Cobey, Inc.

Site Management Plan

Cobey-Buffalo Lakeside Park – Parcels 1 & 2

Site C915202

February 2022

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Cobey-Buffalo Lakeside Commerce Park – Parcels 1 & 2

Site No. C915202

February 2022

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Certification Statement

I, Michael Higgins, certify that I am currently a New York State registered Professional Engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Michael Higgins, P.E.
Principal Engineer

Date: February 1, 2022

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Acronyms and Abbreviations

ABB	ABB Environmental Services
Arcadis	Arcadis of New York, Inc.
AST	Aboveground Storage Tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BLCP	Buffalo Lakeside Commerce Park
BUDC	Buffalo Urban Development Corporation
CAMP	Community Air Monitoring Plan
Cobey	Cobey, Inc.
C&D	Construction & Demolition
COC	Certificate of Completion
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
E&E	Ecology and Environment, Inc.
ERM	Environmental Resources Management
EWP	Excavation Work Plan
HASP	Health and Safety Plan
HRS	Hazard Ranking Scoring
IC	Institutional Control
mg/kg	milligram per kilogram
NAPL	Non-Aqueous Phase Liquid
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYCRR	New York Codes, Rules, and Regulations
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector

ppm	Parts per Million
PRR	Periodic Review Report
PSA	Preliminary Site Assessment
RAO	Remedial Action Objective
Recra	Recra Environmental, Inc.
RP	Remedial Party
RSO	Remedial System Optimization
S/FMP	Soil/Fill Management Plan
SMP	Site Management Plan
SSALs	Site-Specific Action Levels
SSL	Soil Screening Level
SVOCs	Semi-Volatile Organic Compounds
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	Volatile Organic Compounds

Executive Summary

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan (SMP):

Site Identification:	Cobey-Buffalo Lakeside Commerce Park – Parcels 1 & 2 Site 1 Ship Canal Parkway, Buffalo, New York New York State Department of Environmental Conservation (NYSDEC) Site No. C915202

Institutional Controls:	1. Limiting the use and development of the property to commercial/industrial use.
	2. Compliance with the approved site management plan.
	3. Restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by New York State Department of Health (NYSDOH) and/or the Erie County Department of Health.
	4. Prevention of current or future property owners from conducting activities that will potentially jeopardize the integrity of the cap.
	4. All ECs must be inspected at a frequency and in a manner defined in the SMP.
	6. The property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.
Engineering Controls:	1. Cover systems
Inspections:	Frequency
1. Site cover inspection	Triennially
Reporting:	
1. Periodic Review Report	Triennially

1 Introduction

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Cobey, Inc. (Cobey) Buffalo Lakeside Commerce Park – Parcels 1 & 2 Site located in Buffalo, New York (hereinafter referred to as the "Site"). A site location map is included as Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C915202 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Cobey entered into a Brownfield Cleanup Agreement (BCA) on March 21, 2006, with the NYSDEC to remediate the site. A figure showing the site location and site boundaries are provided on Figures 1 and 2, respectively. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A.

After completion of the remedial work, some contamination was left at this Site, which are hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Erie County Clerk, requires compliance with this SMP and all ECs and ICs placed on the Site.

This SMP was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with the Environmental Conservation Law (ECL) Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC).

- Failure to comply with this SMP is also a violation of ECL, 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and the BCA (Index # B9-0710-05-12; Site No. C915202) for the Site, and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Table 1.1 (in Section 1.3) of this SMP.

This SMP was prepared by Arcadis of New York, Inc. (Arcadis), on behalf of Cobey, in accordance with the requirements of the NYSDEC's Division of Environmental Remediation (DER) "Technical Guidance for Site Investigation and Remediation" (DER-10), dated May 2010 (NYSDEC, 2010), and the guidelines provided by the NYSDEC. The Site SMP was originally written in 2006 and was revised in 2022 to reflect changes in the reporting and inspection frequencies, and changes in the land use and cover systems. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the Site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the Site conditions. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by Cobey to the NYSDEC, as needed, in accordance with NYSDEC's DER-10 for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or ECL.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan (EWP).
- Notice within 48-hours of discovering any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party (RP) has been provided with a copy of the BCA, and all approved work plans and reports, including this SMP.

- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1.1 includes NYSDEC contact information for the above notification. Additional site contacts are also presented in Table 1.1. The information on this table will be updated as necessary to provide accurate contact information.

Table 1.1 – Site Contact List

Name/Affiliation	Address	Contact Information
Cobey		
Michael Durkin President Cobey, Inc.	1 Ship Canal Parkway Buffalo, NY 14218	T: 716-362-9550 mdurkin@cobey.com
Eric McKendry Vice President Cobey, Inc.	1 Ship Canal Parkway Buffalo, NY 14218	T: 716-362-9550 emckendry@cobey.com
NYSDEC		
Megan Kuczka	270 Michigan Avenue Buffalo, NY 14203-2915	T: 716.851.7220 Megan.Kuczka@dec.ny.gov
Andrea Caprio Regional Remediation Engineer	270 Michigan Avenue Buffalo, NY 14203-2915	T: 716.851.7220 Andrea.Caprio@dec.ny.gov
Kelly Lewandowski Site Control	625 Broadway Albany, NY 12233	Kelly.Lewandowski@dec.ny.gov
NYSDOH		
Gregory Rys	584 Delaware Avenue Buffalo, NY 14202	T: 716.847.4385 Gregory.Rys@health.ny.gov

Note: Notifications are subject to change and will be updated as necessary.

