] submitted a BCP application, again indicating the intended Site use to be industrial."

As noted above, the Agreement is dated April 14, 2006.[4] The Agreement, at page 1, states that the current use of the property is industrial, for storage of construction equipment and material, and the intended use of the site remains industrial. In October 2006, DEC Staff conditionally approved the Pilot Test Work Plan.

The Volunteer has changed its redevelopment plans and now wishes to redevelop the Site for residential use, under Track 1 (Unrestricted Use) of 6 NYCRR 375-3.8(e). DEC Staff stated that the Volunteer first notified DEC Staff concerning this change of the intended use in August 2007, prior to submitting the results of the Pilot Test (DEC Statement of Position, at 1). DEC Staff also stated, upon information and belief, that the Volunteer's application to the municipality for re-zoning the site from

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[4] The Agreement is included as Exhibit ("Ex.") A of DEC Staff's Statement of Position.

industrial to residential was approved in early 2008. The Agreement between DEC and the Volunteer apparently still identifies the future use as industrial, based upon Ms. Shaw's September 30, 2008 letter to Ms. Tamuno that mentions amending the Agreement to reflect the change of future use from industrial to residential.

According to DEC Staff's Statement of Position, the proposed cleanup remedy includes removal of all contaminated soils, stockpiling the material on-site, and mixing it thoroughly with a chemical agent to reduce or eliminate concentrations of petroleum-related constituents of concern ("COCs"). "The treated material, pending review of post-treatment sampling, would then be re-used on-site as backfill material." (DEC Statement of Position, at 6).

The dispute to be resolved in the present dispute resolution process concerns the Final Remediation Investigation Report ("RIR") submitted by the Volunteer in May 2008 and DEC's disapproval of the RIR in August 2008. DEC Staff's disapproval letter, dated August 15, 2008, identified numerous reasons for disapproval. All but one of these issues were resolved during the informal dispute resolution process that took place between August 29, 2008 and January 20, 2009. The substance of the remaining dispute, concerning "Laboratory Analysis/Evaluation of Tentatively Identified Compounds (TICs)" was stated in differing ways in correspondence during the informal negotiation. It appears to have evolved from its initial statement in the August 15, 2008 disapproval letter. The outcomes each party is seeking also appear to have changed somewhat during the informal dispute resolution, and certain aspects of what each party is seeking appear inconsistent within that party's own correspondence and statements in the conference calls. The dispute involves what sources of authority to use in arriving at soil cleanup objectives, and the level of detail to be used in testing for SVOCs.

The paragraphs of DEC Staff's August 15, 2008 letter that are in dispute are paragraphs A-5 and A-6, which read as follows:

> "5. Previous sampling events did not include Tentatively Identified Compounds (TICs). Therefore, in order to properly evaluate the site, all future sampling must include TICs utilizing EPA Methods 8260 + 10 TICs, 8270 + 20 TICs, and TAL metals (23 metals on EPA's Target Analyte List) using Category B deliverables. The turbidity of the samples should be less than 50 NTUs so that the metals results are not influenced by turbidity. MW-1, MW-2, MW-3R, MW-5, W-8

and W-11 all must be re-sampled in accordance with this requirement.

"6. Review of the Pilot Test results indicates that Total Petroleum Hydrocarbon analysis (TPH) was used as the primary determining factor of the total amount of petroleum in the soils for the 3 Pilot Tests. However, the feedstock for pilot test was supposed to contain approximately 1000 ppm[5] TPH. For the Biopile test, it contained 900 ppm TPH and only 12.4 ppm of SVOCs. (This data strongly suggests the presence of a large amount of TICs in the feedstock.) After the pilot test, the TPH reading was 3,168 ppm. This data indicates first that the feedstock was never properly characterized for the amount of contaminants in the soils and secondly that the treatment had limited effects on the removal of the petroleum related contamination thereby compromising the integrity of the test and the results.

"The same feedstock was used for Land Farming.[6] Since this feedstock soil was not properly characterized for petroleum content, this pilot test is also considered to be compromised. The SVOCs detected after the first treatment were higher (12.4 ppm before treatment and 25.6 ppm after treatment) further indicating that the soils were never properly characterized. This data also suggests that the treatment was not effective.

"As a result, the Department has concerns on the validity of the chosen remedial option of ex-situ oxidation. In fact, there was little change in the TPH concentrations in the Phase 3 results in the post treatment samples. It is unknown whether the treatment was capable of addressing the heavier SVOCs consisting mostly of TICs." (August 15, 2008 letter, at 2).

On August 29, 2008, the Volunteer provided responses to the comments in DEC Staff's August 15, 2008 letter. With regard to paragraphs A-5 and A-6, the Volunteer asserted that TICs are not required to be analyzed in DER-10 (the DEC draft Technical

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[5] Parts per million.

[6] This term was not described in the documents or discussion related to the present dispute, but appears to be a treatment method tested in the Pilot Tests.

Guidance for Site Investigation and Remediation).[7] The Volunteer also asserted that there are no standards for TICs. The Volunteer stated that TICs were, however, analyzed during recent work and that once the Volunteer received the full TIC data its technical team would analyze it to determine whether the information enhances the evaluation of the pilot test results.

The Volunteer also disagreed with DEC Staff's interpretation of the pilot test results, although the Volunteer acknowledged it had observed the higher TPH concentrations noted by DEC Staff. The Volunteer stated that TPH was used "historically" in the spills program as the general indicator of petroleum contamination but the Brownfields Cleanup Program has specific petroleum compounds that must be tested and compared to the SCOs, and that TPH is not included in this comparison. The Volunteer stated that testing for the specific petroleum contaminants[8] had been done as part of the pilot study, and that this testing demonstrated that the treatment technologies were effective in achieving Track 1 SCO levels for compounds specified in the list of SCOs.

