Section 2 – Earth Resources

Figures (provided following the text)

Tables

Appendices

List of Acronyms and Abbreviations – Section 2

µg/l	microgram per liter
ACM	asbestos-containing material
ACT	Advanced Cleanup Technologies
AMCO	American Magnesium Company
AOC	Area of Concern
ASTM	American Society for Testing and Materials
BUD	Beneficial Use Determination
ca.	circa
CEA	Critical Environmental Area
COC	constituents of concern
COD	chemical oxygen demand
CVE	Cricket Valley Energy Center, LLC
DCDOH	Dutchess County Department of Health
DEIS	Draft Environmental Impact Statement
EPC	Engineering, Procurement, and Construction
ESA	Environmental Site Assessment
fbg	feet below ground
FEIS	Final Environmental Impact Statement
former Rasco parcel	the 57-acre land south of the Project Development Area now optioned by CVE and formerly utilized by RASCO Materials LLC
HREC	Historic Recognized Environmental Condition
ICR-56	Industrial Code Rule 56
ICRU	Industrial criteria, restricted use (a Soil Cleanup Objective)
LBP	lead-based paint
mg/kg	milligrams per kilogram
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NY AWQS	Technical and Operational Guidance Series New York Ambient Water Quality Standards
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation

NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCS	Petroleum-Contaminated Soil
ppm	parts per million
Project Development Area	the 57-acre portion of the 193.5-acre Property proposed for development
Property	the 193.5-acre property optioned by CVE
PSI	Professional Service Industries, Inc.
RACM	regulated asbestos-containing materials
RAP	Remedial Action Plan
REC	Recognized Environmental Condition
remote Laydown Site	the 38.8-acre construction worker parking and laydown site located approximately 2.5 miles north of the Property
RCRA	Resource Conservation and Recovery Act
SCO	Soil Cleanup Objective
SPCC	Spill Prevention Control and Countermeasure
SPR	Spill Prevention Report
SVOC	semi-volatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
TCLP	Toxicity Characteristic Leaching Procedure
TDS	total dissolved solids
TOGS-GA	Technical and Operational Guidance Series Groundwater Effluent Limitations for Class GA
TPH-DRO	total petroleum hydrocarbons – diesel range organics
URU	Unrestricted use (a Soil Cleanup Objective)
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

2. EARTH RESOURCES

This section provides, for earth resource-related issues, a description of Project refinements since the Draft Environmental Impact Statement (DEIS) was filed, followed by a brief summary of impacts and proposed mitigation. Topics addressed in this section for the DEIS included existing structures and conditions associated with historical use; topography and slopes; soils; depth to bedrock; depth to groundwater; and the seismic setting. Comments received on the DEIS associated with earth resource issues are provided in Section 2.3, along with responses and reference to sections in the Final Environmental Impact Statement (FEIS) where additional information is provided for some topics.

2.1 Project Refinements Since the DEIS

Since the DEIS was filed, the 57-acre former Rasco parcel has been added to the Property (the former Rasco parcel; Figure 2-1). Including the former Rasco parcel in the Project Property provides an opportunity to further clean up environmental conditions on the overall Property. The addition of 57 acres to the Project site will allow Cricket Valley Energy Center, LLC (CVE) to move a substantial portion of the off-site parking and laydown needs onto the Project site (Figure 2-2). This is intended to reduce the impacts and traffic associated with the originally proposed remote parking area (the remote Laydown Site). CVE expects to use the remote Laydown Site for overflow parking during the peak construction months and as a staging area for construction material only. Following construction, the remote Laydown Site will be restored to its existing agricultural use, and the 57-acre former Rasco parcel will be restored and improved to provide for additional visual and noise buffer between the Project and land to the south.

A Phase I Environmental Site Assessment (ESA) had been described in Section 2.2.1.4 of the DEIS for the Property prior to the addition of the Rasco parcel (ARCADIS 2009). In order to provide a basis for further investigation, a Phase I ESA was completed for the former Rasco parcel (ARCADIS 2011). With this information and information from historical documents, CVE worked closely with the New York State Department of Environmental Conservation (NYSDEC) to develop and implement a scope of study for a Phase II ESA and a pre-demolition building characterization. Details of these studies, and the resulting actions incorporated into the Project design and construction, are addressed in Sections 2.3.2, 2.3.3 and 2.3.4 of the FEIS.

2.2 Summary of Project Impacts and Proposed Mitigation Measures

As discussed in Section 2.2 of the DEIS, no unique or unusual geologic conditions exist at the Property or the remote Laydown Site to preclude the proposed development of the Project. Geologically, the entire Property and the remote Laydown Site are underlain by Stockbridge Marble, also known locally as "limestone," and consisting of the mineral dolomite, a calcium-magnesium carbonate. Topographically, the remote Laydown Site is relatively flat with a gentle slope to the south. No unique or unusual geologic conditions preclude this area from being used for construction worker parking or equipment laydown.

The area has a mapped seismic hazard rating of "intermediate" within the four seismic zone ratings in the State of New York. The Project will be designed in compliance with the appropriate code to address this rating.

The Property is located on the western slope of a north-south trending ridge that separates the Swamp and Ten Mile rivers. The Project Development Area itself is relatively flat, although there is a gentle slope trending west toward the Swamp River. Soils underlying the Project Development Area are a mix of gravelly or sandy silt loams.

The original site occupant was the American Magnesium Company (AMCO), which refined magnesium from local limestone bedrock from ca. 1942 to 1966. Waste piles 1 through 4 (Figure 2-3) originated from AMCO operations, and consist primarily of the remnant limestone slag that remained after magnesium was extracted. Following AMCO was Mica Products Corporation (1966 - 1980), whose business was manufactured furniture products with plastic laminate finishes. Mica Products wastes were chiefly scrap lumber, sawdust and glue residues, deposited in the same areas as AMCO waste piles 1 and 2. As discussed in Section 2.3.2, the AMCO waste piles and Mica Products debris have been tested and shown to be non-hazardous; the location of the various waste piles is also illustrated in Figure 2-3.

There are multiple dilapidated buildings and structures on the Property related to former industrial uses. Materials associated with these structures include concrete, steel, wood and brick. In addition to the structures, there are miscellaneous solid waste pile disposal areas and debris. Previous site investigations have indicated that neither the site nor the surrounding properties have any active, current or open cases regarding a release of hazardous materials.

In May 1985, the Dutchess County Environmental Management Council's "Closed Landfill Committee," proposed that the Mica Products site be added to a list of Critical

Environmental Areas (CEA). The purpose of adding the site to this list would be to ensure environmental and health risks were fully evaluated before the site was altered. According to NYSDEC records, the CEA designation became effective in September 1985.[1] A Phase II Site Investigation conducted in 1991 (Lawler, Matusky & Skelly Engineers 1991) found that no extensive contamination from the previous operations exists at the site and recommended that the site be delisted from the Inactive Hazardous Waste Sites list and properly closed as a non-hazardous industrial landfill under the guidance of NYSDEC. NYSDEC concurred, and the site was delisted in November 1991(NYSDEC 1991).

A Waste Characterization Report, conducted in 1994 (Advanced Cleanup Technologies 1994) to characterize four specific waste pile disposal areas, did not indicate that hazardous waste thresholds were exceeded.

A subsurface investigation that was conducted in 1995 (Rust Environmental and Infrastructure 1995) indicated that no action had commenced regarding the closure of the waste piles previously studied. Further, it determined that there was a significant presence of tire crumb material, a pile of fire bricks, and a single isolated finding of polychlorinated biphenyls (PCBs) which were not observed at other sampling locations.

A Phase I ESA conducted in 2009 (ARCADIS 2009) identified four on-site Recognized Environmental Conditions (RECs), including: a number of inactive aboveground storage tanks; a former gas holder; a yellow sawdust-type material that extended into an on-site wetland; and the incomplete status of the closure of the waste piles discussed above. As part of Project construction, the above items will be removed from the site by qualified professionals, waste piles will be addressed, and the degraded wetland will be restored.

The Phase I ESA conducted in 2011 for the former Rasco parcel (ARCADIS 2011) identified five on-site RECs: stockpiled soil within the RASCO Materials building; three waste material piles; and an asphalt emulsion tanker located adjacent to the RASCO Materials building. These items have either been addressed or have been confirmed to be non-hazardous, with plans for debris disposal and retaining the material on-site subject to a Beneficial Use Determination (BUD) by NYSDEC.

Using information from the recent Phase I ESAs, as well as historical documentation available, a Phase II ESA scope was developed and implemented for the Project

[1] See "Critical Environmental Areas in Dutchess County" at: http://www.dec.ny.gov/permits/25113.html.

Development Area and the 13-acre portion of the former Rasco parcel that had been previously disturbed (ARCADIS 2012). In general, soil, groundwater, and surface water investigations indicate that the study area – while including some constituents consistent with industrial sites – has only three discrete locations where concentrations of pollutants indicate the need for remediation (as further described in Sections 2.3.2 and 2.3.4.1 of the FEIS), which will likely involve excavation and off-site disposal. Surface debris also exists throughout the Property that will be removed for proper disposal. Once those areas are addressed, through a Remedial Action Plan (RAP) subject to review and approval by the NYSDEC, existing soils and certain non-hazardous waste material are planned to be retained on-site pursuant to a BUD from NYSDEC.

Professional Service Industries, Inc. (PSI) conducted pre-demolition characterization surveys to evaluate potential environmental concerns associated with building demolition, debris removal, and potential beneficial re-use of materials on-site (PSI 2012a, b). In general, the building materials and debris piles sampled do not contain constituents of concern (COCs) at concentrations that would indicate the materials are a listed or characteristic hazardous waste. Laboratory analyses indicate that the building materials are inert and would be considered a solid waste, and in the case of the concrete and brick materials, acceptable for use as hard fill on-site. Demolition debris will be tested, sorted and properly disposed of at a licensed landfill, or recycled as fill, in accordance with applicable disposal regulations and subject to a BUD.

Following demolition, the Project Development Area and 13-acre temporary work area within the former Rasco parcel will be re-graded and excavated. Natural vegetation will be preserved wherever possible in accordance with the approved site plan and final clearing and grubbing plan. Temporary fences will be installed to protect equipment from damaging areas designated for preservation, including established wetlands. Before the start of below-grade preparation, all surface cover materials, including topsoil, will be removed, sorted, and stockpiled on the site within designated erosion control areas. Any additional excavated materials will be temporarily stockpiled and disposed of or used as fill. Stockpiles will be maintained in accordance with the preliminary Stormwater Pollution Prevention Plan (SWPPP) which has been developed in accordance with state regulations and final bid specifications (provided in Appendix 5-A of the DEIS and Appendices 5-A, 5-B and 5-C of the FEIS).