2 Summary of Previous Investigations and Remedial Actions

This section summarizes site background information relevant to the development of this SMP, including site location and description, physical setting, investigation and remedial history, remedial action objectives (RAOs), and a summary of remaining Site-related contamination.

2.1 Site Location and Description

The Site is located in Buffalo, Erie County, New York and is identified as property tax parcel number 132.19-2-1.1 on the City of Buffalo Tax Maps. Historically, the site consisted of parcels 132.19-2-1, 132.19-2-2 and 132.20-1-13 but were combined on May 18, 2006. The approximately 12.3-acre property is further identified by two former parcel identifiers including the Former Railroad Yard (Parcel 1) and the Former Manufacturing Area (Parcel 2). These parcels are part of the 113-acre Buffalo Lakeside Commerce Park (BLCP), formerly known as the Hanna-Furnace or Union Ship Canal site. The two other parcels associated with the BLCP include the Union Ship Canal with a surrounding 200-foot buffer zone (Parcel 3) and Parcel 4 (remaining area north of Parcel 3). The BLCP is bounded by property owned by the Buffalo Urban Development Corporation (BUDC) to the north, CSX railroad tracks to the east, New York State Route 5 to the west, and Lackawanna Commerce Park to the south. The boundaries of the Site are more fully described in the Environmental Easement included as Appendix A. The owner of the Site at the time of issuance of this SMP is Cobey, Inc.

2.2 Physical Setting

An overview of the Site's physical setting is presented below, including a description of the land use, and Site geology and hydrogeology.

2.2.1 Land Use

The Site consists of the following: an approximate 90,000 square foot manufacturing building and driveway/ loading/parking areas. The Site is zoned for industrial (manufacturing and processing) use and is currently operated by Cobey as a manufacturing operation for specialized systems and compressor packages used by the petrochemical, power generation, and air separation industries. The properties adjoining the Site and in the neighborhood surrounding the Site primarily include properties zoned for commercial, industrial, institutional, and residential use.

2.2.2 Geology

The Site is situated adjacent to Union Canal, a small waterway that empties into the South Inner Channel which in turn empties into Lake Erie. The topography of the site is characterized by the flat low-lying plains of the Erie-Ontario Lowlands.

Site specific boring logs were provided in historical reports, see Section 8, References.

Regionally, the Site lies within the northwest portion of the Appalachian Plateau, a high plains area that lies on the western side of the Appalachian Highlands. The area around the Site is overlain by glacial drift deposits deposited during the Pleistocene glaciations (Weaver, 1976). Specifically, the glacial till consists of lacustrine silts and clays deposited in proglacial lakes during the last glacial maximum (LaFleur, 1979). Paleozoic aged shale with thin interbedded siltstones underlays the glacial till at the site. Bedrock at the site is a part of the Lower Canadaway group. The group is composed predominately of gray and black shales and siltstones. The shales largely consist of marine sediments deposited west of the Appalachian highlands (Weaver, 1976).

2.2.3 Hydrogeology

Per the Supplemental Investigation Report (Malcolm Pirnie, January 2001), the groundwater flow direction at the Former Railroad Yard is generally north and west, toward the canal, which is consistent with that described during previous investigations.

Historical groundwater elevation data was provided in historical reports, see Section 8, References.

2.3 Investigation and Remedial History

The following narrative provides an operation, investigation, and remedial history of the Site. Available project records to document key investigative and remedial milestones for the Site are referenced in the following subsections.

2.3.1 Operational History

In 1900, the Buffalo Union Steel Corporation purchased the manufacturing and railroad yard portions of the Site and commenced pig iron manufacturing activities. In 1910, the Union Ship Canal was constructed near the northern edge of the Buffalo Union Steel property to service the Site. The Union Ship Canal is approximately 20 feet deep. Iron ore, lime, coke, and other raw materials were received via the canal and were stockpiled along the northern and southern portions of the canal. In the area immediately south of the canal and north of the manufacturing area, the raw materials were stored on massive concrete pads that occupy the bulk of the southern portion of parcel 3.

The Pennsylvania Railroad acquired the land to the north of the canal and used the property for unloading raw material ores into train cars. The Hanna Furnace Corporation purchased an approximately 25-acre portion of the property located to the north of the canal from the Pennsylvania Railroad in 1960. This property included the northern portion of the designated 200-foot Buffer Area. Wetland areas that included ponds occupied much of the property at the time. The swampy area was subsequently backfilled with silty sand and gravel, with some black cinders, as described in Recra Environmental, Inc.'s (Recra's) 1988 report.

