

Appendix A

Agency Correspondence



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Jersey City PPG Chromium Sites

12/16/11

Subject: Adequacy of Response to Comments on July 2006 Remedial Action Work Plan and the July 2010 Remedial Action Work Plan Addendum; Metropolis Towers, Site 146, Jersey City, New Jersey

Dear Mr. McCabe:

With the exceptions noted below, PPG Industries (PPG) has adequately addressed the New Jersey Department of Environmental Protection (Department) comments, dated September 20, 2010 on the July 2006 Remedial Action Work Plan (RAWP) and July 2010 Remedial Action Work Plan Addendum (RAWP Addendum) developed by Civic & Environmental Consultants, Inc. (CEC) for PPG. Note that since a revised RAWP has not yet been submitted by PPG, it was not possible to assess how the comments were addressed in the revised RAWP/RAWP Addendum.

Prior comments for which response was not considered fully adequate:

General Comment 2: NJDEP had considered the July 2006 version of the RAWP as approvable with revisions. Therefore, per the requirements set forth in New Jersey Administrative Code (N.J.A.C.) 7:26E-1.3(c)2, since the RAWP had been submitted prior to 2 December 2008 and it that (generally) met the requirements of N.J.A.C. 7:26E-6, the soil cleanup criteria in place prior to promulgation of the Soil Remediation Standards (promulgated 2 June 2008) established for the contaminants of concern are applicable provided that the Soil Remediation Standards are not an order of magnitude or more lower than the pre-June 2008 soil cleanup criteria. A comparison of the pre-June 2008 soil cleanup criteria and the Soil Remediation Standards specific to residential property use for the site-specific contaminants of concern are provided below:

Table with 3 columns: Contaminant of Concern, May 1999 Soil Cleanup Criterion (mg/kg), and June 2008 Soil Remediation Standard (mg/kg). Rows include Hexavalent Chromium, Trivalent Chromium, Antimony, Nickel, Thallium, and Vanadium.

- Notes:** (1) This value is the soil cleanup criteria for non-residential soil; however, the July 2006 version of the RAWP notes that the most stringent cleanup criteria was used.
- (2) This standard was identified in the July 2006 version of the RAWP as being applicable to total chromium, while it is identified in the soil cleanup criteria for trivalent chromium.
- (3) Based on the Commissioner's Chromium Policy memo dated 8 February 2007.
- (4) Based on April 2010 NJDEP Memo "Chromium Soil Cleanup Criteria"

As can be seen in the table above, none of the contaminant of concern had a reduction in standard of an order of magnitude or more, therefore, PPG may use the May 1999 soil cleanup criteria in lieu of the 2008 soil remedial standards should they choose.

Note that since the 2006 RAWP deferred the impact to groundwater soil remediation pathway, this pathway now needs to be evaluated to determine that soils remaining following remedial excavation do not adversely impact groundwater.

Note that remedial standards for the PPG chromium sites have been established under the 2009 Joint Consent Order.

Response: PPG acknowledges the NJDEP decision to use the May 1999 soil cleanup criteria as remedial standards at this site. PPG will pursue the Impact to Groundwater (IGW) requirements by obtaining samples from the three highest concentration hexavalent chromium post-excavation samples that are less than 20 mg/kg from each Area and performing the IGW protocol to demonstrate compliance for chemicals of concern. If approved, this approach will be incorporated into the Final RAWP.

Adequacy of Response: The response is adequate. However, the Department recommends that PPG consider performing the IGW assessment in advance of the remedial excavation, particularly if PPG intends, as indicated in the draft RAWP, to backfill upon reaching remedial limits established by pre-excavation sample results. Should these samples be collected following excavation and the excavation backfilled prior to completing the IGW assessment, there might be a need to revisit/reexcavate certain areas if the IGW assessment determines that there is a residual risk associated with soils remaining following the remedial excavation.

General Comment 3: Together, the July 2006 RAWP, July 2006 RAWP Investigation (Appendix D of the July 2006 RAWP), the July 2010 RAWP Addendum, and the August 2010 PAMP contain inconsistencies which preclude the accurate and clear presentation of the current proposed remedial action. As presented, these documents are confusing and may cause issues with implementability of the remediation in the field.

The 2006 RAWP must be revised in "track-changes" format to clearly identify which portions of the 2006 RAWP have been superseded by the 2010 RAWP Addendum (strike out text that no longer applies and identify which section(s) of the RAWP Addendum apply in its place), and must clearly call out figures and tables in the RAWP and RAWP Addendum that have been superseded. The revised 2006 RAWP and 2010 RAWP Addendum must also be revised to address the deficiencies noted later in this comment letter. Because of the confusion engendered by this group of documents, the Technical Execution Plan must be submitted for Department

review and approval. Development of a singular set of tables and figures is required in the Technical Execution Plan.

Response: The 2006 RAWP superseded sections have been identified in the addendum and the Figures that supersede those in the 2006 document are identified.

Before producing a Technical Execution plan, PPG would like the NJDEP to define what the requirements of the Technical Execution Plan include; this is not a document that is defined in the Technical Regulations or the JCO. Before agreeing to provide an additional document subject to review, PPG requests the approval of the RAWP before pursuing preparation of another document.

Adequacy of Response: A Technical Execution Plan (TEP) is not required. However, the RAWP/RAWP Addendum must be revised to be sufficiently clear (e.g., a singular set of figures/tables/documents, clarity on which portion of the 2006 RAWP are superseded by which sections of the April 2012 RAWP, etc.)

General Comment 3, continued: For example, as per N.J.A.C. 7:26E-6.2(a)(6), figures must be provided that identify location, depth and concentration of all contaminants in excess of the remediation standard; and sample locations, depths and parameters for all post-construction samples. The figures do not have the analytical data posted to the sample locations. Additionally, there are discrepancies between sample identification numbers presented on the tables and figures that make it difficult to correlate the data from the tables to the figures. Additionally, a sampling summary table for all proposed post remediation samples is required pursuant to N.J.A.C. 7:26E-6.2(a)2. As per N.J.A.C. 7:26E-6.2(a)6, the remedial area detail maps must include the volume of each remedial media being remediated and the vertical extent of the area being remediated.

In addition, to assist in clarification of the proposed work, an Executive Summary should be added to the RAWP Addendum (and also included in the Technical Execution Plan) giving the reader an overview of where and how deep the contaminated zones are, the nomenclature for each, and the order in which they will be addressed. The summary should also include the totals of soil being removed and hauled away, soil being removed and used a clean backfill, and soil being imported as make-up fill. Because the Technical Execution Plan must be approved prior to implementation, PPG must build this approval into the schedule.

Response: The 2006 RAWP superseded sections have been identified in the addendum and the figures that supersede those in the 2006 document are identified as requested. Additionally, the figures and tables have been updated.

PPG is unsure about the requirements of the Technical Execution Plan include, as this document is not defined in the Technical Regulations or the Joint Consent Order (“JCO”). We would like to schedule a quick call to discuss the requirements of this document prior to submittal of the revised RAWP and RAWP Addendum.

In regards to the specific requirements of the scaled site map:

- i. The location of remedial treatment units is present and indicated numerous times on various drawings.
- ii. The volume of each medium to be remediated is subject to change in the field during remedial activities, so an estimate of the volumes to be remediated has been added to the remedial area details.
- iii. The estimated vertical and horizontal extents of the area to be remediated are included in the remedial area details and on the excavation plans.
- iv. The location, depth, and concentration of all contaminants in excess of the remediation standards are shown on the excavation plans.
- v. The sample locations, depths, and parameters for all post-construction samples are shown on the excavation plans.

An Executive Summary shall be added to the final RAWP and shall be included in the Technical Execution Plan, once the details and content of that document have been discussed and defined.

Adequacy of Response: The Department believes that a call would benefit the execution of this program. As noted earlier, a TEP is not required; however, the RAWP/RAWP Addendum must be amended to fully address these comments previously submitted.

General Comment 4: Methods identified for dust suppression and air monitoring are not adequate as proposed in the PAMP. Most notably, there does not appear to be any buffer zone between air monitoring stations and the public, and dust control measures are reactive, not proactive. The Department requires a conference call to further discuss these issues. Supplemental comments on this issue will be provided following the conference call.

Response: As discussed with the Department, the location of the public (residents) on the site precludes the existence of much of a buffer zone between the excavation areas, the air monitoring stations and the public. The public will be excluded from the construction area through the use of barriers and fencing. A revised air monitoring program has been developed that includes consideration of both ground level and elevated sampling at the perimeter of the construction area. The revised air monitoring program will also include continuous real-time PM10 monitoring using hand-held instruments near the excavations to allow proactive dust control to be implemented and to verify that dust control measures are being successful in controlling dust levels to be below the allowable limits at and above the construction area.

Adequacy of Response: The PAMP proposes a real-time action level of 339 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), averaged over 15 minutes, for all excavation areas. For areas where there is no spatial buffer between the general public and excavation activities, a more conservative averaging time of 5 minutes will be required, with a 1-minute averaging time as an “early warning” mechanism. Additionally, consistent with the goals established in the Garfield Avenue Site Dust Control Plan, PPG should meet the objectives of “no visible dust” for all work areas, and shall update the PAMP to reflect the “no visible dust” goal. As total dust and hexavalent chromium air results are available, PPG must evaluate the data to determine whether

there is a correlation between the dust and hexavalent chromium concentrations. The real-time dust action level may need to be revised based on the data assessment.

General Comment 6: The tenant parking density at the property must be evaluated, and contingencies developed for tenant parking spaces consumed during the various stages of the remedial action.

Response: Previous meetings with the former building owner made them aware of the influence of remedial action on the availability of parking spaces. The current building owner has been made aware of the influence of remedial action on the number of parking spaces available to tenants. This impact will be addressed through the site access agreement with the property owner. A survey of parking spaces was performed over four weeks in September 2010 and this information will be discussed with the building management.

Adequacy of Response: The Department expects PPG to work out the parking impacts to the satisfaction of building management and the tenants.

General Comment 7: It is not clear from reading the RAWP and RAWP Addendum which data have undergone validation and which have not. As the data are being relied upon to determine limits of remediation, these data must undergo validation to ensure that they are accurate and may be relied upon for remedial decision-making. Validation reports must be provided as an attachment to the revised RAWP, and must include identification information to allow the reviewer to understand which investigation (and which attachment, if the revised RAWP will be organized in that manner) each validation report relates to. If any of the data are determined to be invalid (must be rejected), those data must be removed from the report and the data presentation must be revised to reflect that that particular data point does not exist for that analyte.