In later correspondence sent to DEC Staff on September 30, 2008 and October 10, 2008, the Volunteer's consultant stated that the TPH data is not a relevant or applicable tool to measure Track 1 SCOs, and suggested that the TICs may not be related to historical use of the Site but instead may represent naturally occurring background chemicals such as plant-derived organic matter in soil. The consultant also stated that the laboratory had been unable to specifically identify most of the tentatively identified compounds and, as a result, no toxicological information could be developed to serve as a basis for using the TICs for remedial action objectives.

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[7] The assertion about analysis of TICs not being required does not appear to be consistent with statements in DER-10 (see, DER-10 excerpt, Appendix D of Volunteer's Statement of Position, at 29-30 and definitions at 32-33).

[8] The Volunteer's August 29, 2008 letter refers to this testing as "a full 8260 and 8270 scan," apparently a reference to the U.S. Environmental Protection Agency's ("EPA's") Method 8260 and Method 8270 or 8270D, contained in the EPA publication numbered SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," http://www.epa.gov/osw/hazard/testmethods/sw846/online/index.htm.

Additional correspondence (including e-mail) and discussion took place between the parties in the fall and early winter of 2008, which included outlines describing how to test for and evaluate the TICs in this cleanup, as discussed further below.

With regard to evaluating soil test results in the cleanup for this Site, the parties referred to several DEC guidance documents and one regulation as sources of SCOs and similar cleanup levels, and as authority on how to calculate SCOs for compounds that are not specifically listed in the tables for such values. The guidance and regulations cited are as follows, in chronological order:

- - Spills Technology and Remediation Series #1 (“STARS #1"), Petroleum-Contaminated Soil Guidance Policy, last revised August 1992.

- - Technical and Administrative Guidance Memorandum 4046 (“TAGM 4046"), Determination of Soil Cleanup Objectives and Cleanup Levels, January 24, 1994.

- - Draft DER-10, Technical Guidance for Site Investigation and Remediation (“DER-10"), December 25, 2002. There is no indication that a final version of DER-10 has been issued by DEC. The December 2002 draft is on the DEC web site, and an excerpt from that draft was included as part of the Volunteer’s Statement of Position.

- - Technical Support Document, Development of Soil Cleanup Objectives, New York State Brownfield Cleanup Program, September 2006.

- - 6 NYCRR part 375, Environmental Remediation Programs, effective December 14, 2006. The parties primarily referred to subpart 375-6, Remedial Program Soil Cleanup Objectives.

The Volunteer’s Statement of Position also referred to several memoranda signed in 2000 or 2001 by the then-Director of the Division of Environmental Remediation, and to an undated “Frequently Asked Questions” document from the DEC web site.

Analysis of samples

Number of SVOC TICs

The procedure to be used for testing for VOCs, as opposed to SVOCs, is not in dispute between the parties. Both parties’

documents state that this testing should be done using EPA Method 8260 + 10 TICs.

With regard to SVOCs, the parties' correspondence refers to "Method 8270+20" and "Method 8270 + 20 TICs." There apparently is not an EPA method called "Method 8270+20," but instead this term and the similar one are used to designate testing by means of Method 8270[9] and reporting results for 20 TICs in addition to results for the targeted compounds tested for using that method. A description of the concept is found in the "Spill Response & Remediation FAQ" document on the DEC website,[10] attached as Exhibit E of the Volunteer's statement of position. That document states, with regard to analytical methods for testing for weathered fuels or certain other materials in soils, "Soil testing for the suspected presence of these compounds should utilize Method 8260 + 10 Tentatively Identified Compounds (TICs) for the volatiles and Method 8270 + 20 TICs for the semi volatiles. The laboratory will report the 10 highest (for volatiles) and the 20 highest (for semi volatiles) tentatively identified compounds as well as their estimated levels contained in the sample."

As of the end of the informal negotiations, in November and December 2008, DEC Staff's position regarding the remaining dispute included the following with regard to sample analysis:

> "After consideration and review of all pertinent guidance and regulatory documents, the Department has determined that the Volunteer must analyze all soil and waste samples using Method 8270 to identify as many TICs as practicable/possible with a minimum total of 30 TICs as recommended in DER-10." (November 26 and December 31, 2008 letters from Nick Acampora.)

Mr. Acampora's December 31, 2008 letter also stated, in the paragraph numbered (2), that at least 30 SVOC TICs must be identified. DEC Staff's Statement of Position, at 7, states that DEC Staff expected the Volunteer to follow the protocols specified in DER-10 but to expand the sampling to include up to 30 TICs.

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[9] Although the parties did not provide clarification regarding this name during either conference call, "Method 8270D" in the EPA's list of methods is probably the current version of Method 8270.

[10] http://www.dec.ny.gov/chemical/8692.html

The Volunteer's position, near the end of the informal negotiations, was that it would "use Method 8270+20 to identify the broadest list of SVOCs, and Method 8260+10 for the VOCs" (December 17, 2008 e-mail from Ellis Koch, part of Appendix A of the Volunteer's Statement of Position). The text of the Volunteer's statement of position paraphrased this proposal as "conduct a supplemental investigation utilizing Method 8270+20 to identify up to 20 SVOC TICs, and Method 8260+10 to identify up to 10 VOC TICs" (Statement of Position, at 3).

DER-10 recommends conducting an analysis of "Target Compound List plus 30" and certain other testing when contaminants in an area are unknown or not well documented, although a limited contaminant list may be used subject to DER's approval (DER-10, at 29). "Target compound list plus 30" is defined as the list of organic compounds designated for analysis as contained in the version of EPA's "Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration"[11] in effect on the date of the analysis, and up to 30 non-targeted organic compounds. A "Target Compound List+30 scan" is described as "the analysis of a sample for Target Compound List compounds and up to 10 non-targeted volatile organic compounds and up to 20 non-targeted semivolatile compounds using GC/MS analytical methods." (DER-10, at 32).