The Hanna Furnace Corporation ceased Site operations in 1982. The Jordan Foster Scrap Corporation purchased the Site in 1983 and subsequently removed most of the facility and railroad. In 1986, the Jordan Foster Scrap Corporation filed for bankruptcy and leased the Site briefly to the Equity Scrap Processing Company. In 1998, the City of Buffalo gained title to the Hanna Furnace Site due to nonpayment of taxes. The Hanna Furnace Site was vacant and unsecured from 1986. For future development consideration, the City of Buffalo divided the Site into the following parcels:

- Parcel 1: The former railroad yard, approximately 43 acres.

- Parcel 2: The former manufacturing area, approximately 29 acres.
- Parcel 3: A 200-foot-wide strip around the canal, approximately 22 acres.
- Parcel 4: The manufacturing waste disposal area, approximately 19 acres.

The Site consists of approximately 12-acres of Parcels 1 and 2.

2.3.2 Investigation History

Prior to remediation, the Site was subject to several environmental assessments and investigations as summarized in the following sections, per the Remedial Action Work Plan (Malcolm Pirnie, 2006). Full titles for each of the reports referenced below are provided in Section 8.0 – References.

2.3.2.1 Solid Waste Management Facility Report

A Solid Waste Management Facility Report was prepared by Rupley, Bahler, and Blake, Consulting Engineers in 1979 for the Site. The report provided an evaluation of surface water samples collected in the Union Ship Canal and an on-Site pond. These samples contained phenols and soluble iron at concentrations exceeding the NYSDEC Class GA (drinking water) groundwater standards. In the area of the Site, groundwater is not utilized as a source for drinking water.

2.3.2.2 Inactive Site Profile Report

Following the cessation of pig iron manufacturing at the Site, the Erie County Department of Environmental Protection inspected the Site during April 1982 and prepared a report entitled “Inactive Site Profile Report”. The report recommended that the NYSDEC downgrade the Site classification to a “class F” which pertains to a Site where no further action is warranted and little to no environmental hazard potential exists.

2.3.2.3 Inactive Hazardous Waste Disposal Report

In 1983, after inspection of the Hanna Furnace property, the NYSDEC prepared an Inactive Hazardous Waste Disposal Site Report, also known as the “Registry”. The on-Site inactive landfill was assigned a site number (#915029). The Site was initially assigned a classification of 2A, which indicates a potential hazardous waste site with insufficient data to properly characterize potential site issues.

2.3.2.4 Chemical Migration to the Niagara River from Hazardous Disposal Sites in Erie and Niagara Counties

In 1983, the United States Geological Survey (USGS) drilled and sampled seven soil borings on the north side of the Union Ship canal. Samples collected from the borings were submitted for laboratory analysis for a short list of heavy metals. Based upon the results of the sampling event, USGS prepared the “Draft Report of Preliminary Evaluation of Chemical Migration to the Niagara River from Hazardous Waste Disposal Sites in Erie and Niagara Counties,” in which it was concluded that there was a potential for lateral migration of contaminants at and away from the Site. No samples were collected in the Former Manufacturing Area (Parcel 2) during this investigation.

2.3.2.5 Phase I Investigation

In 1985, Engineering-Science and Dames and Moore conducted a site inspection and Phase I Investigation on behalf of the NYSDEC. The Phase I Investigation was limited to areas north of the Union Ship Canal and included a record search and scoring the Site using the Hazard Ranking Scoring (HRS) System. The study area was assigned a score greater than 28.5 indicating that it is generally considered to pose an immediate threat to human health and the environment and are recommended for placement on the National Priorities List. Additional data needs were identified by the Phase I Investigation and a Phase II Investigation was recommended and outlined.

2.3.2.6 Site Characterization and Environmental Assessment

In August 1988, Recra conducted a Site Characterization and Environmental Assessment on behalf of the New York State Department of Transportation (NYSDOT). Activities were conducted on the entire 113-acre Hanna Furnace property. Site activities included the collection of surface and subsurface soil/fill, surface water, sediment and groundwater samples; performance of a risk assessment; and an evaluation of remedial alternatives.

The investigation in the Former Railroad Yard Area (Parcel 1) included the collection of five surface soil samples (SS-19 to SS-24). The soil samples were collected from the 0.5 to 1.5 feet below grade, and were analyzed for polychlorinated biphenyls (PCBs), oil and grease, cyanide, ammonia, phenols, and metals, including arsenic, chromium, copper, and lead. Analytical results indicated that PCBs were detected in all five samples at concentrations ranging from 0.074 to 1.5 parts per million (ppm). Inorganics were detected in at least one sample at concentrations exceeding the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 soil cleanup guidelines, but less than the guidelines proposed for other commercial/industrial development on former steel manufacturing properties.

The investigation of the Former Manufacturing Area (Parcel 2) included the collection of eight surface soil samples, six subsurface soil samples, and two groundwater samples. The soil and groundwater samples were analyzed for arsenic, chromium, copper, lead, cyanide, oil and grease, ammonia, and PCBs. Analytical results indicated elevated concentrations of inorganics and low (less than 1 ppm) concentrations of PCBs in the soil samples. Groundwater samples from the monitoring wells contained arsenic, chromium, lead, and cyanide at concentrations exceeding the class GA standards. The pH of the groundwater was also above the range of the class GA standard. Based on these results, the HRS score of the Hanna Furnace Site was recalculated using the data collected from the site characterization. The revised HRS, as scored by Recra, remained low at 12.28 out of 100, and Recra concluded that the Site does not pose an immediate threat to human health and the environment.