Response: Validation had not been performed on any of the data collected after the original RAWP submittal in July 2006. Validation of data collected after that date is being performed with the intent of incorporating the validated data into the final RAWP.

Adequacy of Response: Incorporation of the validated data is appropriate. However, the validation reports for those samples which will be relied upon for remedial decision making (e.g., clean post-excavation samples, samples beyond the limits of excavation) must be provided as attachment(s) to the RAWP.

General Comment 9: PPG shall ensure that all receptor evaluation requirements specified in N.J.A.C. 7:26E-1.15 through 1.19 are met by the deadlines identified in the regulations.

Response: A receptor evaluation was not submitted for either the Site Investigation report or the Remedial Action Work Plan because the original submission of these documents predates the requirement. PPG submitted a Receptor Evaluation on June 6, 2011.

Adequacy of Response: A Receptor Evaluation Report, which addressed the Department's 6/29/11 comments on the Receptor Evaluation form, was submitted by AECOM on behalf of PPG on 9/20/11. Please confirm that the finalized RE forms were distributed as per N.J.A.C. 7:26E-1.15(e).

Section-Specific Comment 1: All submittals to NJDEP must be certified by PPG as required by N.J.A.C. 7:26E-1.5(a).

Response: The certification page will be included with the final FSWP document.

Adequacy of Response: As required by N.J.A.C. 7:26E-1.5, all submittals must be certified, not just the finalized submittal.

Section-Specific Comment 12 - Section 6.4, page 16: The current dewatering plan is not clearly defined. Additional detail regarding the dewatering plan and contingency dewatering measures are required. Adequate dewatering will allow for excavated soils to be acceptably direct loaded for off-site disposal, or managed on site, and will facilitate visual inspection of in-situ soils to verify all visible CCPW has been removed. Additional detail regarding the Passaic Valley Sewerage Commissioners (PVSC) permit, the anticipated dewatering rates, if the water will be discharged directly to a sewer, if a NJDEP Treatment Works Approval and/or Water Allocation Permit or notification is required must be provided. Please explain whether dewatering beneath the meadow-mat will be required to prevent upward seepage which could result in wet bottom sediments despite dewatering of the excavation sidewalls above the meadow-mat.

Response: See Section 7.3 for additional information on dewatering. The approved PVSC authorization to discharge will address the issues identified related to rates, volumes, direct discharge to sewer and whether a NJDEP Treatment Works Approval or Water Allocation permit or notification is required. This permit is part of project documents governing remedial work and will be provided upon approval by the PVSC. Dewatering below the meadow mat is not anticipated to complete the planned excavation activities.

Adequacy of Response: The Department requests that the dewatering details described in the initial comment be provided to the Department through a series of status conference calls during the remedial design/implementation process, similar to those held for Site 114.

Section-Specific Comment 15 - Section 7.1, page 17, second paragraph, last sentence: For any non-chromium and non-CCPW-related soils intended to be used for backfill, a soil reuse plan must be prepared in accordance with N.J.A.C. 7:26E-6.4(d) and approved by the Department. Any soil with chromium being proposed for reuse must not contain hexavalent chromium at a concentration of 20 milligrams per kilogram (mg/kg) or greater, which must be demonstrated through analytical results. Note that the information provided in RAWP Addendum Section 4 does not meet all the technical requirements set forth in N.J.A.C. 7:26E-6.4(d).

Response: Please provide what specifically needs to be added to RAWP Addendum Section 4 to comply with the technical requirements set forth in N.J.A.C. 7:26E-6.4(d). This information or analyses will be added to the final RAWP.

Adequacy of Response: This issue requires further discussion with the Department.

Section-Specific Comment 17 - Section 7.2, page 18, first paragraph: The “pre-excavation delineation” approach presented by CEC (slides 21 and 22) in the June 17, 2010 meeting at AECOM’s Piscataway office should be included in the revised RAWP, except that there shall be

samples for every 2-foot vertical interval as described in Section 7.4.1 of the work plan. The complete horizontal and vertical pre-delineation data set and supporting figures clearly providing point-by-point compliance to support the extent of the excavations must be provided to, and approved by the NJDEP prior to the commencement of the soil remedial action.

Response: The data and presentation of this information has been included in the RAWP for each remedial area and on Figure 3 Pre-Excavation Boring Locations.

Adequacy of Response: As discussed during the December 12, 2011 Master Schedule call, Weston and PPG/CEC will have a phone call to discuss the required figures and tables needed for a compliant RAWP.

Section-Specific Comment 18 - Section 7.2, page 18, second paragraph: Free liquids are not permitted to discharge from the lined and loaded haul trucks. As the effectiveness of the dewatering efforts are not known at this time, the RAWP must be revised to include additional detail regarding the material and construction of the truck liners, and contingency measures to prevent any discharge of free liquids from the loaded haul trucks.

Haul truck tire washing is mandatory prior to leaving the site. Additionally, truck exteriors must be inspected and all soils removed/truck decontaminated prior to the vehicles departing the site.

Response: Material and construction of the truck liners is more appropriately addressed in technical specifications for bid. The type of truck liner to be used shall be a transport contractor decision appropriate to the containment results required. Inspection of the integrity of the truck liners prior to loading is integral to the proper functioning of a truck liner. Trucks will be staged on the decontamination pad following loading and visually inspected for leakage. Trucks with leaking liners will remain on the truck decontamination pad until such time as they can be unloaded, decontaminated, and released for liner repair. Due to the amount of paved surfaces on this site and the intent to load on hard surfaces, the requirement for haul truck tire washing will be evaluated through visual inspection and reaction to the conditions of the specific truck tire.

Adequacy of Response: This response is not adequate. The Department requires that the RAWP be revised to include additional detail regarding material and construction of truck liners, and contingency measures to prevent releases of free liquids from the loaded haul trucks. Further, the Department requires that haul truck tire washing is mandatory prior to leaving the site, and that the RAWP document the inspection of all truck exteriors and decontamination/removal of soil from truck exteriors, as necessary, prior to vehicles departing from the site.

Section-Specific Comment 21 - Section 7.3, page 19, second paragraph, first sentence: The RAWP must provide additional dewatering detail to ensure the ability to direct-load excavated materials. See Section-Specific Comment 12.

Response: At this site, materials to be excavated are primarily granular fill and construction debris which reduces material water-holding capacity. Additionally, ground water elevations have been decreasing with time reducing the anticipated need for dewatering.

Adequacy of Response: *See discussion of adequacy of response for Section-Specific Comment 12.*

Section-Specific Comment 27 - Section 7.5, page 22, first paragraph, fifth sentence: All haul trucks must go through the truck tire wash before exiting the site.

Response: This is addressed in the soil erosion and sediment control plan. Also see Response to Section-specific Comment 18.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 18.*

Section-Specific Comment 28 - Section 7.5, page 23, first paragraph: Dust suppression must be proactively implemented during any and all intrusive site work. Dust control measures must be in place for working and non-working hours (i.e. 24 hours per day) for any open excavation or stockpiled materials.

Response: Section 7.5 of the RAWP provides general contamination migration control measures; specific measures for dust control are provided in RAWP Appendix E Perimeter Air Monitoring Plan which was superseded by the August 2010 update submitted as part of the RAWP Addendum. Proposed revisions to the Perimeter Air Monitoring Plan will include the following. Dust suppression will be proactively implemented during intrusive site work during the standard 8-hour work day. At the end of each work day and during non-working periods (e.g. weekends), excavation areas and any stockpiled excavated material will be stabilized using engineering controls to mitigate the production of fugitive dusts during non-work periods. The stabilization will be performed through use of wind screens, chemical binders or tarps depending on the materials and conditions present onsite.

Adequacy of Response: *The approved RAWP must be wholly consistent with the approved PAMP.*

Section-Specific Comment 29 - Section 7.6, page 23, second paragraph, second sentence: A certification to document the quality of the fill is not acceptable. As the NJDEP indicated during the June 17, 2010 meeting at AECOM's office, any imported fill must have analytical data to demonstrate compliance with all 2008 NJDEP Soil Remediation Standards. The RAWP Addendum did not incorporate the testing requirements to document the cleanliness of the imported clean backfill, as had been indicated in an interim submittal.

Response: N.J.A.C. 7:26E-6.4(b)2(iv) states that "documentation of the quality of the fill shall be provided by a certification stating that it is virgin material from a commercial or noncommercial source or decontaminated recycled soil." Therefore, additional analytical data should not be required.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 15.*

Section-Specific Comment 32 - Section 7.7.2 and 7.7.3: These sections of the RAWP were not reviewed because of major changes provided in 2010 RAWP Addendum. Please confirm that the RAWP Addendum supersedes these sections of the 2006 RAWP.

Response: A new Section 7.7 was not provided as part of the 2010 RAWP Addendum or was it indicated as being superseded.

Adequacy of Response: PPG must clarify how the RAWP and RAWP Addendum work together to describe with sufficient clarity the remedial plan for the site. Also see assessment of adequacy of response to Section-Specific Comment 17.

Section-Specific Comment 34 - Section 8.0, page 38, third paragraph, second sentence and last paragraph: Dust controls must be proactively implemented during all site work. See Section-Specific Comment 28. In addition, there must be only one dust action level for the site.

Response: Section 8.0 of the RAWP provides a summary of the Perimeter Air Monitoring Plan (PAMP) and was not meant to provide complete details of the plan. Revisions to the updated August 2010 PAMP submitted as part of the RAWP Addendum will include the following. In addition to construction zone perimeter ground level and elevated monitoring. Ground-level locations will include continuous real-time PM10 sampling and integrated Cr+6 and PM10 sampling. Elevated locations at first-balcony level, mid-building and rooftop will include sampling for real-time PM10 sampling and integrated Cr+6 and PM10 sampling. The revised air monitoring program will also include continuous real-time PM10 monitoring using hand-held instruments near the excavations to allow proactive dust control to be implemented and to verify that dust control measures are being successful in controlling dust levels to be below the allowable limits at and above the construction area. The Particulate Action Level (PAL) for respirable (PM10) particulates (independent of chemical concentration in dust) is 339 ug/m³ as indicated in Section 2.3 of the August 2010 PAMP.