DEC's "Frequently Asked Questions" document concerning spill response and remediation makes reference to using Method 8270 + 20 TICs for semivolatiles (FAQ document, Question 7).

One question in the present dispute is whether the Volunteer will need to report 20 SVOC TICs or 30 SVOC TICs. A secondary question is whether this number is a fixed number, "up to" that number, or a minimum number.

The parties' correspondence is ambiguous regarding how many SVOC TICs to report, and DEC Staff's position appears to have changed (from 20 to 30 SVOC TICs). In the parties' correspondence, the association of a method number with a number for how many TICs to include can be interpreted as identifying

[11] No sections from the Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration ("Contract Laboratory Statement of Work") were provided with the parties' Statements of Position. The document is on the EPA web site at www.epa.gov/superfund/programs/clp/som1.htm.

whether the reference is to VOC TICs, or SVOC TICs, or TICs in general. Thus, the reference in Mr. Acampora's December 31, 2008 letter to "using Method 8270 to identify as many TICs as practicable/possible with a minimum total of 30 TICs" can be interpreted as referring to 30 SVOC TICs. The remainder of that sentence, however, reads "as recommended in DER-10," which sounded like a reference to 30 TICs total, 10 of which would be VOCs and 20 of which would be SVOCs.

During the second conference call, DEC Staff stated that the Volunteer should report 30 SVOC TICs. DEC Staff's Statement of Position, at 6, notes that the Site is mostly contaminated by aged fuel oils #2, #4, and #6, and the standard analyte list under Method 8270 for SVOCs will only detect a small fraction of the petroleum related compounds present at the Site. The Statement of Position (at 6) goes on to state:

> "Most of the contaminant mass is SVOCs that are detected as tentatively identified compounds (TICs) under Method 8270. It should be noted that there may be hundreds of TICs present in some areas of the Site. Earlier sampling only involved the reporting of 10 VOC TICs and 20 SVOC TICs thereby only detecting a faction [*sic,* probably fraction] of the TICs actually present in the most contaminated areas. It is noteworthy that much of the soils are grossly contaminated by petroleum, as evidenced by the odors, oil staining of the soils and the TPH/DRO [total petroleum hydrocarbons/diesel range organics] results. The typical analyte list of compounds that are used for most petroleum sites with fresher releases of petroleum have limited use at this Site. The contaminant mass is mostly contained in the TICs."

DEC Staff's August 15, 2008 comments were written at a time when DEC Staff did not have TIC data from the Volunteer.[12] DEC Staff's Statement of Position was written after additional discussion and correspondence between the parties.

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[12] See, DEC Staff's August 15, 2008 letter, comment A-5; attachment to Ms. Shaw's August 29, 2008 letter, response to Comment A-5, stating that TICs were analyzed during recent work and that when the full TIC data is received it will be analyzed with regard to the pilot test results; October 10, 2008 letter from the Volunteer's consultant; and DEC Staff's October 20, 2008 letter, at 1 - 2, regarding review of the October 10, 2008 letter and data.

Further reasons cited by DEC Staff for expanding the testing to 30 SVOC TICs include the unique and sensitive nature of the site, the relatively shallow depth to groundwater, the potential for continued migration of contaminants into the marine environment and the intended residential use of the site (Statement of Position, at 7). In addition, Mr. Harrington stated during the second conference call that toxicity data might not exist for all of the SVOC TICs, and that this supported tentatively identifying a larger number of compounds because it would be preferable to have SCOs based upon toxicity information.

Comment 6 of DEC Staff's August 15, 2008 letter stated that, based on the pilot test, it is unclear whether the chosen remedial option is capable of addressing the heavier SVOCs, and that the contaminants in the feedstock for the pilot test were not properly characterized. The Volunteer's consultant responded that TPH (the data that was apparently used for at least the initial evaluation of the pilot tests) is not relevant to measure compliance with Part 375 SCOs, and that the objective of a Part 375 remedial action will be removal of grossly contaminated media and removal of contaminants in soil at concentrations above Track 1 SCOs (September 30, 2008 letter from David S. Glass, P.E. to Mr. Acampora, at 2 - 3).

DEC Staff has provided reason to believe that much of the contamination at the site may be compounds for which 6 NYCRR part 375 does not list SCOs. Adequate testing for SVOCs will be important in determining whether the Site has been remediated.

The Volunteer's objection to using 30 SVOC TICs is based upon the use of 20 TICs in the scan described in DER-10 and in the discussion in section 7 of the "Frequently Asked Questions" document. DEC Staff has, however, provided reasons why the ordinary procedure outlined in those two guidance documents should be expanded for this particular cleanup.

In the second conference call, the parties did not address whether the number of SVOC TICs should be stated in terms of a fixed number, "up to" that number, or a minimum number. I had stated this question in my March 3, 2009 summary of the first conference call. It is unclear whether this is even in dispute between the parties or is a variation that I noticed in reviewing the parties' papers. It may be something that is clarified in the test methods or is standard practice in brownfield work. This question is referred to the Director of the Division of Environmental Remediation, to clarify if he believes that is necessary.

Level of detail in identifying and quantifying TICs

A tentatively identified compound ("TIC"), as described in DER-10, is a non-targeted compound detected in a sample using a gas chromatography/mass spectrometry ("GC/MS") analytical method and tentatively identified using a mass spectral library search. An estimated concentration of the TIC is also determined (DER-10, at 33). Part of the present dispute involves how much effort the Volunteer should expend in order to identify TICs as specific compounds, in order to then identify SCOs for these compounds.

Appendix G of the Volunteer's Statement of Position (a December 19, 2008 letter to the Volunteer's consultant from TestAmerica, an environmental testing laboratory), EPA Method 8270D, and the EPA's Contract Laboratory Statement of Work include some discussion of identifying TICs. The spectra are compared with known spectra of specific compounds. According to the letter submitted by the Volunteer, a TIC can be identified as one or more specific compounds if the spectral match is greater than 85%. In that event, the next step would be to test further using standards of the compound or compounds. The letter also states that TICs may be classified as unknown if the spectra do not match any apparent class of compounds, or may be classified as an unknown compound of a certain class.