2.3.2.7 NYSDEC Surface Soil Sampling, 1990

During 1990, the NYSDEC collected two surface soil samples (one composite and one discrete) from Parcel 2 (the Former Manufacturing Area) for laboratory analysis of PCBs. The composite sample was collected from three locations in the vicinity of the oil shack building where it was identified that transformer salvaging had apparently been conducted. The discrete sample was collected from oil-stained soil in the vicinity of a suspected transformer pen in the southwest corner of the Site, near the former office building. PCBs were not detected in either sample.

2.3.2.8 NYSDEC Surface Soil Sampling, 1994

In 1994, the NYSDEC collected 36 surface soil samples from the Hanna Furnace property, of which 13 were collected from Parcel 2 (the Former Manufacturing Area). The 13 samples were analyzed for PCBs using immunoassay techniques, and were analyzed for metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, and selenium) using standard laboratory methodologies. PCBs were not detected in the samples, and all metals, with the exception of silver, were detected at concentrations exceeding the current NYSDEC soil cleanup guidelines in at least one sample.

2.3.2.9 Preliminary Site Assessment

In 1995, ABB Environmental Services (ABB) performed a Preliminary Site Assessment (PSA) on behalf of the NYSDEC. The PSA included the 113-acre Hanna Furnace Site and the adjacent Shenango Steel Site. The purpose of the PSA was to: more thoroughly characterize the Hanna Furnace property, recalculate the Site score using the HRS system, and reclassify the Hanna Furnace property.

Former Railroad Yard Area (Parcel 1): One soil (BS-104) and one groundwater sample (MW-104) were collected in the Former Railroad Yard. The soil sample was collected from a boring in the south-central portion of the Former Railroad Yard Area from fill at a depth of 6 to 8 feet below grade. The water sample was collected from a monitoring well installed at the same location. The well was screened from 5 to 15 feet below grade. Water levels measured during ABB's investigation indicated that the water table was present at a depth of approximately 8.7 feet below grade in MW-104.

The samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs, and Target Analyte List (TAL) metals and cyanide. Analytical results indicate that aluminum, beryllium, calcium, and magnesium were present in the soil sample at concentrations exceeding the Eastern United States Background concentrations listed in the TAGM 4046 soil cleanup guidelines by up to four times. Total cyanide was detected at a concentration of 32.1 ppm in the soil sample. Analysis of the groundwater sample indicated that only cyanide (240 ug/L) and sodium (26,300 ug/L) were detected at concentrations exceeding the NYSDEC Glass GA Groundwater Quality Standards (100 and 20,000 ug/L, respectively). TCL VOCs, SVOCs, pesticides, and PCBs were not detected in the soil and groundwater samples.

Former Manufacturing Area (Parcel 2): Five surface soil, two subsurface soil, and two groundwater samples were collected from the Former Manufacturing Area. The soil and groundwater samples were analyzed for TCL VOCs, SVOCs, pesticides/PCBs, and TAL metals, plus cyanide. The surface soil samples were also analyzed for EPTox metals.

Analytical results for the surface soil samples indicated that SVOCs, primarily polycyclic aromatic hydrocarbons (PAHs), and a number of metals were detected at concentrations exceeding the TAGM 4046 soil cleanup guidelines. Metals were detected in the EPTox analysis at low concentrations. The analytical results for the two subsurface samples indicated that no VOCs, SVOCs, pesticides, or PCBs were detected, and a number of metals were detected at concentrations exceeding the soil cleanup guidelines.

Analysis of the groundwater samples indicated that only iron, magnesium, manganese, and sodium were detected at concentrations exceeding the NYSDEC Glass GA Groundwater Quality Standards. VOCs, SVOCs, and pesticides/PCBs were not detected in the groundwater samples.

Since no disposal of listed or characteristic hazardous waste was documented at the Site, the NYSDEC removed the Hanna Furnace Site from its Registry of Inactive Hazardous Waste Disposal Sites.

2.3.2.10 Environmental Site Assessment

In May 1997, Ecology and Environment, Inc. (E&E), performed an Environmental Site Assessment on behalf of the Buffalo Urban Renewal Agency. The objective of the assessment was to summarize all available and pertinent environmental information, to identify variations in current Site conditions relative to those defined in earlier investigations, and to identify potential areas of concern. The assessment involved a review of records as well as the performance of three site inspections. The assessment report presented the findings in order of environmental concern by area.

- Within the Former Railroad Yard Area (Parcel 1), the only environmental concern was solid waste disposal. Several waste piles of railroad ties, tires, construction and demolition (C&D) debris, household trash, firebrick and black material were noted in the report. Only those debris piles with black material were considered to have potential contamination by E&E.
- Within the Former Manufacturing Area (Parcel 2), the following concerns were identified:
- Potential contamination in the machine shop (2-story brick building).
- Discolored firebrick at blast furnace No. 3.
- An area containing brown-black material with lack of vegetation.
- Sediment contamination within sumps and trenches.
- Oil and lubricant staining in the Oil Shack.
- Potential releases from an aboveground storage tank (AST) in the former coal bin drums.
- Elevated pH in monitoring wells MW-104, MW-105, and MW-106.