Adequacy of Response: See assessment of adequacy of response to Section-Specific Comment 28.

Section-Specific Comment 35 - Section 8.0, page 38, last paragraph: The Department requires a conference call to further discuss these issues. Comments on this section of the RAWP are deferred until after the call.

Response: Please coordinate this call with Dave Claassen of PPG Industries, Inc.

Adequacy of Response: These discussions occurred over a series of meetings and conference calls during the January/February 2011 time frame.

Section-Specific Comment 41 - Section 10.0, page 41: A verified list of required State, local, and Federal permits must be provided. The applicability determination of the NJDEP Treatment Works Approval must be finalized to avoid unwarranted project schedule delays. An applicability determination of the need for a Water Allocation Permit or Temporary Dewatering Permit must be made based on dewatering calculations (see Section-Specific Comment 12).

Response: See Response to Section-Specific Comment 12.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 12.*

Section-Specific Comment 44 - Section 13.0, page 44: In lieu of the proposed periodic progress reports, the Department anticipates that weekly progress teleconferences, with follow-up teleconference minutes submitted via email, will be adequate. Any proposed modifications to the approved RAWP would require written approval prior to implementation in the field.

Response: Weekly teleconferences with follow-up minutes via email as an approved alternative will be included. PPG would like clarification on what is intended by “any proposed modifications to the approved RAWP would require written approval prior to implementation in the field.” Small scale changes and modifications are expected as a part of any field project based on field conditions, weather, equipment, etc., and holding PPG to a strict interpretation of this could easily result in severe impediments to proceeding with remedial action construction.

Adequacy of Response: *Proposed modifications to the approved RAWP would require written approval prior to implementation in the field. In order to alleviate “severe impediments to proceeding with remedial action construction,” conditions which might require a requested revision to the approved RAWP should be anticipated. As has been demonstrated during implementation of the Interim Remedial Measure #1 at the Garfield Avenue Site, use of field change request forms has allowed for timely Department review and approval of revisions to field procedures authorized in that approved work plan.*

Section-Specific Comment 45 - Section 14.0, page 45: The revised remedial schedule, provided as Figure 15 of the July 2010 RAWP Addendum, appears out of date. In accordance with 7:26E-6.5(c), within 30 calendar days of RAWP approval an updated remedial action schedule must be submitted to the Department.

Response: The remedial schedule provided as Figure 15 is a segment of the current JCO schedule for Site 156 Metropolis Towers activities.

Adequacy of Response: *In accordance with 7:26E-6.5(c), an updated remedial action schedule must be submitted to the Department within 30 calendar days of RAWP approval.*

Section-Specific Comment 49 - Figure 2: Please correct inconsistencies on Figure 2. The figure uses three different symbols to designate remedial investigation locations. The remedial investigation location symbols used on the map are not represented accurately in the legend; and the soil boring and monitoring well symbols in the legend are identical. Some of the remedial investigation locations on the map do not have labels.

The text (page 7) states there are 68 soil borings and 5 well locations associated with the PPG remedial investigation. However, there are more than 73 remedial investigation sample locations depicted in Figure 2.

Twenty-one of the 68 remedial investigation soil boring locations and PPG1-MW2 are not depicted and labeled in Figure 2. A “PPG1-B05” and “PPG1-B5” are depicted on Figure 2. The PPG-T01 through PPG1-T04 soil sample locations included in Appendix A are not illustrated on Figure 2. Non-remedial investigation sample locations should not be included (or included in gray) in Figure 2. Please ensure all PPG remedial investigation sample locations are depicted and correctly labeled on Figure 2.

Response: The copy of Figure 2 provided on the RAWP CDs incorporated data from the RAWP Investigation (RAWP Appendix D) and the RAWP Addendum in error. Please refer to Figure 2 from the hard copy versions of the 2006 RAWP. The figure will be reviewed for inconsistencies and updated as necessary.

There were 58 soil borings and 5 well locations associated with the original RI. Additionally, “PPG1-B5” has been corrected to read “PPG1-B51” and PPGT01 through PPGT04 have been added to Figure 2.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 50 - Figure 3: A “LB7” and a “LB-7” are depicted on Figure 3. LB-17 is not shown on Figure 3. All non-Langan sample locations should not be included (or included in gray) in Figure 3. Please ensure all Langan Supplemental Investigation sample locations are depicted and correctly labeled on Figure 3.

Response: The designations “LB7” and “LB-7” are shown per the drawing obtained for the Langan Supplemental Investigation and were not re-designated.

Adequacy of Response: *PPG must conduct due diligence to ensure that the data on which remedial decisions are being made are accurately located and represent the actual samples collected from those locations. Figure 3 must be revised to identify the location of Langan sample LB-17, at a minimum. Also see assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 51 - Figure 4: Sample locations PE-30 through PE-35 are not depicted on Figure 4. All non-Pre-Remedial boring locations should not be included in Figure 4. Please ensure all Pre-Remedial sample locations are depicted and correctly labeled on Figure 4.

Response: Figure 4 does not present locations for PE-30 through PE-35 because borings with these designations were not installed.

Adequacy of Response: *Please provide a note on Figure 4 to provide clarity for future users of the report.*

Section-Specific Comment 54 - Figure 6: The number and location of post-excavation sidewall sample locations shall be a minimum frequency of 1 location for every 30 linear feet of each sidewall. Post-excavation bottom samples must be at a minimum frequency of 1 sample per 900 square feet of bottom area.

Response: Figure 6 does not show the locations or number of post excavation sidewall or floor samples. Post excavation samples for Area A are shown on RAWP Addendum Figure 19.

Adequacy of Response: If it is the intent to not include post-excavation sidewall samples on Figure 6, the legend designation for “sidewall sample location” should be removed to increase clarity. Also note that sidewall samples indicated on Figure 19 for excavation Area A do not meet the minimum requirements since 50 feet separates PPG-B01 and PE-3. Finally, figures should include the results of all sampling, including the sampling program conducted per the July 2011 Pre-Remedial Sampling & Analysis Plan.

Section-Specific Comment 55 - Figure 7: No post-excavation sidewall sample locations are shown on Figure 7 in Appendix A of the July 2010 RAWP Addendum. The number and location of post-excavation sidewall sample locations shall be a minimum frequency of 1 location for every 30 linear feet of each sidewall. There are three sidewalls identified in the remedial excavation that do not have any post-remediation samples identified. Post-excavation bottom samples must be at a minimum frequency of 1 sample per 900 square feet of bottom area.

Response: Figure 7 does not show the locations or number of post excavation sidewall or floor samples. Post excavation samples for Area B are shown on RAWP Addendum Figure 17 Layout 1.

Adequacy of Response: As shown on Figure 17 of the RAWP Addendum, 45 feet separates the proposed post-excavation sidewall sample along the eastern edge of excavation Area B and sample location PE-6. This does not satisfy the minimum sampling frequencies established by the Department. The final figures should include the findings of the sampling program conducted per the July 2011 Pre-Remedial Sampling & Analysis Plan.

Section-Specific Comment 57 - Figure 9: No post-excavation sidewall sample locations are shown on Figure 9 of the July 2006 RAWP. The number and location of post-excavation sidewall sample locations shall be a minimum frequency of 1 location for every 30 linear feet of each sidewall. Post-excavation bottom samples must be at a minimum frequency of 1 sample per 900 square feet of bottom area.

Response: Figure 9 does not show the locations or number of post excavation sidewall or floor samples. Post excavation samples for Area D are shown on RAWP Addendum Figure 17 – Layout 3.

Adequacy of Response: See assessment of adequacy of response to Section-Specific Comment 17.

Section-Specific Comment 59 - Figure 11: The Remedial Area F is not consistently depicted on Figure 11 of the July 2006 RAWP and Figure 14 of the July 2006 RAWP. Figure 11 must be updated to reflect the extent of the more currently proposed excavation. For Remedial Area F (Figure 11, July 2006 RAWP), there are distances approaching 60 feet (between PE-16 and PPG1-B12) with no sidewall post-excavation data. In addition, there are no proposed post-

excavation sidewall sample locations are shown for Remedial Area F-1. The number and location of post-excavation sidewall sample locations for Remedial Areas F and F-1 shall be a minimum frequency of 1 location for every 30 linear feet of each sidewall. Post-excavation bottom samples must be at a minimum frequency of 1 sample per 900 square feet of bottom area.

Response: The depictions of Area F on Figure 11 and Figure 14 of the July 2006 RAWP appear to be the same. An additional Pre-excavation boring will be installed between PE-21 and PPG-B12 and between PPG-B12 and PE-36 to meet the required sampling intervals. For Remedial Area F-1, RAWP Addendum Figure 21 identifies the location of 12 sidewall and 1 excavation floor sample.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 60 - Figure 12: Figure 12 of the July 2010 RAWP Addendum must be modified to include the requirements specified in N.J.A.C. 7:26E-6-2(a)(6).

Response: Due to current complexity of the drawings and the presence of this information on other RAWP drawings, a key to the location of the information specified in N.J.A.C. 7:26E-6.2(a)(6) will be added to Figure 12.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 61 - Figure 13: Figure 13 of the July 2010 RAWP Addendum must be modified to include the requirements specified in N.J.A.C. 7:26E-6-2(a)(6).

Response: Due to current complexity of the drawings and the presence of this information on other RAWP drawings, a key to the location of the information specified in N.J.A.C. 7:26E-6.2(a)(6) will be added to Figure 13.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 62 - Figure 14: Figure 14 of the July 2006 RAWP must be modified to include the requirements specified in N.J.A.C. 7:26E-6-2(a)(6).

Response: Due to current complexity of the drawings and the presence of this information on other RAWP drawings, a key to the location of the information specified in N.J.A.C. 7:26E-6.2(a)(6) will be added to Figure 14.

Adequacy of Response: *See assessment of adequacy of response to Section-Specific Comment 17.*

Section-Specific Comment 63 - Figure 15: See Section-Specific Comment 45.

Response: See Section-Specific Response to Comment 45.

Adequacy of Response: *See assessment of adequacy of Response to Comment 45.*

Section-Specific Comment 68 - Appendix F, Section 6.1: Personal worker air monitoring shall be designed to ensure compliance with the applicable Occupational Safety and Health Administration (OSHA) standard, as outlined in 29 CFR 1926.1126. This section does not discuss if upgraded levels of respiratory protection will be required for workers within the exclusion zone until sample data indicates no exposure above the permissible exposure limit (PEL). Revise text to document compliance with the OSHA standard.