Due to anticipated shallow bedrock within the construction area, limited blasting may be necessary to excavate foundations and support structures. A detailed geotechnical survey will be conducted to determine if, or how often, blasting will need to occur. If deemed necessary, a detailed safety plan will be developed and a comprehensive public outreach

plan will be implemented. All blasting operations will adhere to applicable New York State statutes and regulations governing the use of explosives, as well as to the applicable requirements of Chapter 69 of the Town of Dover Town Code. The impacts of grading and blasting are expected to be minimal and confined to the Project Development Area. Regardless, appropriate precautions and notifications will be made to adjacent landowners, the Town of Dover Town Clerk, New York State Police, Dutchess County Sheriff's Office, and the Town of Dover Building Inspector per the timelines set forth in Chapter 69-13 of the Town Code.

Work at the remote Laydown Site (which will not be used to the same extent now that the former Rasco parcel is available for construction worker parking and laydown) will require temporary displacement of agricultural plantings and topsoil to ensure these plantings and original topsoil are available and protected to return the land to its original condition. The remote Laydown Site is designated prime farmland, and therefore all soils will be removed, temporarily stockpiled and ultimately restored in accordance with guidelines established by the New York State Department of Agriculture and Markets and the NYSDEC. All stockpiles will be protected from erosion.

The remote Laydown Site will be cleared and grubbed. A driveway will be cut through a narrow strip of wooded land located on the western edge adjacent to Route 22 (as shown in the preliminary SWPPP provided in Appendix 5-C of the FEIS). Standard excavation equipment and techniques will be used for these activities which will be conducted in accordance with the SWPPP. The temporary parking area surface will consist of coarse material, such as gravel, to help prevent channels and ruts and to minimize the potential for tracking soil onto public roadways. Immediately following its use as a parking and storage area, all imported fill, lighting and fencing and any other installed items will be removed. In areas where topsoil was removed, soil decompaction will be conducted prior to soil replacement. The soil will be reseeded to maintain consistency with the adjoining field, and will be monitored to identify any agricultural impacts associated with the restoration and, if required, additional mitigation will be provided.

Prior to operation, a Spill Prevention Control and Countermeasures Plan (SPCC) and Spill Pollution Reduction (SPR) Plan will be developed to detail both general and facility-specific methods to prevent a release of oil or hazardous materials into the environment.

2.3 Responses to Comments on the DEIS

Table 2-1 provides a summary of comments received relative to this topic, and provides a response or guides the reader to the location of the response within this section of the FEIS.

Table 2-1 Responses to Comments on the DEIS Regarding Earth Resources			
Author	**Summary**	**Comment Number**	**Response**
C.L.J. Wood, Oblong Land Conservancy	…We are very pleased to note that the proposal will conserve some 74 acres in a sensitive area adjacent to the Swamp River and our own "Curruth Preserve," and will provide for some remediation of formerly degraded wetlands. It will also clean-up an old industrial area that is a blight upon the landscape and in so doing will set a new standard for developments in the immediate area.	12-2	CVE has proposed to leave all property west of the railroad track (79 acres) in its natural state through incorporation of a conservation easement. In addition, the 57-acre former Rasco parcel, following use of a portion of this area during the construction period, is not planned for any future Project use. Detailed investigation regarding site conditions has occurred, as discussed in Section 2.2.1 of the DEIS, and clean-up and remediation efforts are further discussed in Section 2.3.4 of the FEIS.
Evelyn Chiarito and Joseph Chiarito, Dover Plains Residents	I realize that Cricket Valley will clean up the site but am wondering if aquifer draw-down can also cause deep well contamination to be drawn up into the water supply?	23-5	CVE has drilled six separate on-site wells, with depths ranging from 600 to 1,000 feet deep. During the long-term pumping test, which concluded that there would be no discernible drawdown effects, the water quality of the Project wells was tested by a Dutchess County Department of Health (DCDOH) listed laboratory. The laboratory assessment of the existing water thresholds indicated that the water was potable, although some wells did contain "total coliform," which is a group of naturally occurring bacteria. The coliform will be treated by the Project's potable water system, as required by DCDOH drinking water requirements. With these water quality results in mind, CVE does not believe there is any "deep well contamination" beneath or surrounding the CVE Property. In addition, the Phase II ESA tested groundwater from an existing array of NYSDEC monitoring wells installed downgradient from the site, adjacent to the Metro-North rail line. Laboratory analysis of samples from these wells – discussed in greater detail in Section 2.3.2 of the FEIS – supports the conclusion that the Project's groundwater withdrawal wells will not encounter significantly contaminated groundwater. The analysis does not indicate contamination in the surrounding water supply that

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			could be impacted by the Project's water withdrawal. In addition, the Project will discharge no process waste water, and will implement a SPCC and SPR. As a result, the Project will not be a source of contamination for water supply.
Christina Palmero, State of New York Department of Public Service	Section 2.1 '"Applicable Laws, Regulations and Policies" includes "National building code addresses the construction of structures in certain seismic zones and draft seismic provisions have been prepared to support the New York State Uniform Fire Prevention and Building Code". Please note that Section 1613 of 2010 NY State Building Code required seismic design standards.	28-5	This comment is noted. The Engineering, Procurement and Construction (EPC) Contractor will adhere to all applicable New York State Building Codes, including seismic design standards, as the Project is designed and constructed.
Graham Trelstad, AKRF	It is noted that the project site is located within the Mica Products Critical Environmental Area (CEA). A map and the reasoning behind this designation should be provided. Will this designation be removed once the area is cleared of the former Mica Products facility?	32-2	The Dutchess County Environmental Management Council's "Closed Landfill Committee," at a May 8, 1985 hearing, proposed that the Mica Products site be added to a list of CEAs. The purpose of adding the site to this list would be to ensure environmental and health risks were fully evaluated before the site was altered. According to NYSDEC records, the CEA designation became effective in September 1985 (see the reference to "Mica Products (inactive) landfill" listed on NYSDEC's list of CEAs in Dutchess County at http://www.dec.ny.gov/permits/25113.html). A Phase II ESA to investigate environmental conditions was conducted beginning in 1989. The results of this investigation, as noted in Section 2.3 of the FEIS, found that no extensive contamination from the previous operations existed at the site, and recommended that the site be delisted from the Inactive Hazardous Waste Disposal Sites registry and properly closed as a non-hazardous industrial landfill under the guidance of NYSDEC. NYSDEC concurred and the site was delisted in November 1991. Following proposed site clean-up activities associated with the Project, it may be appropriate to petition the Dutchess County Legislature to confirm that the Property does not have a CEA designation, or remove

Table 2-1 Responses to Comments on the DEIS Regarding Earth Resources			
Author	**Summary**	**Comment Number**	**Response**
			its CEA designation, whichever is more appropriate.
Graham Trelstad, AKRF	Page 1-5, which describes the past industrial use of the site, fails to mention the past and present use of the project site for product storage by Rasco Materials (formerly T&T materials).	32-6	See Section 2.3.1 of the FEIS for a discussion of the Phase I ESA addressing the former Rasco parcel. Related uses were also considered in the scope for the Phase II ESA completed for the Property (discussed in Section 2.3.2 of the FEIS). As of March 2012, RASCO Materials no longer operates at the Property.
Graham Trelstad, AKRF	The Project Description should include a discussion of the required subdivision to adjust the lot line between the Project Site and the Rasco Materials parcel (which, like the Project Site, is owned by Howland Lake Partners). It is noted that Rasco Materials shares the same driveway off of Route 22 with the Proposed Project. How will access to the Rasco site be maintained? Are there any plans to purchase the Rasco site since it is owned by the same entity?	32-7	Since filing the DEIS, CVE has acquired an option to purchase the former Rasco parcel. Therefore, a subdivision is no longer required and no uses associated with RASCO Materials will remain.
Graham Trelstad, AKRF	This section discusses the Phase 1 Environmental Site Assessment of the on-site buildings. The use of Building E by Rasco Materials for the storage of cold mix asphalt (the soil piles noted on page 2-4) should also be identified. As such, this building should also be inspected for petroleum contamination.	32-12	See Section 2.3.1 of the FEIS for a discussion of the Phase I ESA addressing the former Rasco parcel. Related uses were also considered in the scope for the Phase II ESA completed for the Property (discussed in Section 2.3.2 of the FEIS). Inspection for petroleum contamination was specifically considered during the Phase II ESA analysis.

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Graham Trelstad, AKRF	Page 2-10 notes that Rasco Materials, LLC (formerly TT Materials Corporation), is located on an adjacent parcel owned by Howlands Lake Partners south of the Project Development Area. It should also be noted that Rasco Materials has historically used the Project Site for storage.	32-13	Former materials storage, both on the former Rasco parcel and the Project Development Area, has been considered in assessing current Property conditions.
T. Michael Twomey, Entergy	The Proposed Site is Extensively Contaminated and Poses a Serious Risk of Releases to the Environment, Necessitating a Comprehensive Site Assessment…the DEIS summarizes prior Project site investigations, which number only three, with the most recent dating to 1995 – sixteen (16) years ago. The final reports of these investigations are not provided in the Appendix to the DEIS, and, therefore, it is not possible to compare their scope to the apparently comprehensive and ubiquitous evidence of releases around the Site. These reports must be made available for public review as part of the DEIS in order to allow the public to assess the accuracy of the DEIS representations.	33-7	As described in Section 2.2.1 of the DEIS, the former investigations at the site, evaluated previously by NYSDEC, were included among information reviewed in developing the scope for the Phase II ESA investigation that was planned. ARCADIS assembled a scope of work that identified areas of concern (AOCs) based on all available historical knowledge; the scope of work was then presented to NYSDEC. The scope of work was revised to reflect NYSDEC comments. ARCADIS then executed the scope of work, which addressed potential release areas across the entire Property. The sampling program included soil, various waste materials, groundwater and surface water. The Phase II ESA has now been completed and results are discussed in Section 2.3.2 of the FEIS. The results have been analyzed in the context of previous investigations as well. As discussed in Section 2.3.2, data from the comprehensive analysis of soil, groundwater and surface water show that the Property is not “extensively contaminated.” In summary, the Phase II ESA identified only three release areas where limited excavation was needed to remove contaminated soil in which certain pollutant concentrations exceeded “industrial criteria, restricted use” (ICRU) levels. At these three areas, a limited amount of soil will be excavated for off-site disposal at a permitted facility. Elsewhere on the site, soil with pollutant concentrations that exceed the “unrestricted use” (URU) levels, but are less than the ICRU, will be amenable to a BUD, and therefore left in place or re-used during site redevelopment. Furthermore, redevelopment plans will include protocols to address