2.3.2.11 Characterization of the Former Railroad Yard

Between December 1998 and January 1999, Malcolm Pirnie collected surface and subsurface soil samples from 36 boring locations within the Former Railroad Yard Area (Parcel 1). The report summarizing the results of this investigation was submitted to the NYSDEC in October 1999. As detailed in the report, the results of sampling indicated that no VOCs, phenols, or PCBs were detected in any of the samples collected. However, metals and PAHs were present in the samples at concentrations exceeding TAGM guidelines.

The concentrations of PAHs detected in both the surface and subsurface soil samples are primarily within the range typically found in urban soils. The TAGM soil cleanup guidelines for PAH compounds were exceeded in 17 of the 18 surface soil composite samples.

The PAH concentrations detected in the subsurface soil samples were significantly lower than those in the surface soil composite samples. The TAGM soil cleanup guidelines for PAH compounds were exceeded in 5 of the 18 subsurface soil composite samples.

Because PAHs are formed through anthropogenic combustion processes such as the burning of coal, oil and gasoline, they are generally ubiquitous in soils, especially industrial and urban soils. The presence of PAHs in the

Former Railroad Yard Area is consistent with its industrial location and past use as a railroad yard located adjacent to an active pig iron manufacturing facility.

The analysis of composite soil samples for inorganic analytes (TAL metals plus cyanide) indicated that a number of metals were detected at concentrations exceeding the soil cleanup guidelines.

The analysis of the surface soil composite samples indicated that aluminum, arsenic, beryllium, cadmium, calcium, chromium, copper, lead, magnesium, manganese, mercury, nickel, and zinc were detected in at least one sample at concentrations exceeding the soil cleanup guidelines and/or the Eastern U.S. background concentrations. The concentrations of metals in the composite subsurface soil samples were generally lower than or similar to those of the surface soil samples. Aluminum, arsenic, beryllium, cadmium, calcium, magnesium, manganese, nickel, and zinc were detected in at least one composite surface sample at concentrations exceeding the soil cleanup guidelines and/or the Eastern U.S. background concentrations.

Total cyanide concentrations in the composite surface and subsurface soil samples ranged from 1 to 33 milligrams per kilogram (mg/kg). Analysis of the sample of blue-green sandy material collected from boring SB-20 revealed that no reactive cyanide was detected in the sample, and that the total cyanide concentration was 38.8 mg/kg. Although there was no NYSDEC soil cleanup guideline for cyanide at that time, the United States Environmental Protection Agency (USEPA) soil screening level (SSL) was used for comparison. The SSL for amenable cyanide was 1,600 mg/kg. Amenable cyanide is that portion which is amenable to chlorination. The susceptibility of cyanide complexes to chlorination is indicative of its availability to organisms. Total cyanide includes the cyanide that is amenable and that is not amenable to chlorination. Because the total cyanide concentrations detected in the samples from the Site are less than 40 mg/kg, the concentrations detected in the soil at the Former Railroad Yard Area are well below the USEPA soil screening levels for amenable cyanide.

The Toxicity Characteristic Leaching Procedure (TCLP) analysis of 5 subsurface composite samples indicated that only barium is present in leachable quantities. Barium concentrations ranged from 0.2 to 0.6 micrograms per liter (µg/L) in the samples of fill material, well below the USEPA Maximum Concentration Value for Toxicity Characteristics of 100 µg/L for barium.

2.3.2.12 Qualitative Human Health and Ecological Risk Assessment

In May 2000, Malcolm Pirnie developed Qualitative Human Health and Ecological Risk Assessments for the Former Railroad Yard Area (Parcel 1). The purpose of the risk assessments was to identify relevant environmental media and chemicals of potential concern that may present health risks to the populations in and around the vicinity of the Former Railroad Yard Area. The risk assessments concluded that, given the redevelopment plans for the Hanna Furnace property, exposures to future on-site workers, trespassers, and wildlife would be effectively precluded by covering the Former Railroad Yard Area with 12-inches of vegetated soil, asphalt, or concrete.

2.3.2.13 Supplemental Investigation Report

Based on the results of Malcolm Pirnie's investigation of the Former Railroad Yard Area, the NYSDEC requested additional investigation activities for a more complete characterization of the Site. The additional activities included the installation and sampling of monitoring wells, the characterization of fill piles, and the characterization of blue material encountered at depth in borings.

To address outstanding issues at the Former Railroad Yard, Malcolm Pirnie implemented a Supplemental Investigation between January 24 and January 26, 2000, which included the installation of seven soil borings. Three of those borings were completed as monitoring wells (MW-001 through MW-003) and sampled as part of the investigation. The remaining borings were designated B-37 through B-40. Additionally, the characterization of on-site debris piles was performed and included a thorough inventory, test pit program, and sample collection. The results of the Supplemental Investigation were detailed in the January 2001 Supplemental Investigation Report and as detailed below.