Response: Evaluation of soil concentrations relative to Cr+6 PELs allow real-time dust monitoring to be used concurrently with time-integrated occupational health sampling for verification.

Adequacy of Response: The response provided does not directly indicate intent to comply with the provisions of 29 CFR 1926.1126. The HASP shall be revised to specifically address the requirements of 29 CFR 1926.1126.

Section-Specific Comment 73 - 2010 RAWP ADDENDUM, Section 2, first paragraph: Provide a copy of the conditional approval of the 2006 Sampling and Analysis Plan for RAWP Implementation, along with a point-by-point summary table of the NJDEP conditions to the approval for the February 23, 2006 Sampling Analysis Plan for the RAWP and CEC's disposition. The summary table must identify specifically where each condition and respective disposition is presented in the June 2006 RAWP Investigation or the July 2010 RAWP Addendum.

Response: After a search of old files, PPG found it did not have a copy of the conditional approval of the 2006 Sampling and Analysis Plan for RAWP Implementation to use as a basis for this evaluation.

Adequacy of Response: Reference to the conditional approval must be removed from the text.

Section-Specific Comment 74 - 2010 RAWP ADDENDUM, Section 2, third paragraph, bullets: Provide NJDEP laboratory certification numbers. Per N.J.A.C. 7:26E-2.1(a)(1)(ii), only those laboratories certified for analysis as required under N.J.A.C. 7:18 may be used for analysis of samples required to fulfill requirements of the Site Remediation Program.

Response: The laboratory certification numbers follow the lab names in the referenced bullet list.

Adequacy of Response: The certification numbers identified in the bullets are identified as being provided by NELAC, not by the Department's Office of Quality Assurance (OQA). Please confirm that these numbers are also NJDEP/OQA certification numbers.

Section-Specific Comment 75 - 2010 RAWP ADDENDUM, Section 3.2, page 8, second paragraph: The analytical results for all samples are provided in Table 1. However, evaluation of the data is not possible because the sample identification numbers (IDs) provided in Table 1 do not align with the boring IDs provided in the embedded table on pages 7-8 and Figure 8. See General Comment 3.

Response: Table 1 presents the complete sample designation consisting of a Site prefix (156) followed by a one to two letter boring type (e.g. I, CE, PE) followed by a one to two digit boring type number (e.g. 1, 10) followed by the numeric top of the sample depth below ground surface, a hyphen, the numeric bottom of the sample depth below ground surface, and a letter sample sequence. For brevity during discussion, the locations are referred to by the one or two letter boring type and boring number. Since the letter I appears similar to the number 1, a hyphen is inserted in discussions, imbedded tables, and on figures to separate the boring type and the boring type number for clarity.

Adequacy of Response: It is not clear. If boring numbers are identified within the text and on figures, the corresponding boring number should be added in the tables for each column presenting analytical results for samples collected from that boring. Also see assessment of adequacy of response to Section-Specific Comment 17.

Section-Specific Comment 78 - 2010 RAWP ADDENDUM, Section 4.0, Soil Reuse Plan, pages 11-13: The plan, as presented, is not acceptable; and must be prepared in accordance with N.J.A.C. 7:26E-6.4(d). See Section-Specific Comment 15. Additionally, “additional certified clean offsite fill” must be laboratory tested to confirm it meets all applicable NJDEP soil remediation standards, including those for protection of groundwater. See Section-Specific Comment 29.

Response: Please specifically identify what this section is missing to be in compliance with N.J.A.C. 7:26E-6.4(d). N.J.A.C. 7:26E-6.4(b)2(iv) allows for the use of certified virgin fill from a commercial or noncommercial source or decontaminated recycled soil.

Adequacy of Response: See assessment of adequacy of response to Section-Specific Comment 15 and Section-Specific Comment 29.

Section-Specific Comment 79 - 2010 RAWP ADDENDUM, Section 4.0, pages 12-13: Note that specific requirements for determination of the suitability of concrete for recycling must be met, per the “Guidance for Characterization of Concrete and Clean Material Certification for Recycling” (NJDEP, July 6, 2009), including the prohibition of data averaging to determine compliance with remedial standards. Also, please provide specific details regarding the “erosion control measures.”

Response: The specific requirements that are not met in the NJDEP concrete recycling guidance have not been identified in the comment. Concrete core sampling and analysis was performed in March of 2006 prior to the issuance of the NJDEP concrete recycling guidance. Concrete core analysis was based on known site prior use and the chemicals of concern identified at the site. Data averaging was not part of the concrete core investigation.

Adequacy of Response: The Department reiterates that PPG/CEC need to be familiar with all applicable guidance documents. Current guidance may be found at <http://www.nj.gov/dep/srp/guidance/>.

Section-Specific Comment 80 - 2010 RAWP ADDENDUM, Section 5.1, page 15, second paragraph, second and third sentences: Collection of samples over a 1-foot interval is not in compliance with the requirements of N.J.A.C. 7:26E-3.6(a)(5), which requires that soil “samples

be collected in discrete six inch increments.” Please explain the sampling methodology; collecting a 1-foot sample may be acceptable in this instance. Also, please specify on appropriate tables and figures which sample results are associated with samples that were collected in 1-foot increments.

Response: The 1-foot interval or 2-foot interval were the initial sampling interval sizes retrieved from the boring not the size of the sample placed in laboratory soil sample jars. Each sample placed into a laboratory soil sample container consisted of a 6-inch interval selected based on visual examination from the materials retrieved from the boring.

Adequacy of Response: The text, as written, suggests that a 1-foot sample was mixed in the field and the aliquot collected represented a mixture of the 1-foot sample length. Please clarify the language in the revised RAWP to be consistent with actual field activities.

Section-Specific Comment 84 - 2010 RAWP ADDENDUM, Table 3: Hexavalent chromium analytical results are required for soils proposed for reuse.

Response: Hexavalent chromium results are all below 20 mg/kg in soils proposed for reuse.

Adequacy of Response: See assessment of adequacy of Response to Section-Specific Comment 15.

Section-Specific Comment 85 - 2010 RAWP ADDENDUM, Figures 16-21: The legend must be updated to include the symbol and explanation for the elevation contours within the remedial action areas. See General Comment 3.

Response: The meaning of elevation contours is provided under each view-pane on Figures 16-21.

Adequacy of Response: The legend must be updated to include the symbol and explanation for the elevation contours within the remedial action areas. Also see assessment of adequacy of Response to Section-Specific Comment 17.

Section-Specific Comment 86 - 2010 RAWP ADDENDUM, Figure 21: There are 900 square foot circular areas depicted without a known sample with hexavalent chromium less than 20 mg/kg. There are perimeter sidewall lengths greater than 30 feet where no sample results or proposed samples are depicted. The number and location of post-excavation sidewall sample locations shall be a minimum frequency of 1 location for every 30 linear feet of each sidewall, and the number of post-excavation bottom samples shall be a minimum frequency of one sample for every 900 square feet of excavation bottom.

Response: The issues identified have been addressed in the responses to previous comments: See Section-specific Responses to Comments 56 and 59.

Adequacy of Response: See assessment of adequacy of response to Section-Specific Comment 56 and Section-Specific Comment 29.

Section-Specific Comment 87 - 2010 RAWP ADDENDUM, Figure 22: The cross-sections should depict sample point locations and concentrations used to construct the zone projected to include soil with hexavalent chromium greater than 20 mg/kg, and the boundaries of the proposed excavations. The cross-sections should also depict anticipated limits of remedial excavation in addition to the limits of anticipated contaminant exceedance of remedial standards.

Response: The cross-sections are summary information based on the contours from Figures 16-21 that represent the proposed excavation limits. The proposed excavation limits from Figure 16-21 are based on last overlying and first underlying samples with concentration < 20 mg/kg Cr+6 and below regulatory limits for antimony, nickel, vanadium, and thallium. Depicting the concentrations used to construct these zones would only demonstrate they are all less than regulatory limits. An explanatory note indicating the above will be added to Figure 22 indicating that the concentrations used to construct the proposed limits of excavation are all below regulatory limits.

Adequacy of Response: As per N.J.A.C. 7:26E-6.2(a)6, the RAWP must include a scaled site map that includes, among other information, the location, depth, and concentration of all contaminants in excess of the remediation standard, and sample locations, depths, and parameters for all post-construction samples. Since PPG is using pre-excavation samples in lieu of post-construction samples, the map must provide the locations and concentrations of those samples identifying areas requiring remedial excavation as well as all those which will be used to determine the limits of excavation. Due to the complexity of the planned cut lines at the Metropolis Towers site, this requirement must not be met with an explanatory note, and must be applied both to figures showing plan view and cross section of the excavation areas. Also see assessment of adequacy of response to Section-Specific Comment 17.

Section-Specific Comment 88 - PERIMETER AIR MONITORING PLAN, General: The PAMP provides for a site-specific acceptable air concentration (AAC) of 1.58 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$), which is equivalent to 1,580 nanograms per cubic meter of air (ng/m^3). This proposed AAC is unacceptable due to the proximity of the residential towers. The Department requires a conference call to further discuss these issues.

Response: Based on the results of discussions with the Department, the site-specific acceptable air concentration (AAC) for hexavalent chromium in air will be 487 ng/m^3 based on a non-carcinogenic endpoint within a 225 work-day duration of intrusive remediation activities. Compliance with the AAC during the duration of remediation activities will be based on the results of daily 8-hour TWA analysis for hexavalent chromium in air using a project duration (225 work days) average. The average will be periodically evaluated and communicated to the Department to assess compliance on a 30/60/90-day and project-to-date rolling average. Should the project duration exceed 225 work days due to schedule delays or other unforeseen conditions, the AAC will be recalculated using a carcinogenic endpoint.