The Volunteer questioned how it could develop SCOs for TICs that it can only identify at a less specific level than by a name of a compound (for example, "unknown," "unknown PAH," "Un. cycloalkane," as opposed to a specific compound name such as naphthalene) following a library search. In the second conference call, Mr. Harrington stated that DEC Staff recognizes that the Volunteer might not be able to positively identify some of the TICs. Mr. Harrington stated, however, that if a library search indicates that a TIC appears to be a specific compound, the Volunteer should conduct further testing using a standard of that compound and review whether toxicity information is available for a compound identified in this manner.

The representatives of the Volunteer asked what they would need to do if the results of testing produced TICs that were only identified in a very general way, and cited a list that was attached with Mr. Koch's December 17, 2008 e-mail as an actual example of the results they had obtained even after a library search. The discussion in the second conference call was inconclusive and Mr. Vasudevan stated that such details could be worked out between the parties' technical personnel when negotiating the work plan. The Volunteer objected to committing money to the work without a definite answer on whether it would

need to do more than a library search. The Volunteer also argued that DEC Staff is requiring more detailed analysis than DEC's regulations or guidance specify, and more work than DEC Staff requires of other brownfield cleanups.

Attachment 1 of the October 10, 2008 letter from the Volunteer's consultant stated that no specific TIC compounds other than toluene were identified in sampling at the Site (apparently samples from the pilot test, taken during 2006 and 2007). The attachment stated that other TICs were only identified as "unknown acid," "unknown aromatic," "unknown branched alkane" and similar terms, and therefore were unknown chemicals for which a cleanup objective could not be applied. The Volunteer also cited the list attached with Mr. Koch's December 17, 2008 e-mail (described in the e-mail as a "template" for comparing soil data to SCOs) as being based on a test result that left many TICs only generally identified.

The "template" consists of a list of 16 specific SVOC compounds, with concentrations in a column labeled "10/24/08 untreated" and a second column labeled "SCO (Track 1 or TAGM 4046)." The list of chemicals in the template, however, does not contain any indication of the test method used in doing the test, nor what compounds were the target compounds. Only 16 compounds are listed by name, and the remainder of the rows are listed as "Un. Branched Alkane" and similar terms.[13] The specific compounds are a subset of the SVOC compounds for which 6 NYCRR 375-6.8(a) lists SCOs, but that Part 375 list includes five additional compounds that are not listed specifically in the template's list (even to the extent of reporting that these compounds were not detected in the sample). The template's list also does not include the names of additional compounds for which TAGM 4046 identifies SCOs. Although the e-mail describes the template as having been "prepared using the data from a sample of untreated feedstock taken during the pilot test," the column heading for the data contains a date that is after the pilot test concluded and also after the Volunteer provided pilot test data to DEC Staff on October 10, 2008. To the extent that the template is meant to suggest that only these 16 compounds could be specifically identified after testing for an appropriate group of target compounds with Method 8270 and a library search, it is not persuasive. For similar reasons, the information in the October 10, 2008 correspondence also does not support concluding

[13] Based upon the terms used in Volunteer's Exhibit G, "Un." probably stands for "unknown."

that very few or no TICs at the site could be identified by means of a library search.

DER-10 states:

> "(j) If tentatively identified compounds or unknown compounds are detected at concentrations in excess of the applicable SCG [standards, criteria and guidance],[14] they should be addressed in either of two ways listed below. If a contaminant specific SCG does not exist for tentatively identified compounds and for unknown compounds, the generic SCG (class of contaminant, e.g., semi volatile compounds) should be used.
>
> "1. If the area will be remediated and it is likely that concentration of the tentatively identified compounds/unknown compounds will be reduced by the remediation, the tentatively identified compounds/unknown compounds should be analyzed in post remediation samples to document that they no longer exceed the applicable SCG.
>
> "2. An attempt should be made to positively identify and accurately quantify the tentatively identified compounds/unknown compounds using an analytical method consistent with this section so that a remediation standard can be developed." (DER-10, at 29-30).

This discussion in DER-10 supports DEC Staff's position that the Volunteer should go beyond reporting the results of a library search in connection with identifying, quantifying and setting SCOs for TICs at the Site. This discussion, however, is stated in terms of making an "attempt" to do this, which appears to recognize, as Mr. Harrington stated, that it may not be possible to positively identify all of the SVOC TICs.

Mr. Acampora's December 31, 2008 letter, in the paragraph numbered (1), recommended that the Volunteer's work plan take a "phased approach" using preliminary samples "to identify the most thorough list of COCs [constituents of concern] and TICs." The letter stated that after DEC Staff's review of the data, appropriate methods could be developed for use in subsequent sampling. The letter suggests analyzing samples from three test pits to be installed in the areas previously identified as having the highest concentrations of COCs and TICs.

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[14] This acronym is defined on page 17 of DER-10.

This sampling is less extensive than the work that would be involved even with the remainder of the Supplemental Remedial Investigation Work Plan (see, Mr. Glass's September 30, 2008 letter), much less the sampling and analysis that could be expected as part of the overall remediation of the Site. It would potentially give the Volunteer an answer to questions about what it would need to do in testing for SVOCs, identifying SVOC TICs and developing SCOs. It could give both parties data to work with, in answering these questions, that will have been obtained for the purpose of answering these questions.[15] Proceeding in this manner could give the Volunteer some clarity before deciding whether to proceed further with a cleanup under Track 1 and for residential development, or instead to remediate the Site for industrial use.