Additional Characterization of Blue-Colored Fill Material

During the January 1999 characterization of the Former Railroad Yard, a blue-colored layer of fill material was encountered beneath the majority of the yard. To further characterize the chemical composition of the blue material, additional samples were collected from completed borings during the Supplemental Investigation.

Soil that is described as blue soil, especially Prussian Blue, is often a result of industrial activities, and often contains cyanide at very high concentrations. The blue-colored material at the Hanna Furnace Site is not a Prussian Blue color. The color of the material ranges from grayish blue green to grayish blue to white gray. The blue-green material generally underlies the white-gray material, and the transition from one color to the other was sometimes observed to be at approximately the water table.

The analysis of the blue-green material samples collected during the Supplemental Investigation indicated that VOCs were detected at concentrations less than the soil cleanup guidelines, and pesticides and PCBs were not detected. Two SVOCs (i.e., benzo(a)anthracene and benzo(a)pyrene) were detected at concentrations exceeding the TAGM soil cleanup guidelines.

Eight metals (i.e., aluminum, barium, beryllium, calcium, iron, magnesium, selenium, and zinc) were detected in at least one of the blue-colored soil samples at concentrations exceeding the TAGM soil cleanup guidelines.

One sample was collected from the blue-green material in boring BS-20 for analysis of total cyanide and reactive cyanide due to concerns regarding cyanide contamination. The total cyanide concentration was low (38.8 mg/kg), and no reactive cyanide was detected in this sample. Additional samples were collected specifically for the characterization of the blue-green material during the Supplemental Investigation. These samples were analyzed for total cyanide, and the results showed that cyanide concentrations were low and ranged from 3.1 to 43 mg/kg. Groundwater samples collected from monitoring wells in areas that contain this blue-green material (MW-104, MW-105, and MW-001) contained cyanide at concentrations ranging from 20 to 90 μg/L. These concentrations are below the NYSDEC groundwater standard of 200 μg/L.

Characterization of Eastern Portion of Former Railroad Yard Area

At the request of the NYSDEC, one additional soil boring was installed to sample the fill overburden in the extreme eastern portion of the Site. Additionally, one boring was completed in the northeastern portion of the Former Railroad Yard because that area also was not characterized during previous investigations. These borings were sampled during advancement using the same techniques employed during the January 1999 investigation.

The material encountered during the drilling of the monitoring wells was similar to that encountered in the borings throughout the area. The analytical results of the soil samples collected from the two borings indicated that VOCs were detected at concentrations less than the soil cleanup guidelines, and pesticides and PCBs were not detected. Only one SVOC (chrysene) was detected at concentrations exceeding the soil cleanup guidelines. Chrysene was detected in the sample collected from boring MW-002 at a concentration of 480 µg/kg, slightly exceeding the soil cleanup guideline of 400 µg/kg.

Nine metals (aluminum, arsenic, beryllium, calcium, copper, iron, magnesium, selenium, and zinc) were detected in at least one of the soil samples at concentrations exceeding the soil cleanup guidelines.

Debris Pile Characterization

Numerous debris piles of admixed soil and construction debris have been documented and were observed in the Former Railroad Yard during the January 1999 site characterization effort. The debris piles were generally located along the southern and southeastern perimeters of the Former Railroad Yard Area.

Since these piles had not yet been sampled for chemical analyses, a thorough inventory and sampling program was implemented during the Supplemental Investigation to characterize the contents of the debris piles. To best characterize the debris piles, Malcolm Pirnie verified and updated the inventory to provide an accurate estimate of the number, location, volume, and apparent contents of all on-Site debris piles.

Debris Pile Inventory

As part of the Supplemental Investigation, Malcolm Pirnie verified E&E's 1997 soil pile inventory and amended the inventory to include the contents of the debris piles. Malcolm Pirnie estimated that the volume of all above grade debris in the piles was approximately 24,000 cubic yards**.** The materials observed in the debris piles during the investigation were generally categorized as C&D debris mixed with sand and gravel with occasional railroad ties, slag, and metal refuse.

Debris Pile Screening and Sampling

Subsequent to an inventory of all debris piles, sampling of the debris was performed. A backhoe was used to breach select debris piles to inventory the contents and provide access to non-weathered debris for sampling. Samples were visually characterized and screened for VOCs using a photoionization detector (PID) equipped with a 10.2 eV lamp and observations were recorded on the stratigraphic logs.

On January 23 and 24, 2000, a total of 20 debris pile test pits designated SS-1 through SS-20 were excavated and one sample was collected from each test pit. The Supplemental Investigation Report includes a descriptive log for each sampled excavation. The 20 debris pile samples were submitted for laboratory analysis of TCL VOCs, SVOCs, pesticides, and PCBs, and TAL metals plus cyanide**.**

The analytical results of the debris pile sampling indicated that no VOCs were detected at concentrations exceeding the soil cleanup guidelines. Aldrin was the only pesticide detected at concentrations exceeding the soil cleanup guidelines. Aldrin was detected in three samples, but the concentrations exceeded the soil cleanup guidelines in only sample SS-4. PCBs were detected in two samples at concentrations exceeding the soil cleanup guidelines.