Adequacy of Response: The response is incomplete as stated. When approximately 9-10 months of project time have elapsed, the Department will evaluate whether the proposed project schedule is on track, or if additional project time will be required due to schedule delays or other unforeseen conditions. A new project schedule will be developed at this time, based upon production rates of activities to date. If this new

project schedule extends beyond 225 intrusive activity days, PPG must calculate and measure against a carcinogenic endpoint AAC based upon the revised duration of intrusive activity. PPG will then be required to comply with one of the following:

- 1. If project-to-date average AAC concentrations are below the calculated carcinogenic exposure AAC, and it appears that PPG can continue to operate within the average limit of the carcinogenic exposure AAC, PPG can continue to perform remediation activities without a change in operations.*
- 2. If project-to-date average AAC concentrations exceed the calculated carcinogenic exposure AAC, or it appears that continued operations might cause the carcinogenic exposure AAC to be exceeded prior to the completion of the remediation, PPG must implement additional engineering controls, including the installation of a negative-pressure enclosure around all remaining intrusive activities, to eliminate potential dust exposure to the residential population at the site.*

Section-Specific Comment 89 - PERIMETER AIR MONITORING PLAN, Section 2.5: The proposed PAMP does not indicate the use of exclusion zone perimeter monitoring or any other means of an “early warning” indicator. This is unacceptable. An exclusion zone monitoring system, best management work practices, or other engineering controls shall be included in the PAMP. The reliance upon a hand-held portable monitor (as indicated in the last paragraph of Section 2.4) as the sole exclusion zone monitoring system is unacceptable. Exclusion zone monitoring shall be employed for each work area, and supplemented with hand-held monitoring devices.

Response: Due to the close proximity of the excavation zones with the construction area barriers and the proximity of the residents at the site, there is little or no buffer zone. A revised air monitoring program has been developed that includes consideration of both ground level and elevated sampling at the perimeter of the construction area. The revised air monitoring program will also include continuous real-time PM10 monitoring using hand-held instruments near the excavations to allow proactive dust control to be implemented and to verify that dust control measures are being successful in controlling dust levels to be below the allowable limits at and above the construction area.

Adequacy of Response: *This will be evaluated upon submission of revised monitoring location figures (refer to Comment 102). Also see evaluation of adequacy of response to General Comment 4.*

Section-Specific Comment 96 - PERIMETER AIR MONITORING PLAN, Section 3.2: The PAMP indicates that integrated samples will be collected over a 24-hour period. However, this is not adequately representative of actual site conditions during the period of highest potential for exposure (the actual work day). Integrated sample collection shall be performed only during the work day at the perimeter monitoring locations. Consistent with the air monitoring/sampling practices implemented at Garfield Avenue, PPG shall deploy a minimum of one to two separate air monitoring stations specifically to collect 24-hour samples. Additionally, a turn-around-time (TAT) of 14 days for hexavalent chromium samples is unacceptable; a shorter TAT is required.

Response: Integrated samples for Cr+6 will be obtained daily from each sampling location during the planned eight-hour workday. Twenty-four (24-hour) integrated sampling for Cr+6 is not being proposed at this site. A 7-day turnaround time (TAT) will be utilized for all Cr+6 air data.

Adequacy of Response: The sampling frequency, including 24-hour sampling, must be consistent with what is being performed at the Garfield Avenue Group of sites. However, due to the proximity of residents to the planned excavation area, a TAT of 7 days is being required for this site. Note that the PAMP QAPP must be updated to incorporate these changes, including addressing the inconsistent references to PAH analysis.

Section-Specific Comment 97 - PERIMETER AIR MONITORING PLAN, Section 4: Section 4.0 provides a text overview of personnel on-site responsible for implementation of the PAMP, but is unclear. An organizational chart shall be provided to better define roles and responsibilities of site personnel responsible for implementation of the PAMP and for dust control and response actions.

Response: The text of this section will be revised to better define roles and responsibilities of personnel responsible for implementation of the PAMP. An organizational chart will be provided for clarification.

Adequacy of Response: The response is adequate, provided an updated organizational chart (Figure 3 of the PAMP) is provided prior to site mobilization.

Section-Specific Comment 102 - PERIMETER AIR MONITORING PLAN, Figure 2: The figure provides an overview of proposed perimeter air monitoring station locations. The use of 4 air monitoring stations during work in Layout Area 1 does not adequately provide coverage for residents of Metropolis Towers or the general public beyond the site perimeter along Marin Boulevard (north/northwest of the work area). Similarly, the proposed air monitoring station locations for Layout Areas 2 and 3 do not provide adequate coverage if work is not being performed concurrently. Air monitoring should be provided not just for the perimeter of the property, but also for each individual remedial area (e.g., A, B, C...), as well as near any active residential entrances.

Based upon the number and placement of air monitoring stations as provided in Figure 2, there is no mechanism place to evaluate for potential fugitive dust emissions where excavation extends to the buildings (Remedial Areas A, C South, D and E). Engineering controls or other methods must be utilized to monitor fugitive dusts and prevent particulate matter from impacting the building exteriors accessible to residents (such as windows and balconies in each apartment which may overlook a work area). See General Comment 4. The Department requires a conference call to further discuss these issues.

Response: Figure 2 will be revised to provide additional monitoring stations along the perimeter of each remedial area and building entrances. Air monitoring stations will be moved throughout the excavation and placed around the remedial areas that are being excavated at that time.

Building entrances and balconies will be monitored. Real-time particulate and integrated air monitoring stations will be placed within 20 feet of entrances on the ground level. Elevated air monitoring stations will be anchored to a pulley system on the roof of the building. Air monitors will be mounted at the top of the building, at mid-building height and at the height of the first balconies.

Adequacy of Response: No air monitoring stations are shown for Area F1. Please provide updated figures which specify air monitoring location placement on separate figures for each layout area.

If you have any questions regarding this matter, contact me at (609) 984-2905.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tom Cozzi", is centered on the page. The signature is fluid and cursive.

Thomas J. Cozzi, Assistant Director
Site Remediation DEP

C: Brian McPeak, Project Manager
Dave Doyle, DEP



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

Site Remediation Program
401 E. State Street, 6th Floor
P. O. Box 028
Trenton, New Jersey 08625-0028
Tel. #(609) 292-1250
Fax. #(609) 777-1914

BOB MARTIN
Commissioner

M. Michael McCabe
Site Administrator
Jersey City PPG Chromium Sites

1/22/13

CONDITIONAL APPROVAL

Re: Remedial Action Work Plan
Metropolis Towers – Site 156
(Formerly Gregory Park Apartments)
270-280 Luis Munoz Marin Boulevard
Jersey City, New Jersey

Dear Mr. McCabe:

The New Jersey Department of Environmental Protection (Department) has completed review of the *Remedial Action Work Plan; Metropolis Towers – Site 156; (Formerly Gregory Park Apartments); 270-280 Luis Munoz Marin Boulevard; Jersey City, New Jersey* (RAWP) prepared by Civil & Environmental Consultants, Inc. (CEC) for PPG Industries dated November 16, 2012.

The Department hereby approves the RAWP, conditional upon submittal of all design deliverables in accordance with the Construction Milestone Schedule, dated 11/28/12, submitted via email from Emory McLean of CEC to Brian McPeak on December 3, 2012, as well as the schedule for submission of cut lines and sections submitted via email from Emory McLean to Brian McPeak on December 14, 2012.

If you have any questions regarding this matter, contact me at (609) 984-2905.

Sincerely,

Thomas J. Cozzi, Assistant Director
Site Remediation DEP

C: Brian McPeak, Project Manager
Dave Doyle, DEP

LoPilato, Alfred

From: Amin, Prabal <Prabal.Amin@WestonSolutions.com>
Sent: Wednesday, November 13, 2013 3:26 PM
To: bmcpeak@planningprogress.com; 'Cozzi, Tom'; Doyle, David; dspader@erfs.com
Cc: Michael McCabe; Gibbons, Thomas; Mark Terril; Keith Prins; LoPilato, Alfred
Subject: RE: Site 156 - Boiler Room Tech Memo

Weston and the New Jersey Department of Environmental Protection (Department) have reviewed the subject technical memorandum and are providing the following comments:

1. The Department requests that PPG retain the services of a licensed professional structural engineer to evaluate and identify permanent options for remediating the impacted column, impacted floor adjacent to the column and contaminated soils beneath the concrete slab in the boiler room.
2. Please perform a feasibility analysis of the identified permanent remedial options, and present the results of this analysis and the proposed permanent remedy for all impacted media within a RAWP addendum. This RAWP Addendum will also include the findings from the structural assessment and consolidate all of the results from the various investigations performed to date in the boiler room. Note that the RAWP Addendum should be presenting the final remedial options rather than interim remedial measures (IRMs).
3. PPG must maintain the IRMs already in place (i.e., caution tape, plastic/plywood, and notifications), must inspect these IRMs on a regular basis, and must repair IRMs immediately as necessary.
4. The Department does not agree that the schedule for implementing additional remedial actions within the boiler room should be tied to the completion of the remedial excavations in Layout Areas 2/3. The RAWP Addendum must be presented to the Department **within 45 days**, and should include a proposed schedule for implementation.

If you have any questions, please do not hesitate to contact me.

Thanks.

Prabal N. Amin, P.E.

Weston Solutions, Inc.

205 Campus Drive

Edison, NJ 08837

prabal.amin@westonsolutions.com

Voice: 732-417-5857

Fax: 732-417-5801

From: bmcpeak@planningprogress.com [<mailto:bmcpeak@planningprogress.com>]

Sent: Friday, October 11, 2013 5:46 PM

To: 'Cozzi, Tom'; Doyle, David; dspader@erfs.com; Amin, Prabal

Cc: Michael McCabe; Gibbons, Thomas; Mark Terril; Keith Prins; LoPilato, Alfred

Subject: FW: Site 156 - Boiler Room Tech Memo

Please see email below together with the attached memorandum regarding the results.

Brian McPeak

Planning Progress, LLC

Site Administrator | Project Manager

From: Gibbons, Thomas [<mailto:thomas.gibbons@cbi.com>]
Sent: Friday, October 11, 2013 4:30 PM
To: bmcpeak@planningprogress.com
Cc: 'Michael McCabe'; LoPilato, Alfred; Keith Prins; Terril, Mark
Subject: Site 156 - Boiler Room Tech Memo

Brian,

As discussed during our last PM Conference Call, AECOM has prepared the attached Technical Memorandum, which summarizes the remedial investigation activities, findings and proposed response actions within the Metro Towers Boiler Room.

This memo is ready for your review and distribution to JCO team.

Please let me know if you have any questions or concerns.