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Author	**Summary**	**Comment Number**	**Response**
			unanticipated soil and groundwater contamination under buildings and other permanent structures subject to demolition.
T. Michael Twomey, Entergy	Phase II Investigation, Mica Products Corporation (1991) – The summary of this report does not provide a description of the areas investigated, the number of soil and/or groundwater samples collected, or the scope and extent of identified contamination. *See* DEIS, pp. 2-7, 8. The study appears to be limited in its scope to the activities of the Mica Products Corporation, rather than a more comprehensive assessment of the Site as a whole, and apparently found at least "[t]wo areas, believed to be isolated and not indicative of widespread impacts, ... to have low-level volatile and semi-volatile contaminants in soil, probably due to a minor source of tar or residual petroleum product." DEIS, p. 2-8. There is no discussion as to why these were "believed" to be isolated instances of contaminants. Further investigation of documented contamination to identify its full scope and extent is the norm. Apparently, this report recommended that the investigated area be "closed as a nonhazardous industrial landfill" and that "[c]losure would then prevent the continued leaching of metals and other products to the groundwater and adjacent surface waters." *Id* Given the state of the Site as currently	33-8	NYSDEC has full access to the historical Phase II ESA reports, as CVE has worked with the state to develop an appropriate plan of study and site restoration. CVE cannot defend or expand upon conclusions reached in those reports, as they were completed by others. However, as noted in Section 2.2.1 of the DEIS, additional investigation was planned at a later stage of Project development. The Phase II investigation work has now been completed (working with NYSDEC to develop a scope of work for the Phase II ESA to appropriately characterize site conditions given the known historical information) and is described in Section 2.3.2 of the FEIS. As noted by the commenter, it does not appear that previous “closure” activities occurred at the Property. However, RASCO Materials has implemented certain closure tasks at the former Rasco parcel, as discussed in FEIS Section 2.3.1.3. Should this Project go forward, it would provide a significant benefit to the local community and environment by incorporating clean-up and restoration activities in its construction.

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	characterized, it would appear that no efforts to close the Project site as recommended were actually undertaken, implying that these areas remained opened for an additional 20 years (and counting). Certainly, there is no evidence of closure in conformity with applicable New York law relating to solid (or potentially hazardous) waste landfills. These deficiencies must be remedied.		
T. Michael Twomey, Entergy	Waste Characterization Report (1994) – The summary of this report indicates that twenty-one soil samples were collected from four specific waste disposal areas. *See* DEIS, p. 2-8. It does not indicate how large these areas were, how many waste disposal areas went uninvestigated on the Site or how representative these four areas are as compared to the Site as a whole. "A composite sample of the disposal areas did not indicate hazardous waste thresholds were exceeded," *Id,* but the more relevant question is not addressed – whether any of the waste disposal areas themselves contained hazardous wastes.	33-9	CVE has worked with NYSDEC, based on knowledge available from former reports and on best professional practices, to develop the scope for the Phase II ESA discussed in Section 2.3.2 of the FEIS. Confirming the absence of hazardous wastes at the Property, including the waste disposal areas, was an important element of that program.

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T. Michael Twomey, Entergy	Waste Characterization Report (1994) – This report also discusses the "white chalky material" identified earlier, but inexplicably does not identify what it is. *Id.* These deficiencies must be remedied.	33-10	CVE cannot defend or expand upon conclusions reached in those reports, as they were completed by others. However, the Phase II ESA discussed in Section 2.3.2 of the FEIS has been completed to provide CVE with information about Property conditions in order to inform construction and restoration activities. Note, however, the “white chalky material” is slag from the former magnesium extraction and refining process, which extracted magnesium from locally mined limestone, dolomite and marble. As such, it is inert, as confirmed by Phase II ESA testing.
T. Michael Twomey, Entergy	Mid-Hudson Recycling Park Subsurface Investigation (1995) – This investigation appears to be even more narrow in scope than the 1994 waste characterization, limited to "a subset of the entire parcel" that did not encompass the four waste disposal areas discussed above. DEIS, p. 2-8. It involved soil samples from only six locations on the Site and found polychlorinated biphenyls ("PCBs") in one of the six reviewed locations. *Id.* No remedial actions appear to have been taken as a result of any of these investigations. In fact, the 1995 Mid-Hudson Recycling Park report indicated that "no action had commenced regarding closure of the waste piles previously studied." *Id.* These deficiencies must be remedied.	33-11	CVE cannot defend or expand upon conclusions reached in those reports, as they were completed by others. However, the Phase II ESA discussed in Section 2.3.2 of the FEIS has been completed to provide CVE with information about Property conditions in order to inform construction and restoration activities. As noted by the commenter, it does not appear that previous “closure” activities occurred at the site, though RASCO Materials is implementing certain closure tasks at the former Rasco parcel, as discussed in FEIS Section 2.3.1.3. Should this Project go forward, it provides a significant benefit to the local community and environment by incorporating clean-up and restoration activities in its construction.

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T. Michael Twomey, Entergy	In short, the historic reports are of apparently limited scope, may not be representative of other Site conditions, document releases and threats of further releases to the environment, and evidently resulted in no cleanup of the Site. As of 1995, little was known about the environmental condition of the entire Site now proposed for redevelopment, and an additional fourteen (14) years passed before the next environmental reports were prepared which, as discussed below, are even more limited in their scope and therefore even less likely to address the fundamental question of the scope and extent of contamination, and therefore, what potential site development can and should occur, and under what remediation framework.	33-12	As discussed in Section 2.2.1.4 of the DEIS, CVE had intended to complete additional investigation at the site at a later stage of development. This has now been completed, and is discussed in Section 2.3.2 of the FEIS. Should this Project go forward, it provides a significant benefit to the local community and environment by incorporating clean-up and restoration activities in its construction, as described in Section 2.3.4 of the FEIS. In terms of soil remediation, CVE will prepare a RAP that will be subject to NYSDEC review and approval. The essential components of the RAP are (1) excavation and off-site disposal of soil in which pollutant concentrations exceed the ICRU; (2) on-site re-use of soil in which pollutant concentrations exceed the URU, but are less than the ICRU, subject to a BUD approved by NYSDEC, and (3) closure in place of four existing solid waste disposal areas (W-1, 2, 3 and 4), subject to on-site re-use as feasible, removal of bulky waste from Mica Products, and stabilization of the remaining material.
T. Michael Twomey, Entergy	According to §2.2.1.4 of the DEIS, ARCADIS conducted a Phase I Environmental Site Assessment for the Site in 2009. The report also is not provided in the Appendices to the DEIS, an omission that must be rectified for the reasons stated in the preceding paragraph.	33-13	Applicable details of the Phase I ESA are summarized in the DEIS text (Section 2.2.1.4). The RECs identified in this report were used as a basis for developing the scope for the Phase II ESA investigation, which has since been completed. Results are discussed in Section 2.3.2 of the FEIS.
T. Michael Twomey, Entergy	The summary of this report documents several identified Recognized Environmental Conditions ("RECs") on the basis of the observed Site conditions and historic investigations summarized above. Yet, despite the passage of 14 years since the	33-14	The material sampling referenced as completed in Section 2.2.1.4 of the DEIS was only intended as a spot sample to screen the “sawdust type material” during early site development activities. Comprehensive Phase II ESA activities to confirm site conditions were planned at a later development phase. These investigations have now been completed

Table 2-1 Responses to Comments on the DEIS Regarding Earth Resources			
Author	**Summary**	**Comment Number**	**Response**
	prior, limited investigation, and no apparent information whatsoever on the soil and groundwater conditions throughout the Site, it was decided that only one sample of material would be collected for testing, and that no further characterization of the Site was necessary. The material collected was "the sawdust type material" and contained elevated levels of acetone, ascribed to what "may be a false positive" lab result. DEIS, p. 2-11. The entire Phase I report must be provided to allow review of its adequacy.		and are discussed in Section 2.3.2 of the FEIS.
T. Michael Twomey, Entergy	Blasting would likely result in new fissures being created in the bedrock, creating new migration pathways for releases to the environment that may threaten groundwater, wetland areas, or the surface waters of the Great Swamp. Without a full understanding of current Site conditions, it is not possible to evaluate the wisdom of blasting or its inherent risk to the environment where, as here, the Site has been a dumping ground for decades.	33-15	Current Property conditions have been characterized through the Phase II ESA discussed in Section 2.3.2 of the FEIS. A restoration and cleanup plan will be completed as part of the construction activities. The site clearing and contaminated material removal described in Section 2.3.4 will take place prior to any blasting, and will ensure that environmental risks are appropriately mitigated such that there will be no threat to groundwater. In addition, if required, blasting is not anticipated to create new migratory pathways that would threaten groundwater since it will occur after removal of the limited areas of soil contamination as well as the debris from the former industrial operations, no significant soil contamination will exist on the Property.
T. Michael Twomey, Entergy	…the environmental conditions at the Site have not been characterized sufficiently. In order to protect against the exacerbation of known releases and the prevention of new releases to the environment during Site disturbance activities, a comprehensive Site	33-16	Current conditions – considering the entire and expanded Property – have been adequately characterized through the Phase II ESA discussed in Section 2.3.2 of the FEIS. The assessment included soils, groundwater, surface water, and sediment testing, and the results were considered in developing a plan for site clearing and contaminated material removal, described in Section 2.3.4 of the FEIS, which will be

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	assessment is required and must include soil, groundwater, surface water and sediment testing throughout the Site. The investigation should not be limited to the area of potential development but, in light of the documented dumping and impacts to forested and wetland areas, should extend throughout the Site.		implemented at the start of Project construction.
Ryan Courtien, Town Supervisor, Town of Dover	ES-8: While a Waste Characterization Report "did not indicate that hazardous waste thresholds were exceeded" Implication is that there is hazardous waste; was any hazardous waste found? If so, what?	37-6	Site conditions have been characterized through the Phase II ESA discussed in Section 2.3.2 of the FEIS. As discussed in that section, only three, relatively small areas were identified where substances exceed regulatory levels suitable for industrial sites and, thus, will require removal. CVE will propose a RAP to NYSDEC for the agency's approval, in conjunction with a request for a BUD, as described above for Comment No. 33-12. The essential components of the RAP are (1) excavation and off-site disposal of soil in which pollutant concentrations exceed the ICRU; (2) on-site re-use of soil in which pollutant concentrations exceed the URU, but are less than the ICRU, subject to a BUD approved by NYSDEC; and (3) closure in place of four existing solid waste disposal areas (W-1, 2, 3 and 4), subject to on-site re-use as feasible, removal of bulky waste from Mica Products, and stabilization of the remaining material.
Ryan Courtien, Town Supervisor, Town of Dover	ES-8: How will the tire crumb material, fire bricks and PCBs be removed?	37-7	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. No need for PCB removal was identified through Phase II ESA investigations as there were no materials impacted by PCBs. Before the start of below-grade preparation, all surface cover materials, including topsoil, will be removed and screened to remove crumb rubber and other waste materials. In general, CVE will apply for beneficial reuse of clean materials, such as fire brick, as on-site fill material to the extent applicable and allowed by local officials.