The Volunteer did not object to this phased approach, although Mr. Posillico stated in the second conference call that he wanted the list resolved as the starting point (presumably the list of SVOC chemicals to test for directly, because the list of SVOC TICs would not be known until the testing in the initial phase is done). It should not be a problem for DEC Staff and the Volunteer to confirm a list of the SVOC target compounds for which to test in this initial phase, plus the eight PAHs that DEC Staff has already identified, plus the requirement to identify 30 SVOC TICs. Once the data for the SVOC TICs is available, the extent to which they could be positively identified, accurately quantified and associated with toxicity information could be determined.

If this approach is followed, and once chemistry data from the three test pits is available, I recommend that DEC Staff involve a chemist directly in the discussions of how definitely to identify the TICs.[16]

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[15] The SVOC TIC information from the pilot test appears not to have been a major focus of that testing, because the Volunteer did not even provide it to DEC Staff until after DEC Staff's August 15, 2008 disapproval letter asserted that previous sampling did not include TICs (see, August 15, 2008 letter, comment A-5, and Volunteer's August 29, 2008 response to comment A-5).

[16] None of the persons who participated in the second conference call on behalf of either party identified themselves as being a chemist. Mr. Vasudevan stated that neither he nor Mr. Harrington are chemists. The professions of Mr. Koch and Ms. Miranda were not identified, but the initials "C.P.G." after Mr.

Testing for 8 additional PAHs

The paragraph numbered (2) in Mr. Acampora's December 31, 2008 letter stated that the Volunteer must identify "at least 30 SVOC TICs, 10 VOC TICs and the eight additional PAHs" and it lists eight PAH compounds.[17] This paragraph is in a section of the letter identified as "guidance" offered by DEC Staff for use by the Volunteer in preparing its Supplemental Investigation Work Plan, but is stated as a requirement. It appears to be something DEC Staff would expect to see included in the Supplemental Remedial Investigation Work Plan, if the work plan is to be approved. These compounds did not appear in the earlier correspondence between the parties that was submitted with the Statements of Position, and apparently the eight PAHs were discussed in a teleconference or meeting between the parties. The eight listed PAHs are not compounds for which Part 375 lists an SCO.

During the second conference call, I asked why DEC Staff is seeking to have the Volunteer test for these particular eight PAHs. Mr. Stewart stated that they are among the compounds that DEC Staff would expect to find in fuel oil #4 or #6, and that DEC Staff wants a direct analysis of these compounds rather than reviewing them as TICs.

The correspondence reflects questions regarding whether a laboratory is available that can test for these compounds and what method to use in testing for them, but neither party showed that it is either possible or impossible to test for these compounds. Based on the limited information available in this dispute resolution process, it appears likeliest that these compounds can be tested for although with additional cost and effort on the part of the Volunteer. EPA Method 8100 (in EPA publication SW-846) lists these as compounds that may be determined using that method, although the Volunteer has stated that the method is outdated (see, December 17, 2008 e-mail from

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Koch's name in one of his e-mails suggest that he is a geologist, and Ms. Miranda works for an engineering company and was not identified as a chemist.

[17] The eight PAHs listed in the December 31, 2008 letter are: benzo(j)flouranthene, dibenzo(a,j)acridine, dibenzo(a,e)pyrene, dibenzo(a,i)pyrene, dibenzo(a,h)acridine, 7H-Dibenzo(c,g)carbazole, dibenzo(a,h)pyrene, and 3-Methylcholanthrene.

Mr. Koch to Mr. Acampora). It appears unlikely, however, that no testing capability exists for compounds that DEC Staff would expect to find in two kinds of fuel oil, and for which a test method exists that still appears in EPA's compendium of test methods.

Soil cleanup objectives

Several subjects are in dispute between the parties concerning how to arrive at soil cleanup objectives for the Site. These relate to the sequence in which to use various regulations and guidance documents as sources of SCOs, when to use a cap value instead of a listed or calculated value, and whether to use the SCO cap values from Part 375 or TAGM 4046.

This portion of the dispute was not stated in these terms when the informal negotiations began, but instead the dispute was in terms of evaluating the effectiveness of the proposed remedial method. The position of DEC Staff, as of the November 26 and December 31, 2008 letters, was as follows:

> "All sample results including TICs must then be compared to the Soil Clean-up Objectives ('SCOs') from 6NYCRR Part 375 ('Part 375'), Technical and Administrative Guidance Memorandum ('TAGM') 4046 or Spill Technology And Remediation Series ('STARs') Memorandum #1.
>
> "If a SCO for specific TICs cannot be found in Part 375, TAGM 4046 or STARS, the Volunteer must develop site and contaminant specific SCOs using the method outlined in the TAGM 4046. In order to facilitate the development of the site specific and contaminant specific SCOs, the Volunteer must collect five sub-surface soil samples (above the peat layer, but below four [4'] feet were [*sic*, probably where] practicable) from relatively uncontaminated areas to be analyzed for total organic carbon using EPA Method 415.1.
>
> "The most stringent SCO from Part 375, TAGM 4046, STARS Memo #1 or the calculated contaminant specific concentrations must then be used for endpoint, and pre- and post treatment sampling events."

During the second conference call, DEC Staff stated that the Volunteer should use SCOs from Part 375 even if a lower SCO appears for the same compound in TAGM 4046, because the SCOs in Part 375 represent the most recent science concerning these values. This position is closer to the Volunteer's position than

DEC Staff's position was in late 2008, at which time Mr. Acampora's letter said to use the most stringent SCO. Although not specifically stated in the conference calls or correspondence, it appears likely that DEC Staff would take a similar approach with any compounds for which STARS #1 would produce a lower SCO than the unrestricted use SCO listed in Part 375.

The position of the Volunteer, as of Mr. Koch's December 17, 2008 e-mail and Ms. Shaw's December 24, 2008 letter, was as follows.