Thank you, Tom



Thomas M. Gibbons, PMP
PPG Project Manager, NGA Sites
Environment & Infrastructure
Cell: 917-593-4836
Email: thomas.gibbons@cbi.com

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LoPilato, Alfred

From: bmcpeak@planningprogress.com
Sent: Friday, September 12, 2014 3:58 PM
To: Cozzi, Tom; Doyle, David; Amin, Prabal; Spader, David
Cc: McCabe, Michael (jcsiteadministrator@earthlink.net); Keith Prins; Terril, Mark; Gibbons, Thomas; LoPilato, Alfred
Subject: FW: Site 156 - Preliminary Results

Please see the information presented below regarding the preliminary results from the boiler room sampling. I have requested that Tom Gibbons forward the actual numerical results as well.

While I anticipate an initial discussion of this during Monday's Project Mangers Call I suspect that we will need to set a time for a fuller discussion later in the week.

Brian McPeak
Planning Progress, LLC
Site Administrator | Project Manager
Chromium Cleanup Partnership
bmcpeak@planningprogress.com

From: Gibbons, Thomas [<mailto:thomas.gibbons@cbi.com>]
Sent: Friday, September 12, 2014 3:49 PM
To: bmcpeak@planningprogress.com
Cc: PE Mark E. Terril (terril@ppg.com); Keith Prins (Prins@ppg.com); Michael McCabe; Alfred LoPilato (Alfred.LoPilato@aecom.com)
Subject: Site 156 - Preliminary Results

Brian,

AECOM just reported that they received preliminary results for samples collected from the test pit in the boiler room of building 2. Results indicate that there were no exceedances for total chrome or Cr6 in soil, no exceedance for Cr6 in concrete, and the water sample slightly exceeded the ground water quality standard for total chrome. The associated metals data is still coming in but preliminary results for chrome and hex chrome look good.

We can schedule a conference call to review in more detail next week if needed.



Thomas M. Gibbons, PMP
Program Manager
PPG Chrome – NGA Sites
Cell: 917-593-4836
Email: Thomas.Gibbons@cbi.com

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LoPilato, Alfred

From: bmcpeak@planningprogress.com
Sent: Wednesday, October 22, 2014 3:46 PM
To: Gibbons, Thomas
Cc: PE Mark E. Terril (terril@ppg.com); Keith Prins (Prins@ppg.com); Michael McCabe; LoPilato, Alfred; Amin, Prabal; Spader, David
Subject: RE: Metro Towers Boiler Room - Additional Concrete and Soil Sampling

Tom:

Following consultation with Prabal Amin and a discussion with Mike McCabe, Mike and I have determined that there is insufficient time for Weston to review these materials, confer with the Department and provide comments prior to the work being implemented in accordance with the schedule you have outlined below. Given that determination, the memo has not been distributed.

We assume that PPG will implement the work outlined in the Tech Memo in reliance on the professional judgments made by AECOM and CBI that the work detailed in the Tech Memo will generate information that can be used to resolve the Department's comments regarding the soils data and will enable AECOM to finalize the AOC specific RI/RAWP requested by the Department.

If you have any questions, please feel free to call.

Brian McPeak
Planning Progress, LLC
Site Administrator | Project Manager
Chromium Cleanup Partnership
bmcpeak@planningprogress.com

From: Gibbons, Thomas [<mailto:thomas.gibbons@cbi.com>]
Sent: Tuesday, October 21, 2014 2:42 PM
To: bmcpeak@planningprogress.com
Cc: PE Mark E. Terril (terril@ppg.com); Keith Prins (Prins@ppg.com); Michael McCabe; Alfred LoPilato (Alfred.LoPilato@aecom.com)
Subject: FW: Metro Towers Boiler Room - Additional Concrete and Soil Sampling

Brian,

AECOM has prepared the attached Tech Memo outlining our sampling and analysis plan to address one soil exceedance with a data usability issue, and further delineate the extent of impacts to the floor near the impacted column.

We have scheduled the concrete chip sampling for this Friday, October 24 and will expedite sample turn around. These samples are being collected in furtherance of selecting final remedy, which has an Exhibit 2 milestone of November 2014.

In addition, AECOM is scheduling a driller for the advancement of 3 soil borings, which will be done some time in November. I'll let you know as soon as we have a firm date.

If Weston wishes to comment on the collection of the concrete chip samples, we would ask for those comments prior to October 24th in order to allow sufficient time to meet the November milestone.



Thomas M. Gibbons, PMP

Program Manager

PPG Chrome – NGA Sites

Cell: 917-593-4836

Email: Thomas.Gibbons@cbi.com

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Whooley, Kathy

From: Amin, Prabal <Prabal.Amin@WestonSolutions.com>
Sent: Thursday, September 10, 2015 11:18 AM
To: Mikaelian, Scott; Doyle, David
Cc: O'Connell Kozik, Mary; Krowitz, Lisa; Whooley, Kathy; Feinberg, Richard [C]; Brian McPeak (bmcpeak@planningprogress.com); Amend-Babcock, Laura; Yang, Yunru
Subject: RE: Data Validation Procedures - request for technical call with Weston chemist(s)

Scott,

The recommendation in your email of July 28th (bottom of this chain) is acceptable to NJDEP. We don't envision the need for a conference call, unless you feel otherwise.

Thanks.

Prabal

Prabal N. Amin, P.E., LSRP

Weston Solutions, Inc.

205 Campus Drive

Edison, NJ 08837

prabal.amin@westonsolutions.com

Office: 732-417-5857

Cell: 609-240-5289

Fax: 732-417-5801

From: Mikaelian, Scott [mailto:Scott.Mikaelian@aecom.com]
Sent: Wednesday, September 09, 2015 11:29 AM
To: Doyle, David; Amin, Prabal
Cc: O'Connell Kozik, Mary; Krowitz, Lisa; Whooley, Kathy; Feinberg, Richard [C]; Brian McPeak (bmcpeak@planningprogress.com)
Subject: RE: Data Validation Procedures - request for technical call with Weston chemist(s)

Dave/Prabal—

Are you available this Friday between 12 – 3PM to discuss data validation procedures?

-Scott

From: Mikaelian, Scott
Sent: Wednesday, September 02, 2015 9:19 AM
To: 'Doyle, David'; Amin, Prabal
Cc: O'Connell Kozik, Mary; Krowitz, Lisa; Whooley, Kathy; Feinberg, Richard [C]; Brian McPeak (bmcpeak@planningprogress.com)
Subject: RE: Data Validation Procedures - request for technical call with Weston chemist(s)

Dave/Prabal-

We would like to have a call to discuss this on Friday, September 11. We are available almost any time.

Attendees from AECOM will be myself and Kathy Whooley, and our chemists Mary Kozik and Lisa Krowitz.

Please let me know the best time for you both (and presumably a Weston Chemist) and I will send an invite.

Thank you.

-Scott

From: Doyle, David [<mailto:David.Doyle@dep.nj.gov>]

Sent: Wednesday, August 19, 2015 9:33 AM

To: Feinberg, Richard [C]; Brian McPeak (bmcpeak@planningprogress.com); jcsiteadministrator@earthlink.net

Cc: Amin, Prabal; McGuire, Brian - Environmental; O'Connell Kozik, Mary; Whooley, Kathy; Ruitter, Aimee; Quan, Hue; LoPilato, Alfred; Terril, Mark; Mikaelian, Scott; Cozzi, Tom; Cozzi, Tom; Prins, Keith (prins@ppg.com)

Subject: RE: Data Validation Procedures - request for technical call with Weston chemist(s)

FYI. I will be out of the office starting 8/21/15 and back 9/1/15.

Dave

David S. Doyle, Case Manager
NJDEP Site Remediation Program
Office of Assistant Commissioner
Mail Code 401-06
PO Box 420
Trenton, NJ 08625-0420
Tel: (609) 292-2173
Fax: (609) 292-0848
david.doyle@dep.state.gov

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From: Feinberg, Richard [C] [<mailto:feinberg@ppg.com>]

Sent: Tuesday, August 18, 2015 10:47 AM

To: Brian McPeak (bmcpeak@planningprogress.com)

Cc: Amin, Prabal; Doyle, David; McGuire, Brian - Environmental; O'Connell Kozik, Mary; Whooley, Kathy; Ruitter, Aimee; Quan, Hue; LoPilato, Alfred; Terril, Mark; Mikaelian, Scott

Subject: RE: Data Validation Procedures - request for technical call with Weston chemist(s)

Brian,

We would like to have this call. I am ok with Scott and Mary calling Prabal and Dave Doyle to discuss, if it ok with you.

Please let me know.

Thanks,

Rich

From: Mikaelian, Scott [<mailto:Scott.Mikaelian@aecom.com>]

Sent: Tuesday, July 28, 2015 8:21 AM

To: Brian McPeak (bmcpeak@planningprogress.com)

Cc: Amin, Prabal; David Doyle (david.doyle@dep.state.nj.us); Feinberg, Richard [C]; McGuire, Brian - Environmental; O'Connell Kozik, Mary; Whooley, Kathy; Ruitter, Aimee; Quan, Hue; LoPilato, Alfred; Terril, Mark

Subject: Data Validation Procedures - request for technical call with Weston chemist(s)

Brian-

Questions have come up regarding when the New Jersey Department of Environmental Protection ("NJDEP") Data of Known Quality Protocols ("DKQP") should be implemented for data validation under the JCO Program. Currently the following protocols are referenced as guidance for the data validation procedures:

For full Hexavalent Chromium validation:

- NJDEP Office of Data Quality SOP 5.A.10, Rev 3 (September 2009), SOP for Analytical Data Validation of Hexavalent Chromium - for USEPA SW-846 Method 3060A, USEPA SW-846 Method 7196A

For limited validation that includes inorganics (metals and wet chemistry) and organics (EPA Region 2 guidance is used in the absence of NJ specific requirements) :

- NJDEP Office of Data Quality SOP 5.A.16, Rev 1 (May 2002), Quality Assurance Data Validation of Analytical Deliverables for Inorganics (based on USEPA SW-846 Methods);
- Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B, SOP HW-24, Revision 2; and
- Validating Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8270, SOP HW-22, Revision 4.

It is our understanding that validation of hexavalent chromium data will continue to be performed using NJDEP SOP 5.A.10 Rev 3 which provides the same validation guidance as the DKQP document. For sites under the direction of an LSRP, the DKQP have been implemented for laboratory reports and data validation of all parameters.