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Ryan Courtien, Town Supervisor, Town of Dover	ES-22: What is the plan for disposal of demolition debris?	37-20	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. In general, CVE will apply for beneficial reuse of clean materials as on-site fill material to the extent applicable and allowed by local officials. In addition to the detail provided in Section 2.3.4, a detailed Demolition Plan and Demolition Permit Application will be submitted to the Town of Dover per Chapter 145-65 (B)18 of the Town of Dover Zoning Code.
Ryan Courtien, Town Supervisor, Town of Dover	ES-22: What is the plan for disposal of crystal solids?	37-21	The crystal solids are the result of the Zero Liquid Discharge system described in Section 5.5.3 of the DEIS. As detailed in that section, CVE has identified two potential options for handling the crystal solids: either transport of the material to a licensed third party for use as a marketable by-product, such as road salt, or transport of the material to a licensed off-site solid waste management facility.
Ryan Courtien, Town Supervisor, Town of Dover	2-1: Erosion and Sediment Control will be handled by the Planning Board, not the Town Board.	37-62	This comment is noted. The Project's Chapter 65 permit for Erosion and Sediment Control will be initiated with the Town of Dover Planning Board.
Ryan Courtien, Town Supervisor, Town of Dover	2-2: It is not possible for there to be a "majority of the main building site".	37-63	Section 2.2.1 of the DEIS states: "… at which time a fire destroyed the majority of the main site building…" Although the primary building on the site (called "the main site building" in the FEIS) remains standing, it was significantly damaged by fire.
Ryan Courtien, Town Supervisor, Town of Dover	2-4: It should be noted that Building E is the building designated for use by RASCO for temporary storage of post-process materials.	37-64	With CVE's acquisition of an option to purchase the former Rasco parcel, this use will be discontinued. This former use was considered in developing the work plan for the Phase II ESA discussed in Section 2.3.2 of the FEIS.
Ryan Courtien, Town Supervisor, Town of Dover	2-8: How is identifying the color of materials (grey, brown, white, green/gray) the same as identifying the material type?	37-65	CVE cannot defend or expand upon information in historical site investigations, as they were completed by others. That said, ARCADIS examined the same waste piles as described in the earlier reports. In particular, the 1994 Advanced Cleanup Technologies (ACT) report classified the waste piles into four categories based upon two characteristics observed during field sampling: color and particle size

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			(silt, sand, gravel, etc.). ACT then tested representative samples of each waste for relevant parameters. The most recent Phase II ESA has confirmed the ACT field observations and categories of waste, as well as their conclusion that the materials are not a hazardous waste.
Ryan Courtien, Town Supervisor, Town of Dover	2-9: The site has crumb rubber scattered around. How will this material be removed from the site?	37-66	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS and will be included in a Demolition Plan and Demolition Permit Application to the Town of Dover.
Ryan Courtien, Town Supervisor, Town of Dover	2-10: What is the plan for the removal of waste piles and does this plan for removal depend upon the composition of the waste piles?	37-67	The composition of waste piles does influence the site restoration strategy. A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. Because the waste piles were determined to be inert and non-hazardous material, they will be considered for on-site reuse as structural fill or will be stabilized and closed in place.
Ryan Courtien, Town Supervisor, Town of Dover	2-10: RASCO should not be listed as an inactive solid waste facility.	37-68	The discussion in Section 2.2.1.4 of the DEIS where this terminology is referenced is simply reporting the way in which the RASCO Materials facility was listed in government file searches completed for the Phase I ESA (ARCADIS 2009). RASCO Materials is no longer operating at the Property.
Ryan Courtien, Town Supervisor, Town of Dover	2-20: Lead and asbestos needs to be removed from the building before demolition. The demolition of the building, with these hazardous materials still in place, using machinery will pollute the air and/or ground.	37-69	A detailed pre-demolition survey has been completed for the Property as detailed in Section 2.3.3 of the FEIS. In total, 19 separate structures were analyzed for asbestos containing material (ACM) and lead-based paints (LBP) – and estimated quantities, location, condition, and friability have been recorded. A discussion of plans for demolition and cleanup of these materials is detailed in Section 2.3.4.2. CVE understands that the Demolition Permit required by the Town of Dover may not be issued until a report has been submitted indicating the buildings are free of hazardous materials.

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Ryan Courtien, Town Supervisor, Town of Dover	2-20: Removal of hazardous materials should be made clearer. All hazardous material needs to be removed from the site. It seems that what is being asked is an exemption from removal of hazardous material from the building before removing it from the site.	37-70	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. In general, building demolition material will be segregated to remove and dispose of any hazardous materials as described in Section 2.3.4.2. CVE understands that the Demolition Permit required by the Town of Dover may not be issued until a report has been submitted indicating the buildings are free of hazardous materials. In addition, the three areas identified with pollutant levels exceeding those suitable for an industrial site such as the Project will be excavated and disposed of at a suitable off-site disposal facility.
Ryan Courtien, Town Supervisor, Town of Dover	2-22: Is there any material that is anticipated to be left behind or is all material being removed?	37-71	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. The intent is to remove all solid waste material such as miscellaneous trash, Formica debris, and building materials, with the exception of the inert waste piles (e.g., limestone slag) and inert building materials (e.g., concrete and brick), which, if approved for beneficial reuse, will be used for construction or graded and stabilized in other locations within the work area.
Ryan Courtien, Town Supervisor, Town of Dover	2-22: Areas of topsoil contain scattered crumb rubber which would need to be sorted out if the top soil is to be reused or the topsoil would need to be removed if the rubber cannot be sorted or if the soil has been contaminated by the rubber.	37-72	A discussion of plans for demolition and cleanup at the Property is provided in Section 2.3.4 of the FEIS. Miscellaneous waste, such as the crumb rubber and Formica debris, will be separated from soils and disposed of as solid waste at a licensed landfill.
Ryan Courtien, Town Supervisor, Town of Dover	2-24: The comprehensive public outreach plan *[for potential blasting work]* should include signs on Route 22.	37-73	It is anticipated that signs will be posted on Route 22 during the construction period when blasting may occur at the Property. In addition to Route 22 signage, blasting notifications will follow the guidance of Chapter 69 of the Town of Dover Town Code.
Ryan Courtien, Town Supervisor, Town of Dover	2-26: Who will receive the results of the seismograph readings after blasting has occurred?	37-74	The seismograph readings will be retained by the blasting contractor for use in any potential post-blast inspections as described in Section 2.3.3 of the DEIS.

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Ryan Courtien, Town Supervisor, Town of Dover	2-26: The radius for notification should increase to a half mile because of the noise disturbance that will come from blasting	37-75	Chapter 69-13 of the Town of Dover Town Code requires that adjacent landowners within 300 feet of the blast site be notified within 24 hours of blasting. CVE has committed to notify homeowners within 1,000 feet of the blasting site 5 business days prior to blasting as detailed in Section 2.3.3 of the DEIS. CVE will work with the Town of Dover if a more comprehensive outreach plan is required.
Ryan Courtien, Town Supervisor, Town of Dover	2-29: A detailed map of the laydown site and access to Route 22 needs to be provided.	37-76	A more detailed design of the remote Laydown Site use, including its access from Route 22, has been included in the preliminary SWPPP developed for that location (Appendix 5-C of the FEIS). These plans will also be provided as an update to the Project's application for a Special Permit and Site Plan review.
Ryan Courtien, Town Supervisor, Town of Dover	2-33: The permanent sediment and stormwater control measures should be included on all slopes 20% or greater.	37-77	The preliminary SWPPPs, included as Appendix 5-A of the DEIS and Appendix 5-A of the FEIS (Project Site), Appendix 5-B (former Rasco parcel) and 5-C (remote Laydown Site) to this FEIS, have been designed to meet the latest New York State requirements as outlined in the New York State Stormwater Management Design Manual, August 2010. This includes temporary erosion and sediment control measures, such as an erosion control blanket, on slopes between 15 – 30 percent and permanent erosion and sediment control measures, such as permanent turf reinforcement mats on slopes 30 percent or greater. The preliminary SWPPPs will be used to guide the Project's Chapter 65 permit application (Erosion and Sediment Control) with the Town of Dover.
Constance DuHamel, Wingdale Resident	The monitoring of asbestos removal takes place out of Kingston, downwind from the project, because that was the closest monitoring station equipped to collect that data. Does that make sense to anyone here? My father died of pulmonary fibrosis. His pulmonologist, Dr, Edsel of Columbia Presbyterian, said when the World Trade Center was built, asbestos fibers were found	41-5	Regulated asbestos containing material (RACM) has been identified and quantities have been estimated as part of a pre-demolition survey detailed in Section 2.3.3.1 of the FEIS. RACM must be properly removed by a licensed asbestos abatement contractor prior to renovations or demolition that would disturb the material. Federal, State and Local regulations and guidelines will be strictly adhered to when removing the RACM and the abatement program will include a certified asbestos monitor. Air sampling and analysis pursuant to ICR-56-4 will be performed at the work site as required under applicable requirements,

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	as far north as Boston. It is in that direction the prevailing winds blow, and we want our monitoring stations in the way of the prevailing winds, when they blow. And when they don't, we will know exactly how much more is accumulating in the Harlem Valley, and breathed in by our children, as they continue to engage in outdoor activities, including practice and games for team sports.		including New York State Department of Labor (NYSDOL) Industrial Code Rule Part 56.
Jessica Abrams, Greene County NY	…We're located apparently on, according to New York State, a seismic level C area. Dutchess County rates 15 out of 65 places expected to potentially have this type of annual -- potential event. We need to consider these like never because of the painful lesson we continue to learn daily from Fukushima.	T2-18	Seismic conditions have been an important consideration for the design of the Project. The area has a mapped seismic hazard rating of "intermediate" within the four seismic zone ratings in the State of New York. The Project will be designed in compliance with the appropriate code to address this rating. The Project's Engineering, Procurement, and Construction (EPC) Contractor will be required to adhere to all New York State Building Codes, including seismic requirements, as the Project is designed and constructed.
Jessica Abrams, Greene County NY	We also have to understand the footprint that we're now removing from that very land. What is the impact of this going forward on retention, the impact on the Village, the infrastructures. We want to make sure we reduce that as much as possible.	T2-22	The Project will predominantly reuse a site that has been previously developed and utilized for industrial uses, as shown in Figure 3-9 of the DEIS. Stormwater management systems have been carefully designed, prioritizing water reuse and conservation and using bioretention swales. The Project will be relatively self-contained, and will not add significant demand for town services or infrastructure. Avoiding and minimizing impacts to the community and the environment has been a priority for the Project.
Jessica Wade, Dover Resident	…I know the Vincents brought up that they were concerned about the water quality, and I know that their children played in the river. I grew up in the river and I also played in the river, and it's important to know what you're	T3-69	The Property, although having an industrial character based on its prior use, is not significantly contaminated and likely would not be addressed under federal cleanup programs such as Superfund. For example, Superfund (which is intended to address hazardous waste sites, typically with contributions from responsible parties) is a lengthy process that

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	swimming around in, and Town Supervisor Courtien, just so you know and the Vincents know, there are organizations, such as the EPA Superfund, that exist that will come in and clean up whatever these people left behind from previous -- basically what needs to be cleaned up, they'll come in and clean it up, and they'll hold the people that were there responsible that did not clean up, they'll hold them responsible and have them pay for it, so that does exist. So, Cricket Valley, we can have that option, they don't have to necessarily do that for us…		involves steps to assess sites, determine if they should be added to the National Priorities List, develop and then implement cleanup plans. This Property would be unlikely, based on its non-hazardous condition, to qualify for this type of program. CVE selected the Property, in part, based upon the opportunity to utilize an existing developed footprint and provide a benefit to the local community by returning the site to productive industrial use. Although the cost associated with demolition and restoration at the Property is not insignificant, CVE recognizes that the clean-up activities are an important side benefit both for the community and to the environment. Given the Property's long history in this condition, it seems unlikely that clean-up would occur unless it was within the context of a reuse proposal like the Project.