> The results of testing for VOCs and SVOCs "will be compared to the standards in the following order:
>
> "1. Part 375 Track 1 Unrestricted Use Standards;
>
> "2. If there are no applicable Part 375 Track 1 Unrestricted Use Standards, then the results will be compared to the TAGM 4046 standards and STARS; [Note: Reference to STARS was inadvertently left out of the December 16th email]
>
> "3. If there are no applicable TAGM or STARS standards, PDC will endeavor to develop a standard *if there is appropriate toxicity data available*. The reason the highlight language is important is because if there is no toxicity data, the methodology in TAGM 4046 to develop SCOs cannot be used.
>
> "4. Finally, if a standard cannot be developed, the 'catch-all' caps in TAGM 4046 and the Part 375 regulations will be used:
>
> "- For SVOCs - 50 PPM cap for individual SVOCs with the sum of all SVOCs+20 not to exceed 500 PPM; and
>
> "- For VOCs - 10 PPM cap for all VOCs+10 pursuant to TAGM 4046 and DER-10; Neither TAGM nor DER-10 have caps for individual VOCs." (December 24, 2008 letter, at 5; emphasis and square bracketed material in original).

The Volunteer's Statement of Position contains a somewhat modified paraphrase of this outline, with additional notes. In the second conference call, Ms. Shaw described one of those notes as a change in position, as discussed below in the section concerning cap values from Part 375 and TAGM 4046.

Although SVOCs were the focus of the dispute about the number of TICs to identify and the level of detail to use in

identifying them, the context in which the above outlines appear in the parties' correspondence suggests that the same conceptual framework would be used for identifying SCOs for VOCs as for SVOCs.

Sequence of sources of SCOs

The parties are now in agreement that, with respect to SVOCs and VOCs detected as target compounds or TICs, the Track 1 unrestricted use standard in Part 375 would be used if the list of such standards includes an SCO for the compound.[18] These standards are listed at 6 NYCRR 375-6.8(a).

The parties are also in agreement that, if Part 375 does not contain an SCO for one of the detected compounds, but TAGM 4046 or STARS #1 does, the SCO from the guidance document would be used.[19]

The parties disagree about how to proceed for compounds that are not listed in any of these three lists. DEC Staff would have the Volunteer "develop site and contaminant specific SCOs using the method outlined in the TAGM 4046." The Volunteer stated it would "endeavor to develop a standard *if there is appropriate toxicological data available*" and argued that the method in TAGM 4046 cannot be used if there is no toxicity data.

The positions in the preceding paragraph are based on the parties' December 24 and 31, 2008 correspondence. In its January 20, 2009 Statement of Position, the Volunteer argued that DEC

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[18] Although 6 NYCRR 375-6.8(a) also includes lists of SCOs for metals and pesticides, chemicals of these kinds were not the focus of the correspondence and discussion in the present dispute.

[19] DEC Staff's November 26 and December 31, 2008 letters stated that the Volunteer should use the most stringent SCO from Part 375, TAGM 4046 and STARS #1. As noted above, DEC Staff is now saying to use the SCO from Part 375 if one exists, and if not, to use the SCO from TAGM 4046 or STARS #1. Based upon DEC Staff's earlier position, if a compound has a guidance value in both of these guidance documents, the more stringent value would be used. The parties' correspondence did not get into how to compare the values in the two guidance documents, other than to the extent this is discussed in three DEC memoranda attached as Exhibit F of the Volunteer's Statement of Position.

does not have the authority to require a volunteer to develop an SCO, and that development of SCOs should not be required of a Volunteer that has demonstrated it could meet all of the Track 1 standards (Statement of Position, at 3 - 5 and endnote ii). DEC Staff's Statement of Position argued that DEC has the authority to require development of SCOs for this cleanup for contaminants for which Part 375 does not specify SCOs, citing both 6 NYCRR 375-3.8(e) and 375-6.9(a)(1). In the conference call, DEC Staff also argued that the Volunteer could be required to use the SCO development method in the September 2006 Technical Support Document for development of SCOs under the Brownfield Cleanup Program.[20]

The dispute to be resolved in the present dispute resolution process, however, involves how to apply TAGM 4046, in the context of a negotiated agreement. Consequently, I will make a recommendation that includes that approach, taking into account the proposals outlined by the parties in November and December 2008 and the related correspondence and discussions, rather than evaluating how the Technical Support Document would be used.

The Volunteer's Statement of Position, at endnotes *ii* and *iv* on page 6, argued that the regulatory provision allowing DEC to require a volunteer to develop SCOs under Track 1 (6 NYCRR 375-3.8(e)(1)(v)) is inconsistent with the brownfields statute (ECL article 27, title 14, particularly 27-1415). These endnotes essentially argue that because the statute requires DEC to include tables of SCOs in the regulations, and because section 27-1415(4) allows a BCP applicant to develop SCOs under Track 3, DEC lacks authority in a Track 1 cleanup to require development of SCOs for chemicals that are not in the tables in section 375-6.8(a) at present. The consequence of this, although not specifically stated by the Volunteer, would be that DEC could only consider the chemicals currently in the tables when evaluating effectiveness of a Track 1 cleanup, even if other toxic chemicals are present at the site.[21]

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[20] The Technical Support Document can be found at http://www.dec.ny.gov/chemical/34189.html

[21] See also, the statement at page 2 - 3 of Mr. Glass's September 30, 2008 letter for Mr. Acampora: "The objectives of a remedial action under 6 NYCRR Subpart 375-3 will be removal of grossly contaminated media and removal of contaminants in soil at concentrations above Track 1 SCOs." "Grossly contaminated media" is defined at 6 NYCRR 375-1.2(u) and includes soils that are so contaminated that the contamination is readily detectable without

The Volunteer's interpretation is too narrow and omits other provisions of ECL section 27-1415. Section 27-1415(4), under "Track 1," states in part, "The remedial program shall achieve a cleanup level that will allow the site to be used for any purpose without restriction and without reliance on the long-term employment of institutional or engineering controls, *and* shall achieve contaminant-specific remedial action objectives for soil which conform with those contained in the generic table of contaminant-specific remedial action objectives for unrestricted use developed pursuant to subdivision six of this section" (emphasis added). The SCOs in the tables are only one part of this provision. In addition, ECL 27-1415(1) provides broader authority than the interpretation stated by the Volunteer. With respect to the Volunteer's argument that requiring a BCP volunteer to develop site-specific SCOs is a delegation of DEC's rulemaking responsibilities and bypasses public input, 6 NYCRR 375-6.9(f)(1) provides that contaminant-specific SCOs developed for contaminants not included in the tables may be used at other sites but will be used as guidance, and shall be considered by DEC for inclusion in the tables during any subsequent reevaluation of the SCOs (see, ECL 27-1415(6)(c) concerning updates of the tables). Development of SCOs as proposed by DEC Staff in this cleanup is not rulemaking.