A question arises for the non-chromium parameters such as metals, volatile and semivolatile organics, PCBs, etc. at chromium sites where limited validation has been performed using the NJDEP or EPA Region 2 guidance referenced above since the start of this program; should this validation now follow the DKQP? A change to the DKQP will require the laboratory to provide additional information and will require review of information that has not been reviewed in detail in limited validation; there may also be differences in guidance on control limits that would impact decisions on data qualification. We don't anticipate the DKQP would produce major changes in the approach to data validation and qualification decisions we would just like to have a clear understanding of the guidance we should reference and use for validation of non-chromium data at chromium sites going forward.

The differences between the procedures are relatively minor. We recommend continuing the use of full validation for hexavalent chromium, and limited validation for metals, volatile and semivolatile organics, PCBs, etc. so that we are consistent with historic procedures. Since we are nearing the end of the program, it does not seem to be appropriate or necessary to change course at this time.

We would like to have a call with the Weston chemist(s) to discuss this and come to agreement on a path forward. Please let us know whether you can help coordinate this call.

Thank you.

-Scott H. Mikaelian, P.E.
Associate Vice President
Program Manager
Environment
D 732.564.3624 M 732.757.9425
scott.mikaelian@aecom.com

AECOM

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Site Remediation Program
401 E. State Street, 6th Floor
P. O. Box 028

Trenton, New Jersey 08625-0028
Tel. #(609) 292-1250

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

22 October 2015

W. Michael McCabe
Site Administrator
Jersey City PPG Chromium Sites

**Re: Remedial Investigation Report/Remedial Action Work Plan
Building No. 2 – Boiler Room Subslab Soil and Interior Concrete Surfaces
Hudson County Chromate 156;
270-280 Luis Munoz Marin Boulevard, Jersey City, New Jersey
NJDEP Program Interest Number: G000008770
Case Tacking Number: 04063**

Dear Mr. McCabe:

Please find herein the New Jersey Department of Environmental Protection (Department) comments on the September 2015 *Remedial Investigation Report/Remedial Action Work Plan; Building No. 2 – Boiler Room; Subslab Soil and Interior Concrete Surfaces; Hudson County Chromate 156; 270-280 Luis Munoz Marin Boulevard; Jersey City, New Jersey; NJDEP Program Interest Number: G000008770; Case Tracking Number: 104063 (RIR/RAWP)*, prepared by AECOM Environment (AECOM) for PPG Industries, Inc. (PPG). Supplemental information which was submitted via email on 10/6/15 from CB&I was also included in this review.

GENERAL COMMENTS

1. Consistent with N.J.A.C. 7:26E-4.9(a)2, the Receptor Evaluation must be updated and submitted with the Remedial Investigation Report.
2. All data related to the area of concern must be presented and discussed in the RIR/RAWP, and consistent with N.J.A.C. 7:26E-4.9(a)6i, all remedial investigation findings, including exceedances, must be identified/discussed. Details are provided in the Specific Comments, below.
3. PPG must ensure that the description of the remedy in the RIR/RAWP is internally consistent. Inconsistencies were identified between the Engineering Report and the RIR/RAWP text/deed notice.
4. It is the Departments understanding that PPG will make all revisions indicated in CB&I's 10/6/15 email in the revised RIR/RAWP.

SPECIFIC COMMENTS

1. Section 2.7: Please update the language in this section of the RIR/RAWP to reflect the updated Receptor Evaluation being developed as per General Comment 1.
2. Section 3.2 and Table 1: As per N.J.A.C. 7:26E-1.6(b)6, all sampling results must be presented. Also, the text and table should be internally consistent.
 - a. Initial Characterization - Table 1 does not include sampling results from the AOC 3 Initial Characterization. See General Comment 2. Please revise.
 - b. Phase 1 - The text indicates that three surficial concrete samples were collected. However, Table 1 indicates that the concrete samples were collected from a depth of 10-12 inches. Please resolve discrepancy.
 - c. Phase 2 - The text indicates that ten surficial slab samples were collected on February 2013, yet Table 1 indicates that some of these samples were collected from the column and one was collected from the slab “at depth”. Please resolve discrepancy.
 - d. Phase 3 - The text indicates that five surficial slab samples were collected on September 11, 2013, yet Table 1 presents data for only two samples (one of which was collected in duplicate). See General Comment 2. Please resolve this discrepancy. Also note that all samples which the text indicates were collected during the Phase 3 investigation are identified as Phase 2 samples on Table 1. Please resolve.
 - e. Phase 4 - All samples which the text indicates were collected during the Phase 4 investigation are identified on Table 1 as Phase 3 samples. Please resolve.
 - f. The investigation conducted around the pile cap, from September 4, 2014 through September 9, 2014 is not discussed in Section 3.2. These samples are identified in Table 1 as being associated with Phase 4 of the investigation. Please include a discussion of this investigation phase in Section 3.2.
 - g. Phase 5 - The text indicates that six surficial concrete samples were collected during on October 24, 2014, yet Table 1 presents data for eight concrete samples. In addition, the text indicates that three soil samples were collected on October 30, 2014, while Table 1 indicates there were four soils samples collected, and they were collected on October 29, 2014. Please resolve these discrepancies.
 - h. Phase 6 - Table 1 indicates the collection of concrete and precipitate samples associated with the Phase 6 investigation. Section 3.2 should be revised to include discussion of Phase 6.
3. Section 3.4.1.1: Please identify what soil sampling methodology(ies) were used for soil borings not described in the text (all borings except C1-C5 and C2-1). Also describe sampling methods used to collect soil samples from the test pit installed between the boilers.
4. Section 3.4.2: The text states “...but starting in Phase 5, the analyses were reduced to Cr⁺⁶ only for concrete samples.” Table 1 indicates that numerous soil samples collected

during Phase 5 were also analyzed only for Cr⁺⁶ analysis. Please revise the text to be consistent with Table 1.

5. Section 3.5: Please update the decontamination procedures section to include decontamination of the down-hole drilling equipment (and management of the investigation-derived waste) used to install the boring during the pile cap investigation, the results of which are depicted on Figure 10.
6. Section 3.8: Please update this section to discuss the data from Phase 6, and in particular the reliability of the rejected datum associated with field sample 156-Q2-2015.
7. Section 4.1: Please ensure sampling results for the AOC3 Site Characterization sampling event are included on Table 1, as stated in the text of this section. Also please include the location and result of the concrete sample collected during this event on Figures 3 and 11.
8. Section 4.4, page 17, third paragraph: The text states "...which was collected approximately 0.7 feet north of the column, did exceed the CrSCC and exhibited a Cr⁺⁶ concentration of 691.3 mg/kg." Please note in the text that this sample was collected in duplicate, with a duplicate sample Cr⁺⁶ concentration of 371 mg/kg. This is the concentration reported for this sample on Figure 5.
9. Section 4.4, page 17, eighth paragraph: Please remove the sentence "Based on these results, concentrations of Cr⁺⁶ are delineated on the north side of the column" since subsequent sampling showed the presence of Cr⁺⁶ exceedances to the north of those samples (which were subsequently delineated further to the north).
10. Section 4.4, page 17, eighth paragraph: The text states "It is important to note that a definitive source of the chromium impacts had not been determined. CCPW was not discovered in soil sampling conducted beneath the boiler room floor. Based on the data and evidence thus far, it is possible the source of Cr6 (*sic*) originated inside the boiler room and is not related to the presence of CCPW." Please remove these sentences since they appear to be an artifact from an earlier technical memorandum.
11. Section 4.5, page 19, second paragraph following bullets: In order to avoid confusion for the reader, please revise the language to indicate whether the actions which "should be" done were actually implemented during RI field work. This also appears to be an artifact from earlier technical memoranda.
12. Section 4.6.1, fourth paragraph: Additional vertical delineation samples were also collected for location C4-1W in December 2014. See General Comment 2. Please revise text.
13. Section 4.6.1, fifth paragraph: Please delete the sentence "As indicated previously, the remediation of soils will be conducted outside the scope of this RIR/RAWP" since the soils remedy for AOC 3 is included in this RIR/RAWP.

14. Section 4.7, paragraph following first table: The text states “the sampling results are presented in Table 1.” Please include the sampling results in Table 1.
15. Section 4.7, second table: Please present the data for sample 156-Q2-2015 in a consistent manner with Table 1 and Figures 5 and 11. The results for this sample were rejected, and the result should be presented as “R”. Additionally, a discussion of this rejected datum should be included. Also see Specific Comment 6.
16. Section 5.1, fourth bullet, sixth bullet, seventh through tenth bullets and twelfth bullet: As discussed in Section 4.5 of the RIR/RAWP, sampling at locations G19 and G20 and the video inspection activities were all performed during Phase 4 of the investigation. Please move these findings to Section 5.2 of the RIR/RAWP.
17. Section 7.1.1 and Appendix F: The description of the proposed remedy in Section 7.1.1 is not consistent with its description in the December 2014 memorandum in Appendix F. See General Comment 3. Specifically, Alternative 1 of the December 2014 memorandum recommends the installation of “a 3” thick fiber reinforced floor topping over the floor, and placing a metal lath and concrete mortar (trowel on) around the column” with subsequent armoring of the column by (minimum) ¼-inch diamond steel plate. Section 7.1.1 calls for diamond steel plate on the column and floor slab, without the floor topping on the floor or lath/mortar on the column. Please resolve discrepancy. Also, please correct the reference to the Appendix containing the draft deed notice (Appendix I rather than E as referenced).
18. Section 7.1.2: Please change “three RA alternatives were developed” to “four RA alternatives were developed.”
19. Section 8.4: The text refers to the containment alternative as Alternative 1. While this is the correct alternative for concrete, the soil containment alternative is Alternative 2. Please revise the text accordingly.
20. Section 8.5: Please add the phrase “and financial assurance is established for on-going maintenance of the engineering control” immediately after the phrase “and the Deed Notice is filed with the appropriate local government agency.”
21. Section 8.9: Please correct the citation provided, as the one provided does not exist. In addition, note that the remedial action schedule must also include provision of financial assurance for the maintenance of the engineering control.
22. Section 8.13: Performance monitoring must also include visual inspections of the condition of the Engineering Control. Please revise text to include.
23. Table 1:
 - a. The file containing Table 1 also contains two other tabs with additional information. Please explain the purpose of this information and whether it is necessary for inclusion in the RIR/RAWP.