2.3.1 Phase I Environmental Site Assessment – Former Rasco Parcel

A Phase I ESA was conducted for the former Rasco parcel (ARCADIS 2011). An approximately 62-acre area owned by Howland Lake Partners LLC was evaluated in the Phase I ESA to represent the legal extent of the two parcels comprising this area, although a small portion of this area (approximately 5 acres) was previously planned to be incorporated in the Project Development Area via subdivision and was also evaluated as a part of the Phase I ESA conducted for that area.

The Phase I ESA was conducted in general conformance with the American Society for Testing and Materials (ASTM) E 1527-05 *Standard Practice for Site Assessments: Phase I Environmental Site Assessment Process*. The goal of the Phase I ESA was to identify RECs and historical recognized environmental conditions (HRECs) associated with the property in conformance with ASTM E 1527-05.

A REC is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or an observable or obvious threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. RECs exclude *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

A HREC is defined as an environmental condition which in the past would have been considered a REC, but which may or may not be considered a REC currently.

The Phase I ESA included a visual inspection of the former Rasco parcel completed on September 19, 2011, observation of adjacent properties, reviews of historical documents and facility records that were available from CVE. A Freedom of Information Law request was filed with NYSDEC on September 20, 2011. Two NYSDEC employees visited the former Rasco parcel during ARCADIS' visual inspection and provided information regarding the parcel's history and permitting compliance.

The former Rasco parcel consists of developed and undeveloped land. CVE has never owned or operated on the former Rasco parcel, but has an option to purchase the land. CVE has no direct knowledge of the history, former operations or former environmental conditions because CVE has no prior relationship with the parcel. Information presented in the Phase I ESA relied on a review of historical documents. Interviews with owners or operators of the former Rasco parcel or neighboring property owners did not occur as a

part of the Phase I ESA. Good accessibility existed for the reconnaissance with the exception of the interior of Site Building B (RASCO's main processing building), which was not accessible at the time of the site visit.

Review of federal, state, and municipal environmental databases did not identify any active releases at the former Rasco parcel, under its current status (ARCADIS 2011). Several reports regarding former parcel use and involvement by the NYSDEC in efforts to understand conditions at the parcel were, however, available. Based upon review of available documentation, records review and site inspection, no HRECs were identified at the former Rasco parcel. Five on-site RECs were identified on the former Rasco parcel, as well as four off-site RECs. Each is described below.

2.3.1.1 On-Site RECs

REC #1 – Stockpiled Soil within Building B – Building B was used by TT Materials, and then its successor RASCO, to process petroleum-contaminated soil. Building B is designated AOC-24 on Figure 2-3. Stockpiled soil within Building B, not observed during the site visit due to a lack of physical access, but having been identified by NYSDEC personnel as being contaminated, is considered a REC. The interior of Building B was not able to be accessed during the reconnaissance, as all entryways were locked. Note that this REC is related to RASCO Material operations that have been subject to a 2005 NYSDEC Consent Order; see Section 2.3.1.3 of the FEIS for more information addressing these activities (Spectra 2008). As of March 30, 2012, RASCO had removed the stockpiled soil within Building B, and cleaned Building B, according to an approved closure plan. On June 26, 2012, NYSDEC notified ARCADIS by email that the RASCO closure had been certified as complete.

REC #2 Northwest Waste Disposal Area – The Northwest Waste Disposal Area corresponds to Waste Pile W-3 (Figure 2-3). There are large amounts of non-native material (white, chalky material, as well as empty, rusted 55-gallon drums, and other industrial debris) disposed of throughout the northwest portion of the parcel. The white, chalky material is believed to be slag from the historic magnesium refining process that took place on the Property. Although previous investigations into the quality of the waste piles indicate that they are non-hazardous materials, ARCADIS' 2009 Phase I ESA determined that it was possible that there were materials in the disposal areas that had not been fully characterized. Additionally, there was no apparent activity at the site pertaining to closure of this area. This material, subsequently tested as a part of the Phase II ESA described in Section 2.3.2 of the FEIS, was determined to be inert and non-hazardous. As further discussed in Section 2.3.4, CVE proposes to stabilize waste pile

W-3 and close it in place, or, if authorized pursuant to a BUD approved by the NYSDEC, use all or some of the material on-site as fill.

REC #3 Central Waste Disposal Area – The Central Waste Disposal Area corresponds to Waste Pile W-4 as identified on Figure 2-3. Vegetation covers a majority of the area, with white slag material and other debris exposed in some areas. This area also contains abundant, large bedrock rubble from blasting during the original site development for AMCO. Although previous investigations into the quality of the waste piles indicate that they are non-hazardous materials, ARCADIS' 2009 Phase I ESA determined that it was possible that there were materials in the disposal areas that had not been fully characterized. Additionally, there was no apparent activity at the site pertaining to closure of this area. This material, subsequently tested as a part of the Phase II ESA described in Section 2.3.2 of the FEIS, was determined to be inert and non-hazardous. As further discussed in Section 2.3.4, CVE proposes to stabilize waste pile W-4 and close it in place, or, if authorized pursuant to a BUD approved by the NYSDEC, use all or some of the material on-site as fill.

REC #4 Northeast Waste Disposal Area – The Northeast Waste Disposal Area, as shown in ARCADIS' 2011 Phase I ESA, is adjacent to the northeast side of Waste Pile W-5 as identified on Figure 2-3. The Phase I ESA refers to Building A as a reference point, which is designated AOC-10/23 in the Phase II ESA, and formerly housed the secondary crusher used to reduce the size of bedrock transported to the site by the aerial tramway. Just southeast of Building A, white-tinted soil was observed beneath standing water in a wetland area. Hand digging in this area revealed a significant amount of white material in the soil. This material is most likely pulverized limestone or process waste (ash, cinders) as observed elsewhere on the site. Drums and other industrial debris were also noted in the vicinity of this area. This material, sampled and tested as a part of the Phase II ESA described in Section 2.3.2 of the FEIS, was determined not to be hazardous; drums and debris will be removed for disposal at an off-site landfill.

REC #5 Asphalt Emulsion Tanker – The Asphalt Emulsion Tanker was located on the northwest side of the TT Materials/RASCO building (Building B of the 2011 Phase I ESA and AOC-24 of the Phase II ESA). ARCADIS (2009) noted that the asphalt emulsion tanker adjacent to Building B had the potential for impacts to soil and/or groundwater in the vicinity of the tanker. The exterior of the tanker was stained with black material, which appears to have been caused by overfills/spills. This tanker was also related to the RASCO Materials operation and, as of March 2012, had not yet been removed from the Property. The emulsion tanker is scheduled for removal as part of the approved closure plan for the RASCO facility (Spectra 2008) (see FEIS Section 2.3.1.3). During the Phase

II ESA (discussed in Section 2.3.2 of the FEIS), soil below the emulsion tanker was tested and no contamination levels were found that would warrant remediation. As noted above, NYSDEC notified ARCADIS by email on June 26, 2012 that the RASCO closure had been certified as complete.

2.3.1.2 Off-site RECs

The currently operational Metro-North Railroad (located on separately owned property that forms the western boundary to the Project Development Area and the former Rasco parcel) has been in use since at least 1901. Historical operations of the railroad may have included the transport and off-loading of oil and chemicals to the Property via rail spurs from the trunk line. Phase II ESA sampling included historical rail operations (Section 2.3.2 of the FEIS) and found no significant soil or groundwater contamination as a result.

The environmental status of South East Auto Recycling Inc., an inactive vehicle dismantling facility located northeast of the former Rasco parcel and across Route 22 is unknown. However, groundwater on the east side of the Property, near Route 22, was sampled as part of the Phase II ESA (Section 3.2.3 of the FEIS). The only evidence of significant contamination was an elevated level of sodium, believed to reflect the seasonal use of de-icing salt on Route 22. The groundwater analysis from this part of the Property did not show any contaminants typical of an auto recycling yard.

The status of the Dover #3 Cricket Hill Solid Waste Landfill (an “orphan” or inactive site with an unconfirmed location) is unknown. With respect to the Property, groundwater quality and flow direction from this landfill are also unknown. However, as indicated by water quality on the east side of the Property, discussed above, there is little effect from off-site sources, other than sodium, believed to be from road salt application.

2.3.1.3 RASCO Materials Closure of Operations

RASCO Materials succeeded TT Materials as the operator of the solid waste disposal facility at the Property, continuing to treat petroleum-contaminated soil into a non-hazardous, re-usable construction material. NYSDEC issued RASCO Materials a Consent Order in 2005, pending the approval of a new permit to operate the facility under 6 New York Code of Rules and Regulations (NYCRR) Part 360. Among the requirements of the Consent Order and operating permit were two documents, which form the basis for: (1) routine operations by the facility, and (2) closure of the facility.

1. Engineering Report, RASCO Materials, LLC, Wingdale Facility, Production Of Cold-Mix Asphalt Using Petroleum-Contaminated Soil. Prepared for RASCO Materials, LLC. Prepared by Spectra Engineering, Architecture and Surveying, P.C., Latham, New York. Report dated October 16, 2006.

2. Closure Plan, RASCO Materials, LLC, Wingdale Petroleum-Contaminated Soil Processing Facility. Prepared for RASCO Materials, LLC. Prepared by Spectra Engineering, Architecture and Surveying, P.C., Latham, New York. Report dated October 2005; revised February 2008.