Six SVOCs were detected at concentrations exceeding the TAGM soil cleanup guidelines. These six compounds are PAHs and were also detected in samples collected during the 1999 Site Characterization. The concentrations of these compounds detected in the soil/fill material are primarily within the range typically found in urban soils. As indicated previously, because PAHs are formed through anthropogenic combustion processes such as the burning of coal, oil and gasoline, they are generally ubiquitous in soils, especially urban soils. The presence of PAHs at the Site is consistent with its urban location and past use as a railroad yard. Eleven metals were detected in at least one debris pile sample at concentrations exceeding the soil cleanup guidelines.

Groundwater Characterization Results

Based on the findings of the Supplemental Investigation, the groundwater flow direction at the Former Railroad Yard is generally north and west, toward the canal. This groundwater flow direction is consistent with that

described during previous investigations. No VOCs or SVOCs were detected in the groundwater samples at concentrations exceeding the Class GA Groundwater Quality Standards. Pesticides and PCBs were not detected in the groundwater samples. Six metals (iron, magnesium, manganese, selenium, sodium, and thallium) were detected at concentrations exceeding the standards in at least one groundwater sample.

2.3.2.14 Remedial Action Work Plan

- A total of five soil borings were completed around monitoring wells MW-104 and MW-105 in January 2001 to assess whether the high pH observed in the groundwater in the wells was associated with grout contamination. Groundwater was collected from each boring using either a bailer or a bottle lowered on a string. The pH of each groundwater sample was measured using a portable pH meter that was calibrated immediately prior to the start of activities. The pH of the groundwater collected from each boring ranged from 10.00 to 11.53.

Based on the results of the boring program, on May 17, 2001, Malcolm Pirnie completed a total of 10 test pits to delineate the areal extent of high pH in the Parcel 1 groundwater. Groundwater was collected from each test pit either by lowering a bottle into the excavation or by collecting water from the backhoe bucket. The pH of each groundwater sample was measured using a portable pH meter that was calibrated immediately prior to Site activities. The pH of the groundwater collected from these five borings ranged from 8.67 to 11.95. The results of the pH Investigation were reported to the NYSDEC in a June 6, 2001 letter report.

2.3.2.15 Site Investigation Report

- In July/August 2001 Environmental Resources Management (ERM) conducted a site investigation associated with the Former Manufacturing Area (Parcel 2) on behalf of the NYSDEC. ERM conducted the investigation in accordance with a work assignment prepared by O'Brien and Gere Engineers, Inc. and the NYSDEC. The investigation consisted of the installation of soil borings and groundwater monitoring wells, and the excavation of test pits. Samples from soil borings were analyzed for VOCs, SVOCs, PCBs, and TAL metals. Groundwater samples were analyzed for VOCs, SVOCs, PCBs, and TAL metals. Fourteen test pits were completed within Parcel 2 to evaluate the nature and extent of non-aqueous phase liquid (NAPL) that was discovered during the 2001 Malcolm Pirnie investigation. Soil and groundwater samples were collected from two test pits and analyzed for SVOCs, PCBs, and TAL metals.

The 2001 ERM investigation, as well as previous investigations, indicate that of the existing contaminants detected in soil and groundwater within the Site, SVOCs (particularly PAHs), and metals were the most prevalent. VOCs and PCBs were sporadically detected and when encountered, were detected at concentrations less than the NYSDEC-approved Site-Specific Action Levels (SSALs), and regulatory soil and groundwater standards or guidance. An area of elevated pH in groundwater and areas of NAPL-contaminated soils were also encountered.

2.3.2.16 Supplemental Preliminary Subsurface Investigation

During October 2005, prior to implementing construction activities at the Site, a supplemental preliminary subsurface investigation was conducted to characterize physical and chemical properties of the Site soi/fill material. Investigation activities included the installation of 75 borings within the proposed building footprint and utility trench locations. Soil samples were collected from the borings and submitted for laboratory analysis of VOCs, SVOCs, pesticides, PCBs, TAL metals and cyanide. Each of the soil samples met the SSALs with the exception of pH.

2.3.3 Remedial History

An overview of remedial measures conducted to address environmental contamination at the Site is presented below.

2.3.3.1 Removal of Contaminated Soil/Fill

During advancement of the Site building foundation footers using a caisson drill, oily soil/fill material was observed at one of the caisson borings identified as location D-20. The approximately 17 cubic yards of contaminated soil/fill was stockpiled, characterized, and disposed of offsite at a NYSDEC-approved permitted landfill.

A remnant of a buried steel vessel was encountered during Site development activities that included the excavation of utility trenches and building footers. In accordance with the soil handling protocols indicated in the NYSDEC-approved Soil/Fill Management Plan (S/FMP), the vessel and surrounding contaminated soil/fill were removed as part of the Site redevelopment. The volume of soil/fill removal from within and around the steel vessel was approximately 51 tons. A combined total of 67.68 tons of contaminated soil was removed and disposed off-Site at a permitted landfill. The soil/fill removal activities were completed with NYSDEC oversight and approval.