The procedure in TAGM 4046 for determining soil cleanup objectives identifies several alternative bases for such limits. These may be summarized as follows: (a) human health levels that correspond to certain excess lifetime cancer risks contained in EPA's Health Effects Assessment Summary Tables (HEASTs); (b) human health based levels for systemic toxicants, also involving information from EPA's HEASTs; (c) environmental concentrations which are protective of groundwater/drinking water quality, based on promulgated or proposed New York State standards; (d) background values for contaminants; and (e) detection limits.

TAGM 4046 states that a recommendation on the appropriate cleanup level is based on the criterion that produces the most stringent cleanup level using criteria a, b and c for organic chemicals.[22] Criteria (a) and (b) involve toxicity information. For criterion (c), however, TAGM 4046 sets forth an equation for calculating an allowable soil concentration and a procedure,

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laboratory analysis.

[22] The most stringent of criteria a, b, and d is used for heavy metals. The list of criteria (a) through (e) prints out as criteria (1) through (5) when printed from the DEC web site.

involving some judgement in certain situations, for applying a correction factor to account for mechanisms affecting transport of contaminants to groundwater. The equation involves the water solubility of the compound, the fraction of organic carbon of the natural soil medium, and the appropriate water quality value from Technical and Operational Guidance Series ("TOGS") 1.1.1. TAGM 4046 limits soil cleanup objectives to being less than certain maximum values (10 ppm for total VOCs, 500 ppm for total SVOCs and 50 ppm for individual SVOCs). The Volunteer's correspondence referred to these as the "caps" in TAGM 4046. DEC Staff stated during the conference call that the cap is used as the SCO if the calculated SCO value for the compound exceeds the cap.

During the second conference call, I asked whether DEC Staff considers criterion (c) as part of the "method outlined in TAGM 4046." Mr. Harrington confirmed that this is part of the method outlined in that guidance document.

DEC Staff's position apparently presumes that contaminant specific SCOs can be found in the tables or calculated for all target compounds and specific TICs, and does not include default values to use in the event that SCOs cannot be found or calculated through these means. The Volunteer's position appears to omit the criterion (c) aspect of TAGM 4046 and seeks to use the cap values in the event that SCOs are not listed and toxicity information is not available for use in criteria (a) or (b) of TAGM 4046.

The method outlined in TAGM 4046 includes the criterion (c) calculation, and this should be included with the rest of the TAGM 4046 process in developing SCOs for this cleanup. It is unclear whether TAGM 4046's overall method for determining SCOs would provide calculated values for all the compounds for which the Volunteer would be identifying SCOs, even if the method was used in a manner approved by DEC Staff. In the event that proper use of this method cannot provide SCOs for some of the SVOC TICs, use of the "cap" values in TAGM 4046 appears to be an appropriate last step.

SCO cap values from Part 375 or TAGM 4046

The "cap" values in TAGM 4046 are described in the preceding section of this report. The Technical Support Document for development of soil cleanup objectives under the Brownfield Cleanup Program includes a similar concept but uses a cap of 100 ppm for individual organics when the use of the site is

"Unrestricted," and apparently makes no distinction between SVOCs and VOCs (Technical Support Document, at 332 - 333).

Mr. Koch's December 17, 2008 e-mail included the statement that, "If a standard cannot be developed a cap of 50 PPM will be used for individual SVOCs with the sum of all SVOCs+20 not to exceed 500 PPM; and for VOCs TAGM and DER-10 specify the cap for all VOCs+10 cannot exceed 10 PPM. Neither TAGM nor DER-10 have caps for individual VOCs." The numbers are those from TAGM 4046.

Ms. Shaw's December 24, 2008 letter to Ms. Tamuno requested confirmation of the process outlined in Mr. Koch's e-mail,[23] but described the portion regarding caps as follows:

> "Finally, if a standard cannot be developed, the 'catch-all' caps in TAGM 4046 and the Part 375 regulations will be used:
>
> "- For SVOCs - 50 PPM cap for individual SVOCs with the sum of all SVOCs+20 not to exceed 500 PPM; and
>
> "- For VOCs - 10 PPM cap for all VOCs+10 pursuant to TAGM 4046 and DER-10; Neither TAGM nor DER-10 have caps for individual VOCs."

This statement included the numbers from TAGM 4046 but also seeks to use cap values from Part 375.

The Volunteer's Statement of Position, at 4, described this portion of the December 17, 2008 resolution offer as: "If a standard cannot be developed a cap of 50 PPM will be used for individual SVOCs with the sum of all SVOCs+20 not to exceed 500 PPM *[Upon further technical review of the guidance documents, the BCP only requires a cap of 100 PPM per individual organic compound [ix]]*." (Brackets and italics in original). Endnote *ix* discussed statements regarding cap values in the Frequently Asked Questions document, an April 10, 2001 DEC memorandum and section 9.3 of the BCP Technical Support Document.

During the second conference call, I asked whether the Volunteer is proposing to use the cap values from TAGM 4046 or from Part 375. Ms. Shaw stated that the Volunteer believes the cap value from Part 375 should be used, and that what the

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[23] The December 24, 2008 letter identifies the date of the e-mail as December 16, 2008, but the letter also quotes the e-mail and it is the message that was sent on December 17, 2008.