By late 2011, RASCO Materials had begun to close its business at the Property and implement the closure plan, which calls for the following steps:

- Removal of unused or unprocessed non-hazardous petroleum-contaminated soils and aggregate;
- Removal of stockpiles of processed material (cold-mix asphalt);
- Removal of fuel oil and liquid asphalt (i.e., asphalt emulsion used in soil treatment process);
- Removal of small equipment and other liquids;
- Facility housekeeping; and
- Post-closure monitoring and maintenance (this step was expected to be unnecessary after removal of treated and untreated petroleum-contaminated soils, which were considered to be the only two sources of contamination for the operation).

RASCO Materials has now completed all steps of the closure plan. All unused or unprocessed petroleum-contaminated soil that had been stockpiled in the buildings has been removed from the Property. All equipment, with the exception of the emulsion tanker, has also been removed from the Property.

2.3.2 Phase II Environmental Site Assessment

Phase I ESAs completed for the Property (ARCADIS 2009) and the former Rasco parcel (ARCADIS 2011) identified historical uses of the Property having the potential for contamination and observed visual indicators of various materials deposited within this area. A Phase II ESA has been completed for the Property in order to serve two primary purposes:

- Determine whether significant areas of contamination exist and, if so, their extent; and

- Generally estimate the extent of waste deposited in several locations by historical site operations.

The focus of the Phase II ESA was to determine potential contamination of soil, groundwater, and surface water at the Property due to various tenant operations that have occurred over approximately 70 years, including:

- AMCO Magnesium Corporation, ca. 1942 to 1966, which was engaged in the extraction of magnesium from limestone mined from a local quarry;

- Mica Products Corporation, ca. 1966 to 1980, which applied plastic laminates onto a variety of furniture products;

- Poly Tech Recycling Corporation, ca. early 1990s to 1996, a tire shredding and recycling operation;

- Carbon Activation U.S. Inc., 1994 to ca. 1998, a business that recycled activated carbon used as an industrial filter medium; and

- TT Materials, 1993 to ca. 2005, which recycled petroleum-contaminated soil into a non-hazardous soil product suitable for reuse in a variety of applications approved under a permit issued by the NYSDEC.

In 2004, RASCO Materials, LLC acquired the TT Materials operation and continued the same petroleum-contaminated soil recycling activities. Although RASCO had waste on-site through 2012, NYSDEC indicated that the last known receipt of waste was in 2005. RASCO Materials ended its commercial operations in early 2012. NYSDEC notified ARCADIS by email on June 26, 2012 that the RASCO closure had been certified as complete.

The Phase II ESA is based on: 134 test pits; 29 hand auger test holes; groundwater sampling from five monitoring wells (one near Route 22, to the east, and four along the western boundary downgradient of the Project Development Area); and surface water sampling at six key locations at on-site wetlands (particularly near solid waste pile deposits). The test pits and hand auger test holes were placed according to the locations of former industrial operations and waste disposal by the tenants listed above (Figure 2-3);

these locations are termed AOCs. This strategy allowed focus on those areas of the site with the greatest potential for oil or chemical spills to soil to determine site conditions.

The Phase II ESA identified two general varieties of substances in soil at the various AOCs on the Property: organic substances (mainly related to petroleum fuels); and inorganic substances (consisting of metals related to prior industrial operations). The numerical concentration of each substance was compared to two cleanup standards known as Soil Cleanup Objectives (SCOs). The SCOs were developed by NYSDEC for state-wide use at contaminated sites, and identify appropriate levels based upon the use or proposed use of a given site that can be used for guidance in this case.[2] For the purpose of the Phase II ESA, the soil analyses are compared to two specific Soil Cleanup Objectives:

- Substance levels appropriate at sites in use for any purpose (e.g., residential, schools), termed "unrestricted use," or URU.

- Substance levels appropriate at industrially zoned or used sites, such as the proposed Project, termed "industrial criteria, restricted use," or ICRU.

NYSDEC has stated that for other soil in which pollutant concentrations exceed the URU, but are less than the ICRU, the URU is the appropriate SCO in the context of 6 NYCRR Part 360, which is the relevant regulatory program due to the presence of the four solid waste disposal areas. Consequently, all soil in which pollutant concentrations exceed the URU, but are less than the ICRU, will require a BUD from NYSDEC to remain on-site for re-use as structural fill or for grading during site redevelopment. CVE will make a formal request for the BUD in conjunction with the overall RAP for the site; both documents will be submitted to the NYSDEC for review and approval.

Figure 2-4 illustrates that at only three locations on the Property do substance concentrations in soil exceed the ICRU criteria. Each of these locations is discussed further below, and the affected soil at each location will be properly handled by a licensed contractor and removed from the Property. As can be seen in Figure 2-5, scattered exceedances of the URU criteria were identified, as would be expected within an area that has experienced many years of industrial use. Figure 2-5 illustrates that the areas where such exceedances occur are limited to the portions of the Property where Project activities

[2] The numerical SCOs are tabulated in the September 2006 publication "*New York State Brownfield Cleanup Program, Development of Soil Cleanup Objectives, Technical Support Document. Prepared by New York State Department of Environmental Conservation and New York State Department of Health*" (NYSDEC and New York State Department of Health [NYSDOH] 2006).

are proposed: the Project Development Area and the 13-acre portion of the former Rasco parcel intended for temporary use as construction worker parking and laydown prior to restoration.

The Phase II ESA investigation of four previously identified AMCO waste piles (W-1, 2, 3, and 4) revealed material with physical and chemical properties consistent with those reported by earlier investigations.[3] The Phase II ESA findings support the earlier conclusions that the AMCO waste piles do not contain hazardous waste, nor have they resulted in surface water or groundwater plumes of concern, as further discussed below. The general extent of each waste pile has been identified. CVE intends to seek a BUD for the AMCO waste to allow its use as structural fill on-site or, if the entire volume is not needed, then provide for closure in place, subject to approval by NYSDEC. CVE will request a BUD for the AMCO waste piles as part of the overall RAP for the site, as discussed above, and subject to agency review and approval.

The general extent of Mica Products waste debris was also mapped, as well as its composition, which was also found to be non-hazardous, comparable to that reported previously. The Mica Products waste consists of sawdust, scrap lumber and plastic laminate, and gelatinous sawdust/glue residue in a drainage ditch leading to Wetland 2. CVE proposes to remove the Mica Products waste debris by excavation and off-site disposal at a suitable solid waste disposal facility. The associated volumes are approximately 1,400 cubic yards of gelatinous sawdust/glue residue, and 17,000 cubic yards of upland (dry) bulky waste on waste piles W-1 and W-2.

Additional details regarding each of the components of the Phase II ESA investigation are discussed below.

2.3.2.1 Soil Analyses

Based on this comparison to the ICRU and the URU, as described above, only three soil sampling locations were identified for which contaminant levels indicate the potential need for remediation (Figure 2-6):

- AOC-12: An area conservatively estimated at 100 cubic yards with oil staining and odors on soil, and an oily sheen on groundwater.

[3] Section 2.1 of the Phase II ESA (ARCADIS 2011) summarizes the investigation of waste piles W-1, 2, 3 and 4.

- AOC-15: An area conservatively estimated at 100 cubic yards, containing arsenic at a concentration above the ICRU of 16 milligrams per kilogram (mg/kg), associated with an area of discolored soil.

- AOC-25: An area conservatively estimated at 370 cubic yards of petroleum-contaminated soils, and benzo(a)pyrene at a concentration above the ICRU of 1.1 mg/kg.

Throughout the Project Development Area, an ash layer was encountered in 24 of the test pits. The ash layer was observed at depths varying from 0.5 to 3 feet below grade (fbg), and the thickness ranges from 6 to 12 inches. The ash is light grayish tan to gray in color, and its physical appearance was similar where observed in the various test pits. There was no obvious correlation between the distribution of the ash and historical operations at the site. The ash appears to have been a component of fill soil used around the Project Development Area.

The ash was sampled in two locations, and there was only one exceedance in a single sample, of mercury, above the URU but below the ICRU. Soil immediately below the ash layer was also tested in various locations, to determine if contaminants were leaching into the subsurface from the ash layer, and the results demonstrated that this was not the case.

The Phase II ESA (ARCADIS 2012) measured soil pH across the study area to determine whether historical operations by AMCO resulted in a pH increase (i.e., more alkaline), particularly for waste piles 1 – 4.[4] As a basis for comparison, the pH values for native soils mapped on the Property, absent human influences, varies from 4.5 to 8.4.[5]

Most results from this investigation showed pH values between 7 and 8, with a few in the ranges of 6 to 7 and 8 to 9. Many of the samples are calcareous ash or other soil affected by AMCO residues, so the more alkaline pH measurements are not surprising, especially considering the nature of historical operations by AMCO. Crushing, briquetting, calcining and heat-treating limestone resulted in widespread dispersion of lime dust at the Property.

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[4] The USEPA and NYSDEC use a pH measurement of 12.5 as a threshold to define a hazardous waste by the characteristic of corrosivity. No sample of soil or waste analyzed by ARCADIS or others reached this threshold.

[5] Site-specific reference data obtained from USDA Natural Resources Conservation Service (NRCS) Web Soil Survey, retrieved March 28, 2012. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

2.3.2.2 Groundwater Analyses

ARCADIS sampled water from five monitoring wells that were installed in 1989 as part of an earlier site investigation.[6] The well depths vary from 14 to 45.5 fbg, and were installed to assess water quality in overburden and shallow bedrock. Monitoring well GWMP-3 could not be located after a thorough search. The samples were analyzed for the following substances, conservatively using NYSDEC's Technical and Operational Guidance Series New York Ambient Water Quality Standards and guidance values (NY AWQS) and Technical and Operational Guidance Series Groundwater Effluent Limitations for Class GA (TOGS-GA), intended for evaluating drinking water supplies:

- Pesticides – no detections;
- Semi-Volatile Organic Compounds (SVOCs) – no detections;
- Volatile Organic Compounds (VOCs) – no detections;
- Metals; and
- Part 360 Leachate Parameters, which include a variety of organic and inorganic substances commonly used to assess water quality affected by solid waste landfill leachate.

The metals present in concentrations that exceed either the NY AWQS or TOGS-GA are iron, manganese and magnesium, most likely reflecting background input from bedrock and soil, although historical operations at the Property may partly account for the magnesium detections. Metals that exceeded the criteria include:

- GWMP-1 (upgradient well) – sodium (72 parts per million [ppm]); this result likely reflects the effects of seasonal highway de-icing along Route 22.
- GWMP-2A (shallow well of pair) – iron (2.5 ppm) and sodium (24 ppm). The sodium concentration is consistent with dilution from the upgradient well GWMP-1.
- GWMP-2B (deep well of pair) – iron (0.73 ppm), magnesium (48 ppm) and manganese (0.683 ppm)

[6] These wells are designated GWMP-1, -2A, -2B, -4 and -5 on the site plan; these are the same identifiers used in previous reports (Figure 2-3).