- b. Please identify what sample type “FD” represents in the Table Notes.
 - c. Please identify the correct sample date associated with sample 156-IRM-2015Q1-CONC collected during the Phase 6 investigation.
 - d. Please ensure all samples are “assigned” to the correct Phase of investigation. See Specific Comment 2.
 - e. Please ensure all data are included (e.g., samples collected during initial characterization phase; sample C2-1; sample C4-1W collected from a depth of 4-4.5; sample 156-IRM-2015Q1-CONC; etc.). See General Comment 2.
24. Figure 2: The text in Section 2.8.1 of the RIR/RAWP states that Figure 2 shows the locations of AOC 1 and AOC 2. This figure shows the locations of AOC 1 and AOC 3. Please make the text and figure consistent.
25. Figure 3: Please revise the sample names for the three samples identified as “Test Pit” on this figure to be consistent with Table 1 and the text of the RIR/RAWP. Also please include vertical delineation data associated with sample location C4-1W collected on 12/19/14.
26. Figure 8 and Table 1: The sample heights above the floor on Figure 8 (within parentheses in Figures 8) generally do not agree with the indication of those sample heights above the floor stated in Table 1 (under the Sample Depth column), nor are they consistent with the sample heights discussed in the text of Section 4.4. Please make this information internally consistent. Also, there is a reference on Figure 8 to “Previous Result <20” at one sample location. This sample should be discussed/presented within the RIR/RAWP; see General Comment 2.
27. Figure 10: Consistent with the requirements at N.J.A.C. 7:26E-1.6(b)6iii, the aqueous sample result should be reported in units of ug/L rather than mg/L. Also, the aqueous sample result for total chromium should be presented and shown in red to indicate that this was an exceedance of the Department’s groundwater quality standard for total chromium. Note 3 should be revised to document that the groundwater result is for total chromium rather than Cr⁺⁶.
28. Figure 11: Please confirm that the remedial action engineering control will be installed beneath the boilers. Please also clarify whether the engineering control will be implemented beneath the Electrical Tower identified on this figure adjacent to the eastern boiler.
29. Figure 12: This figure depicts the results for a sample collected at a depth of 4-4.5 ft from sample location C4-1W. Please ensure this result is included on Table 1.
30. Appendix F: The revised Muesser Rutledge Feasibility Study, provided to address high-level comments on the RIR/RAWP still does not agree with the remedy described in the RIR/RAWP. Specifically, the remedy designed by Muesser Rutledge includes structural fiber wrap (Sikawrap), isolation membrane/vapor barrier (Biuthene), metal lath and concrete mortar and steel diamond-plate for the column while the RIR/RAWP does not

include the metal lath/concrete mortar. For the floor, the remedy designed by Muesser Rutledge includes an isolation membrane/vapor barrier (Liquid Boot) and a 3-inch fiber-reinforced concrete floor covering, while the RIR/RAWP calls for Liquid Boot and steel diamond-plate. The RIR/RAWP must be internally consistent. See General Comments 3 and 4.

31. Appendix I, Exhibit B-2: Please ensure all changes made to Table 1 as per Specific Comments 2 and 23, are also captured in Exhibit B-2 of the draft Deed Notice.
32. Appendix I, Exhibit C-2: Figures P-1 and S-1 are not consistent with the remedy as described in Section 7.1 of the RIR/RAWP (both the versions submitted with the RIR/RAWP and the revised versions submitted on 10/6/15). Also, the text of Exhibit C-2 is not consistent Figures P-1 and S-1 in the Draft Deed Notice. Please make all descriptions of the remedy internally consistent. See General Comment 3.
33. Appendix J: Please include an answer to the question “Was an Order of Magnitude Evaluation Conducted” for both AOC 2 and AOC 3 in the CID.
34. Appendix J: Since soils beneath the boiler room floor are impacted with hexavalent chromium at concentrations in excess of remediation standards, the Additional Exposure Route for AOC 3 should identify “Ingestion/Dermal” rather than remain blank. Please revise.
35. Appendix J: Please revise the entry for “Applicable Remedial Standards” to “Remediation Standards:” rather than “Site-Specific ARS.”

If you have any questions regarding this matter, contact me at (609) 984-2905.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Thomas J. Cozzi', is written over a light blue grid background.

Thomas J. Cozzi, Assistant Director
Site Remediation DEP

C: Brian McPeak, Project Manager
Dave Doyle, DEP

LoPilato, Alfred

Subject: FW: Metropolis Towers/PPG Boiler Supports

From: Alki Antonopoulos [<mailto:AAntonopoulos@almarealty.com>]

Sent: Wednesday, October 5, 2016 9:30 AM

To: Jeff Worden <jeff@worden-pr.com>

Subject: Fw: FW: Metropolis Towers/PPG Boiler Supports

Hi Jeff,

Below are all the emails regarding the work that we have been discussing for the rails of the boilers and if it will pass inspection from the state. Please review the below emails from American Boilers and the Bureau of Boiler & Pressure. I believe it is clear as to what we have discussed regarding the work. Let me know if there is anything else you need.

Thank You,

Alki Antonopoulos

Alma Realty Corp.

201-435-6200 Office

201-434-7201 Fax

646-261-2651 Cell

Aantonopoulos@almarealty.com

From: lewis@americanboilercompany.com lewis@americanboilercompany.com <lewis@americanboilercompany.com>

Sent: Wednesday, October 5, 2016 9:24 AM

To: Alki Antonopoulos

Subject: Fwd: FW: Metropolis Towers/PPG Boiler Supports

Alki,

Here is the official word from Bureau of Boiler & Pressure.

Lew

American Boiler Company

636 South 21 Street

Irvington, NJ 07111

973-923-1999 - Phone

908-720-0846 - Cell Phone

Americanboilercompany.com

----- Original Message -----

From: Gary Frank <gfrank@americanboilercompany.com>

To: <lewis@americanboilercompany.com>, <sfox@americanboilercompany.com>, <agrim@americanboilercompany.com>, <kurt@americanboilercompany.com>, <mike@americanboilercompany.com>, <jay@americanboilercompany.com>

Date: October 5, 2016 at 9:10 AM

Subject: FW: Metropolis Towers/PPG Boiler Supports

Lewis,

Below is the official response issued from the New Jersey Bureau of Boiler & Pressure Vessel Compliance. Also please be advised that Easco the original equipment manufacturer has indicated that the boiler was not designed for the support rails to be encased in concrete and had no comment on the proposed installation method on the basis that no engineering assessment, study and or calculations were ever performed for this method of installation.

It is the recommendation of American Boiler Company that the boilers be elevated and that the support rails should not be encased in the new concrete floor as proposed.

Thanks

Gary Frank, President

American Boiler Company

NY Office: 333 W 52nd Street, NY,NY 10019

NJ Office: 636 S 21st Street, Irvington, NJ 07111

Tel: (973) 923-1999

Fax: (973) 923-1099

Cell: (908) 528-6061

Gfrank@americanboilercompany.com

www.AmericanBoilerCompany.com

-----Original Message-----

From: Gary Frank [<mailto:gfrank@americanboilercompany.com>]

Sent: Wednesday, October 5, 2016 8:44 AM

To: 'Amuzie, Michael' <Michael.Amuzie@dol.nj.gov>

Cc: 'Washington, Milton' <Milton.Washington@dol.nj.gov>; 'McCabe, Patrick' <Patrick.McCabe@dol.nj.gov>; 'Kronenberger, Thomas' <Thomas.Kronenberger@dol.nj.gov>

Subject: RE: Metropolis Towers/PPG Boiler Supports

Assistant Chief Amuzie, thank you for your response regarding the supports for the boiler at Metropolis Towers. We will advise our client accordingly.

Thanks

Gary Frank, President

American Boiler Company

NY Office: 333 W 52nd Street, NY,NY 10019 NJ Office: 636 S 21st Street,

Irvington, NJ 07111

Tel: (973) 923-1999

Fax: (973) 923-1099

Cell: (908) 528-6061

Gfrank@americanboilercompany.com

www.AmericanBoilerCompany.com

-----Original Message-----

From: Amuzie, Michael [<mailto:Michael.Amuzie@dol.nj.gov>]

Sent: Tuesday, October 4, 2016 10:11 AM

To: gfrank@americanboilercompany.com

Cc: Washington, Milton <Milton.Washington@dol.nj.gov>; Mccabe, Patrick <Patrick.Mccabe@dol.nj.gov>; Kronenberger, Thomas <Thomas.Kronenberger@dol.nj.gov>

Subject: FW: Metropolis Towers/PPG Boiler Supports

Mr. Frank:

Encasing any of the boiler's supports in concrete would not be in compliance with the manufacturers recommendations for installation. The concrete has the potential to alter the supports rates of expansion due to temperature changes and would cause undue stress on the boiler. Therefore, the request is denied.

In order to reopen the case, the MIBPVC shall require such action regarding the mechanical and/or structural integrity of the boiler to be reviewed by the original equipment manufacturer (OEM). Please be guided accordingly.

Michael O. Amuzie

Assistant Chief/Examining Board Member

Department of Labor and Workforce Development Bureau of Boiler & Pressure Vessel Compliance

1 John Fitch Plaza, 3rd Floor

P. O. Box 392

Trenton, New Jersey 08625.

Voice: (609) 984-3001

Fax: (609) 984-1577

-----Original Message-----

From: gfrank@americanboilercompany.com

[<mailto:gfrank@americanboilercompany.com>]

Sent: Friday, September 16, 2016 9:27 AM

To: Amuzie, Michael

Cc: gfrank@americanboilercompany.com; agrim@americanboilercompany.com; Fox, Stu

Subject: Metropolis Towers/PPG Boiler Supports

Dear Mike, attached is a letter regarding the boiler support rails at Metropolis Towers in Jersey City. Please review it and contact me at your earliest convenience.

Thanks

Gary Frank, President

American Boiler Company

NY Office: 333 W 52nd Street, NY,NY 10019 NJ Office: 636 S 21st Street,

Irvington, NJ 07111

Tel: (973) 923-1999

Fax:(973) 923-1099

Cell:(908) 528-6061

Gfrank@americanboilercompany.com <<mailto:Gfrank@americanboilercompany.com>>

www.AmericanBoilerCompany.com <<http://www.AmericanBoilerCompany.com/>>

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