Statement of Position said on this subject represents a change in the Volunteer's position. Ms. Shaw also stated, however, that the Volunteer would use the TAGM 4046 cap values if that is necessary in order to resolve the dispute.

DEC Staff's position includes use of the SCO calculation method in TAGM 4046, and the cap values in TAGM 4046 are part of that process.

I recommend, to the extent that cap values are used as discussed in the previous section of this report, that the cap values be the ones from TAGM 4046. Use of these numbers is part of the calculation process, for SCOs calculated using the method in TAGM 4046. To the extent that an SCO for a particular compound is not listed and cannot be calculated using the method in TAGM 4046, use of the TAGM 4046 cap values would be consistent with the maximum values allowable for compounds for which an SCO could be calculated under TAGM 4046.

Endnote *ix* of the Volunteer's Statement of Position appears to suggest that, for spills of weathered fuel, SVOC TICs should be evaluated solely by adding their values and comparing that total to the Part 375 cap value for SVOCs. This differs from the approach outlined in Mr. Koch's e-mail and Ms. Shaw's December 24, 2008 letter. It also assumes that the environmental conditions in the present cleanup resemble those in the quote from the April 10, 2001 DEC memorandum ("all the individual compounds were below the recommended cleanup objective, but there is residual contamination") and omits the FAQ document's inclusion of professional judgement in determining cleanup objectives at particular sites. In view of the background information provided in DEC Staff's Statement of Position, I do not recommend the approach apparently suggested by endnote *ix*.

Significance of prior studies at the Site

The Volunteer argued that the Site has been studied extensively, that its December 17, 2008 proposed resolution of the remaining issue is more conservative than required under the BCP law and applicable guidance, and that to the best of the Volunteer's knowledge no other volunteer has been asked to engage in SCO development for TICs in relation to "a typical petroleum-contaminated site" (Statement of Position, at 3 -4; see also, the discussion of Issue No. 1 in Ms. Shaw's August 29, 2008 letter; see also, DEC Staff Statement of Position, at 2 - 7 for DEC Staff's position concerning the earlier studies).

The Volunteer's Statement of Position asserted, "From September 2006 until submission of the Final May 2008 Remedial Investigation Report (RIR), the Volunteer has spent more than $400,000 to develop a remedial procedure that will clean the Site to the regulatory Track 1 BCP numeric standards, and in doing so, relied upon what it understood to be the requirements of the Brownfield Cleanup Act (BCP Law), which directed DEC to develop Track 1 standards in regulations" (Statement of Position, at 3).

The BCP Agreement, however, was executed on April 14, 2006 with the intended use of the Site being industrial. According to DEC Staff's Statement of Position, the procedure for the pilot test was approved in October 2006, at a time when DEC Staff understood the intended use to be industrial, and it was not until August 2007 that the Volunteer first notified DEC Staff of its intention to change to Unrestricted Use (Track 1).

According to DEC Staff, the pilot test did not show that the proposed remedial option will work. Although Total Petroleum Hydrocarbons (TPH) are not the basis for determining whether a site has been adequately cleaned up, TPH can serve as a general indicator of petroleum contamination and the TPH results cited by DEC Staff should not be ignored (see, DEC Staff Statement of Position, at 4 - 8; DEC Staff's August 15, 2008 letter, comment A-6; and Volunteer's Exhibit F, April 10, 2001 memorandum, at 3). DEC Staff has identified reasons to believe that much of the contamination at the Site is SVOCs that are detected as TICs under Method 8270; failing to ensure that these SVOCs are adequately cleaned up before allowing unrestricted use would not be prudent. This is particularly so at a Site that has significant contamination and is now proposed to be developed for residential use. The level of chemical analysis and the development of SCOs proposed by DEC Staff does not appear excessive in these circumstances. The Volunteer would have the option to conduct the supplemental work in phases to see if attempting a cleanup for Track 1 Unrestricted use is worthwhile or if a cleanup for industrial use would be more feasible.

Recommendation

I recommend that the Director of the Division of Environmental Remediation direct the Volunteer to submit a Supplemental Remedial Investigation Work Plan ("SRIWP") in accordance with DEC Staff's position as stated in the four paragraphs that appear in Mr. Acampora's November 26, 2008 letter and are reiterated in his December 31, 2008 letter, with the following modifications, clarifications and recommendations:

(a) The SRIWP should include an initial phase, as outlined in numbered paragraph (1) of Mr. Acampora's December 31, 2008 letter.

(b) DEC Staff should involve a chemist in its review of analytical results from this first phase, particularly in connection with determining how far the Volunteer should take its efforts in specifically identifying SVOC TICs.

(c) The number of SVOC TICs to be identified would be 30 SVOC TICs.

(d) Analysis of soil samples should include the eight PAHs identified in Mr. Acampora's December 31, 2008 letter, as compounds for which to specifically test rather than as TICs, unless and until DEC Staff determines that specific testing for these compounds is not necessary.

(e) In comparing the sample results to SCOs, the SCO from 6 NYCRR 375-6.8(a)(Unrestricted use soil cleanup objectives) would be used if one exists for the compound in question, and the guidance documents would only be used if the table in subdivision 375-6.8(a) does not include an SCO for the compound.

(f) The method outlined in TAGM 4046 for developing SCOs includes the procedure for determining SCOs for organics in soils for protection of water quality.

(g) If the process for arriving at an SCO, as outlined in Mr. Acampora's November 26, 2008 and December 31, 2008 letters and this report, cannot produce an SCO for an SVOC TIC, the SCO for that compound would be 50 ppm, with the maximum concentration for total SVOCs not to exceed 500 ppm (cap values from TAGM 4046).

Respectfully submitted,

_____/s/_____
Susan J. DuBois
Administrative Law Judge

Dated: May 12, 2009
Albany, New York