Part 360 Leachate Parameters were included at the request of NYSDEC. Although there are no exceedances of NY AWQS or TOGS-GA, notable results among the various substances are:

- pH – ranges from 7.13 to 7.74
- Total Dissolved Solids (TDS) – range is 260 to 520 ppm; no applicable NY AWQS, or TOGS-GA
- Chemical Oxygen Demand (COD) – no detections; detection limit is 20 ppm.

The results for these three substances are consistent with the data measured for the same monitoring wells in an earlier report from 1991. The other results for the Part 360 substances are unremarkable.

2.3.2.3 Surface Water Analyses

The surface water samples were collected from the following locations:

- Waste pile WP-1, adjacent to mapped wetland flag W2-44 in Wetland 2 (one sample);
- Waste pile WP-2, adjacent to mapped wetland flags W2-8, W2-16 and between W2-12 and W2-14 in Wetland 2 (one sample at each location);
- Between waste piles WP-3 and WP-4, adjacent to mapped wetland flag A4 in Wetland A; and
- Waste pile WP-4, adjacent to mapped wetland flag B2 in Wetland B.

The samples were analyzed for:

- Pesticides – There were no detections other than a single estimated value for 4,4'-DDT(0.01 micrograms per liter [µg/l]) in sample W2-12/14 from waste pile WP-2. This detection was less than the NY AWQC.
- SVOCs – A single detection was for 2-methylnaphthalene in WP-2-12/14, and this detection was less than the regulatory criteria. There were also estimated values for 2-methylnaphthalene, below the regulatory criteria, in WP-1 (W2-44), and WP-2 (W2-8 and W2-16).

- VOCs – There were no detections in any sample. The detection limits exceeded the NY AWQC and/or TOGS-GA for certain substances in other samples.

- Metals – Iron, manganese and magnesium at concentrations exceeding NY AWQC reflect background input from bedrock and soil. Historical site operations may partly account for the magnesium detections. Sodium is most likely associated with highway de-icing.

- NYSDEC Part 360 Leachate Parameters – There were no exceedances of the various substances detected in any of the surface water samples collected adjacent to Waste Piles WP-1, WP-2, WP-3/WP-4 and WP-4.

2.3.3 Building Pre-Demolition Surveys

In order to characterize the scope of demolition activities that are expected to occur at the Property, CVE commissioned a pre-demolition survey. The survey, conducted by Professional Service Industries, Inc. (PSI), served multiple purposes:

- Identify all ACM and presumed ACM within the interior and exterior of the existing buildings and structures as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP), U.S. Occupational Safety & Health Administration (OSHA), and New York State Industrial Code Rule 56 (ICR-56) requirements. The survey was designed to provide information relative to friability, quantity, and condition of all ACM or presumed ACM to assist CVE in planning demolition activities.

- Identify suspect hazardous materials associated with the buildings' construction including assessment for PCBs, mercury sources (e.g., light ballasts), lead-based paints (LBP), and paints or coatings impacted by heavy metals (Resource Conservation and Recovery Act [RCRA]-8 metals).

- Gain knowledge of potentially contaminated building materials (e.g., brick, concrete), with a focus on likely worst-case conditions such as visually stained areas, that will aid in determining decommissioning requirements (i.e., beneficial re-use and/or off-site disposal).

2.3.3.1 Asbestos Survey

Certified asbestos inspectors collected and analyzed bulk samples of suspected ACM within 19 structures and 4 debris piles on the site, including firebrick (PSI, 2012a). New York State requires that all suspected ACM have a minimum of two samples collected and analyzed from each homogeneous area (minimum of three samples for surfacing materials or thermal systems). Samples were collected by coring through material from the surface down to the base substrate. Each sample location was sprayed with amended water[7] and was kept wet during the sampling process. Material was placed in sample containers, sealed and labeled, and transported to Environmental Laboratory Approval Program (ELAP) accredited laboratories for analysis.

A material is considered ACM if at least one sample from a homogeneous area is confirmed to contain greater than one percent asbestos under laboratory analysis. An asbestos assessment summary table is included as Appendix 2-A, which lists laboratory-confirmed ACM by building, room, and homogeneous area, followed by estimated quantities, condition, and friability. Regulated ACM must be properly removed by a licensed asbestos abatement contractor prior to any demolition that would disturb the material. Federal, state, and local regulations and guidelines will be strictly adhered to when removing ACM, including air sampling and analysis pursuant to ICR-56-4. All ACM or presumed ACM will be removed from the site and disposed of at an approved landfill facility.

It should be noted that there are multiple structures on-site which are partially collapsed or destroyed, where abatement cannot occur in a safe and practical manner. In these situations, the Project will seek a variance pursuant to ICR-56-11.5(b), which allows buildings or structures to be demolished with asbestos material in place, provided that the structure is ruled structurally unsafe by a licensed Professional Engineer, Building Inspector, or other official of competent jurisdiction. Should this course be applicable, the resultant demolition debris that cannot be decontaminated must be considered asbestos-contaminated waste and disposed as regulated ACM at a licensed landfill.

[7] Amended water means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

2.3.3.2 Lead-Based Paint & Hazardous Material Survey

A visual assessment of exposed painted surfaces was conducted by PSI inspectors who identified and sampled painted components for the RCRA 8 metals (PSI 2012a). An area of approximately 1-2 square inches was extracted from coated components down to the substrate. Chip samples were placed in a sealed container, labeled, and analyzed by United States Environmental Protection Agency (USEPA) Method SW-846/6010b for metals, and USEPA Method 7171A for mercury at certified laboratories.[8] A Paint Testing Summary Table is included as Appendix 2-B.

As indicated on the PSI summary table, most of the RCRA-8 metals were detected in the various paint chip samples. Some of the paint chip samples contained certain metals in concentrations that exceed the screening concentrations used to compare the results with the associated Toxicity Characteristic Leaching Procedure (TCLP) thresholds for hazardous waste determinations. The paint chip samples which exceeded the TCLP triggers could be considered a hazardous waste. The major sources of LBP in the structures (78,000 to 387,000 ppm) are the wooded windows (see Appendix 2-B). These windows will be removed from the structures prior to demolition and will be disposed of as hazardous waste according to applicable regulations.

In accordance with USEPA building demolition recommendations, PSI also visually assessed each building and collected bulk samples of building materials suspected to contain PCBs for laboratory analysis. PSI's sampling methods confirmed to USEPA SW-846 and were analyzed by USEPA Method 8082. Based upon the laboratory results, no PCB building materials were identified.

2.3.3.3 Building Material Characterization Survey

The purpose of the Building Material Characterization Survey (PSI 2012b) was to identify any hazardous substances potentially associated with the material comprising the on-site buildings, e.g., brick, concrete slabs, cinder blocks, etc. Gaining knowledge of contaminated materials and building components will aid CVE in determining decommissioning requirements, i.e., beneficial re-use as on-site fill and/or off-site disposal.

[8] Analyses were performed by Pace's American Industrial Hygiene Association (AIHA) and Environmental Lead Laboratory Accreditation Program (ELLAP) accredited laboratory AIHA #11078 in Schenectady, NY.

PSI removed core samples from the major structural components expected to be demolished in each building, including concrete slabs, cinder block walls, wooden beams, and brick chimneys. Sampling was biased toward likely worst-case conditions such as stains, or other observed indicators of contamination. Core samples were analyzed for:

- VOCs (USEPA Method 8260b) by mass analysis;
- SVOCs (USEPA Method 8270c), by mass analysis;
- RCRA 8 metals (USEPA Methods 7471 & 6010b), by mass analysis and TCLP for lead; and
- PCBs (USEPA Method 8082).

PSI also sampled the white precipitate in a stalactite hanging from the roofless mezzanine ceiling inside Building 1, at the direction of NYSDEC. The results of the sampling indicate that the various building materials, and white precipitate, do not contain hazardous substances in concentrations greater than regulatory criteria. Consequently, these materials would be considered non-hazardous solid waste, and, in the case of the concrete and various brick materials, should be acceptable for beneficial re-use as hard fill on-site.

PSI also collected core samples of building structural components where oil or chemicals had been spilled, as evidenced by likely industrial processing areas, staining or residual debris. These cores were designated waste samples, and were tested as follows:

- VOCs (USEPA Method 8260b), by TCLP;
- SVOCs (USEPA Method 8270c), by TCLP;
- RCRA 8 metals (USEPA Methods 7471 & 6010b), by TCLP;
- PCBs (USEPA Method 8082);
- Cyanide and sulfide reactivity (USEPA Method 7.3);
- Solid corrosivity (USEPA Method 9045); and
- Flashpoint (Ignitability) by USEPA Method 1030.

The laboratory analyses indicated that none of the samples would be considered a characteristic hazardous waste.

In addition to the major structural components of the buildings, PSI sampled various outdoor waste piles, which consist of former building materials such as fire brick presumed to have been part of the AMCO operation. The waste pile materials were analyzed for the same constituents, and by the same methods, as for the building waste samples discussed above. The laboratory analyses indicate that the materials are not a characteristic hazardous waste.

PSI also collected and analyzed oil samples from on-site machinery associated with the former Rasco operations. Laboratory results from the machinery (e.g., conveyor and screen) and the emulsion tanker indicate that the oils are not impacted by PCBs. As of March 2012, this machinery, with the exception of the emulsion tanker, has been removed from the Property.

In summary, based on its sampling program PSI found that the building materials and waste piles sampled are not characteristic hazardous waste as per federal and state regulations with the exception of the ACM and LBP described in Sections 2.3.3.1 and 2.3.3.2.[9] Laboratory results indicate that the materials are inert and would be considered a solid waste, or in the case of the concrete and various brick material, acceptable for use as hard fill onsite. During demolition, sampling of the aggregate demolition debris for TCLP analysis will be conducted to confirm that the material is non-hazardous.

2.3.4 Demolition and Clean-up Strategies

The overall strategy for demolition and clean-up will be formalized into a RAP that will be submitted to NYSDEC for review and approval. Additional detail regarding removal of contaminated material, demolition activities, site preparation and use of waste piles, and post-construction conditions is provided below.

[9] Applicable federal standards are 40 CFR [Code of Federal Regulations] Chapter 1 Subpart 261.20 "Characteristics of Hazardous Waste" per Resource Conservation Recovery Act (RCRA). Applicable state standards are 6 NYCRR [New York Codes Rules and Regulations] 372.2 (a) (2) (iii).

2.3.4.1 Removal of Contaminated Material

Based upon the results of the field investigation and laboratory analyses, only three soil sampling locations were identified for which contaminant levels indicate the need for special handling (Figure 2-6):

- AOC-12: An approximately 100 cubic yard volume with visual evidence of hydrocarbon contamination in the form of a petroleum sheen on the water table, petroleum staining on soil in contact with the water table, and total petroleum hydrocarbons – diesel range organics (TPH-DRO) in soil (147 to 286 mg/kg);

- AOC-15: An approximately 100 cubic yard volume of discolored soil containing arsenic at a concentration (32 mg/kg) above the ICRU of 16 mg/kg; and

- AOC-25: An approximately 370 cubic yard volume of petroleum contaminated soils with concentrations of benzo(a)pyrene (3.7 mg/kg) above the ICRU of 1.1 mg/kg.

The amount of contaminated soil at each of these locations is small in comparison to the proposed redevelopment. Consequently, excavation and off-site disposal by licensed contractors is considered the most appropriate means of remediation. Under a specific Health & Safety Plan developed for these activities, the materials will be removed (with appropriate protection measures), and appropriate approvals will be obtained for disposal of the material at either a solid waste landfill or treatment and recycling facility. The limits of contamination will be confirmed by post-excavation sampling of the sidewalls and bottom of the excavations and laboratory analysis for relevant parameters:

- AOC-12: VOCs, polycyclic aromatic hydrocarbons (PAHs), TPH-DRO

- AOC-15: Arsenic

- AOC-25: VOCs, PAHs, TPH-DRO

The NYSDEC has stated that for other soil in which pollutant concentrations exceed the URU, but are less than the ICRU, the URU is the appropriate SCO in the context of 6 NYCRR Part 360, which is the relevant regulatory program due to the presence of the four solid waste disposal areas. Consequently, all soil in which pollutant concentrations exceed the URU, but are less than the ICRU, will require a BUD from NYSDEC to remain on-site for re-use as structural fill or for grading during site redevelopment. CVE will make a formal

request for the BUD in conjunction with the overall RAP for the site; both documents will be submitted to NYSDEC for review and approval.

In addition to the contaminated material, various debris material located throughout the Property will be removed and disposed of properly off-site. This includes the Mica Products waste associated with waste piles WP-1 and -2. Mica Products waste in upland areas on waste pile W-2 is mainly scrap Formica, lumber, sawdust and dry trash. The gelatinous Mica Products waste near the Wetland 2 "finger" area has been tested and shown to be non-hazardous; this material occurs mainly in the ditch and upstream swale near the laboratory building. The nature of both varieties of Mica Products waste is consistent with the definition of solid waste as provided in NYCRR Title 6, Chapter IV, Subchapter B, Part 360, Subpart 360-1.2(a)(1).[10] Consequently, these materials also qualify for disposal at permitted facilities as defined in Subpart 360-1.1(b).

For the Mica Products waste, the estimated volumes (cubic yards) are 1,400 for the gelatinous waste, and 17,000 for the scrap Formica, lumber, sawdust and dry trash on top of waste piles WP-1 and -2.

Conceptually, the approach will be to remove the upland waste with a backhoe, excavator or grapple for staging into roll-off containers prior to off-site disposal. The gelatinous waste will be removed by excavation into roll-off containers for stabilization with an inert material such as sandy material from waste pile W-2. This strategy will result in a non-hazardous waste with no free-draining liquid, appropriate for off-site disposal in a landfill.

After completing removal of the contaminated materials and debris, a report of the remediation activities will be prepared and submitted to NYSDEC as part of the RAP.

2.3.4.2 Demolition Activities

As detailed in Section 2.3.3, CVE commissioned a pre-demolition survey to characterize conditions at the Property prior to developing a demolition plan. All of the materials identified in the survey, including ACM, lead-based paint, and other hazardous materials will be removed according to applicable federal, state, and local guidelines. Where TCLP triggers were exceeded (wooded windows, etc.), LBP material will be segregated and disposed of separately prior to demolition to the extent safely possible.

[10] Subsequent referrals to specific regulations will be limited to Part and Subpart.

All ACM and presumed ACM will be removed in accordance with ICR-56, OSHA, and USEPA's NESHAP regulations. The abatement of hazardous materials will be performed by licensed contractors and the work will be overseen by a third party environmental monitor. Equipment operators and demolition spotters will be briefed on the type of hazardous materials present or expected to be present in each building. Additionally, air sampling will be required during the asbestos removal.

Should a building or structure be ruled structurally unsafe by a Professional Engineer, Registered Architect, Building Inspector, Fire Inspector or other official of competent jurisdiction, the building may be demolished with ACM still within the building in accordance with ICR-56.11-5. Hazardous materials that can be safely reached using demolition tools from outside the structures prior to demolition will be removed or provisions identified to remove these hazardous materials as the demolition progresses. Should this course be applicable, the resultant demolition debris that cannot be decontaminated must be considered asbestos-contaminated waste and disposed as regulated ACM at a licensed landfill.

Once hazardous materials, such as those identified in Section 2.3.3, have been removed from the Property, demolition activities can commence. Buildings will be demolished using conventional demolition methodology, such as a crane with drop ball working in conjunction with grapple/shear equipped excavators and track loaders. The final building demolition methods will be chosen based on actual demolition work scope specification and other approved methods to safely collapse or dismantle structures. Demolition debris will be prepared for disposal by segregating metals from brick and concrete. In general, the intent is to remove all solid waste material such as miscellaneous trash, Formica debris, and building materials, with the exception of the inert waste piles (e.g., limestone slag and fire brick) and inert building materials (e.g., concrete and brick).

The pre-demolition survey described in Section 2.3.3 included testing of concrete and brick materials using TCLP methods which indicate that the materials are inert and acceptable for use as hard fill onsite. If approved for beneficial reuse, this material will be crushed and recycled as fill on site, as local zoning or variances permit.

A detailed Demolition Plan and Demolition Permit Application will be submitted to the Town of Dover per Chapter 145-65 (B)18 of the Town of Dover Zoning Code. CVE understands that the Demolition Permit required by the Town of Dover may not be issued until a report has been submitted indicating the buildings are free of hazardous materials.

2.3.4.3 Site Preparation and Use of Waste Piles

Following demolition, the Project Development Area and 13-acre temporary work area within the former Rasco parcel will be re-graded and excavated. Natural vegetation will be preserved wherever possible in accordance with the approved site plan and final clearing and grubbing plan. Temporary fences will be installed to protect equipment from damaging areas designated for preservation, including established wetlands.

Before the start of below-grade preparation, all surface cover materials, including topsoil, will be removed and screened to remove crumb rubber and other waste materials. Clean soils and solid waste debris will be sorted, and the clean soil will be stockpiled on the site within designated erosion control areas. Any additional excavated materials will be temporarily stockpiled and disposed of or used as fill. Stockpiles will be maintained in accordance with the preliminary SWPPP (provided in Appendix 5-A of the DEIS and Appendices 5-A and 5-B of the FEIS), which has been developed in accordance with state regulations.

The five waste piles (Figure 2-6) were not determined to be hazardous in nature. Therefore, they are classified as a solid waste. Given that preliminary design of the Project indicates that a net addition (import) of suitable soil will be required for various purposes, the intent is to retain materials from the waste piles on-site.

Waste piles WP-1 and WP-2, located in the northern portion of the Project Development Area, will generally remain in place, following the removal of the Mica Products debris. These areas will be stabilized, covered and planted, as outlined in Section 2.3.4.4, and consistent with wetland restoration and replication plans for this area (addressed in Section 3 of the FEIS and Section 3.3.1.3 and Appendix 3-E of the DEIS).

Waste piles WP-3, WP-4 and WP-5 are located within the former Rasco parcel and generally comprise the 13-acre area proposed for temporary construction use. Although the design of the temporary work areas utilizes existing grades to a great extent, some grading and movement of waste pile materials is anticipated to occur during initial construction activities in order to level the work surfaces and install appropriate stormwater management Best Management Practices. Any waste pile material removed from that area will be stockpiled for future re-use within the Project Development Area.

The material re-use option assumes that the physical and chemical properties of the AMCO wastes (i.e., the non-hazardous, limestone slag residue) render them all or partly suitable for this type of re-use, either directly, or blended with an imported aggregate. Re-use of the

AMCO waste on-site is an acceptable alternative pursuant to Subpart 360-1.15, subject to a BUD granted by NYSDEC.

2.3.4.4 Post-Construction Conditions

As discussed above, the four AMCO waste piles are not a source of significant leachate to surface water or groundwater at the Property. Some of the AMCO waste will remain in place following construction, including the waste area used temporarily for construction purposes. Final closure and restoration of these areas will comply with applicable Part 360 regulations for solid waste management facility closure, as well as any requirements for long-term ecological management. CVE will include the four AMCO waste piles in the overall RAP for the Site, which will include a BUD to incorporate the following specific elements, in addition to others that may be deemed appropriate at a later time:

- Grading to suitable slopes that will prevent erosion and sedimentation in bordering wetlands;
- Addition of suitable soil cover for revegetation with indigenous species; and
- A long-term plan for monitoring landscape stability, plus groundwater and surface water quality.

CVE will work closely with NYSDEC to confirm appropriate closure and to identify applicable monitoring and other requirements.

2.4 Conclusions

Phase I and II ESAs have identified the environmental history of the Property, established a conceptual site model, and identified RECs and AOCs warranting further investigation. ARCADIS' 2012 Phase II ESA analyzed the quality of soil, groundwater and surface water in the various RECs and AOCs. In addition, a building pre-demolition assessment was conducted.

Only three limited areas of soil were discovered with regulated substances in concentrations exceeding levels appropriate for an industrially used site. These three areas will be excavated by a licensed contractor and disposed of off-site. The remaining soils, which reflect substance concentrations that would be expected within a long-time industrial site, will be covered by at least 6-inches of clean fill, the proposed structures, paving and landscaping associated with the Project and will not result in exposure issues. The waste

piles (W-1, 2, 3 and 4) were tested and shown to be non-hazardous wastes. The Mica Products and crumb rubber debris will be disposed of off-site, with the remaining materials either closed in place or used on-site for structural fill.

Water quality analysis indicates that historical uses as a whole, and the AMCO waste piles specifically, are not a significant source of site-wide groundwater or surface water contamination. Groundwater and surface water quality are affected by certain metals common to Property soil and bedrock, namely iron, manganese and magnesium. Groundwater entering the Property from the east contains sodium at a concentration above the AWQS, and likely indicates the effect of de-icing salt applied to Route 22 during the winter months.

Appropriate demolition and disposal approaches have been identified for the existing on-site structures, including consideration of the use of clean materials for fill. A detailed demolition plan will be submitted to the Town of Dover as part of the Project's Special Permit Application and a demolition permit application will be submitted for review prior to construction.

As discussed in Section 2.2 of the DEIS, no unique or unusual geologic conditions exist at the Property or the remote Laydown Site to preclude the proposed development of the Project. Some limited blasting may be required to reach competent bedrock suitable for the proposed building construction and to support the heavy equipment necessary for excavation. Appropriate plans will be in place to protect off-site resources and community during earth moving events associated with Project construction.

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