2.3.3.2 Site Cover Systems

The Site was covered with multiple cover systems to isolate the underlying soil/fill material using one of the following cover types, depending on planned Site use.

Asphalt

Areas designated for vehicular and pedestrian traffic, including parking lots, driveways and walkways, were applied with a four-inch gravel subbase over the Site soi/fill materials followed by a minimum two-inch layer of asphalt pavement.

Concrete

The installation of the Site building foundation consisted of the placement of a minimum of four-inch gravel subbase over the Site soi/fill materials followed by an eight-mil polypropylene sheeting to provide a vapor barrier. The foundation was completed with the placement of a minimum four inches of concrete.

In select areas designed for vehicular and pedestrian traffic adjacent to the Site building, concrete pavement was utilized. These areas were constructed similarly to that of the concrete building foundation, with the exception of the polypropylene sheeting.

Soil Cover

A minimum 12-inch thick soil cover was installed in areas where vehicular traffic was not anticipated. Prior to placement of the soil cover, a demarcation layer was rolled out over the entire area. This layer is composed of a fine polypropylene mesh made by Internet® that is bright orange in color with a mesh size of ¾-inches by $^{5}/_{8}$-inches. The Site soil cover system is comprised of borrow soi from off-Site locations that were tested and confirmed “clean” in accordance with the S/FMP.

2.4 Remedial Action Objectives

Per the Remedial Action Work Plan (Malcolm Pirnie, 2006), the RAO for the soil/fill material at the Site is based primarily on the human health and environmental risks the Site poses as identified in the Qualitative Risk Assessment (Malcolm Pirnie, 2000). The RAO for the Site is to minimize the potential exposure risks associated with direct contact with soil/fill material and groundwater.

2.5 Remaining Contamination

The extent of contamination at the Site, following the limited removal activities discussed in Section 2.3.3 is presented in the following subsections.

2.5.1 Soil

Based on historical investigation activities, the constituents of concern in the Site soil/fill include PAHs and inorganic constituents. With the exception of the limited materials removed during redevelopment, these constituents remain in soil/fill located beneath the Site cover systems. PAHs present at the Site are associated with byproducts if incomplete combustion and impurities in petroleum products. The presence of PAHs at the Site is consistent with its urban setting and historical use as a railroad yard.

Metals, including arsenic, chromium, copper, and zinc are present in Site soil/fill located beneath the Site cover systems at concentrations exceeding “background” concentrations. Many of these constituents are components of slag and are present as a result of slag depositions on-Site.

Table 1 summarizes the minimum and maximum detected concentrations of soil samples collected at the Site.

2.5.2 Groundwater

Elevation pH in groundwater was identified in the western portion of Parcel 1 during historical investigation activities. The elevated pH may be associated with the historical use of lime as a raw material in the pig iron manufacturing process or was potentially used a part of fill material brought on-Site at the turn of the century prior to redevelopment of the Site.

Table 2 summarizes the minimum and maximum detected concentrations of groundwater samples collected at the Site.

3 Institutional and Engineering Control Plan

3.1 General

Based on the presence of limited remaining contamination at the Site, ICs and ECs are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all ICs/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all IC/ECs on the Site.
- The basic implementation and intended role of each IC/EC.
- A description of the key components of the ICs set forth in the Environmental Easement.
- A description of the controls to be evaluated during each required inspection and periodic review.
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the EWP (Appendix B) for the proper handling of limited remaining contamination that may be disturbed during maintenance or redevelopment work on the Site.
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the Site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required by the BCA to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to limited remaining contamination; and (3) limit the use and development of the Site. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. ICs below may not be discontinued without an amendment to or extinguishment of the Environmental Easement. These ICs are:

- The property may be used for: commercial/industrial use.
- All ECs must be operated and maintained as specified in this SMP.
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC.

- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP.
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP.
- Access to the Site must be provided to agents, employees, or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The following are prohibited without the express written waiver of the prohibition by the NYSDEC: day care, childcare, or medical care.

3.3 Engineering Controls

An overview of the ECs established for the Site is presented below.

3.3.1 Cover

Exposure to the limited remaining contamination at the Site is prevented by existing cover systems placed over the Site. As shown on Figure 3, these cover systems are comprised of approximately 12 inches feet of clean fill; or a four-inch gravel subbase followed by 2-inches of asphalt or 4-inches of concrete. The EWP provided in Appendix B outlines the procedures required to be implemented for intrusive activities within the Site and if any underlying limited remaining contamination is disturbed. Procedures for the inspection of the existing cover are provided in the Monitoring and Sampling Plan included in Section 4 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and NYSDOH's Generic Community Air Monitoring Plan (G-CAMP) provided in Appendices C and D, respectively. Any disturbance of the Site's cover system must be overseen by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

The existing cover system is a permanent control feature, and the quality and integrity of this feature will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

4 Monitoring Plan

4.1 General

This Monitoring Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring Plan may only be revised with the approval of the NYSDEC.

This Monitoring Plan describes the methods to be used for evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment.

To adequately address these issues, this Monitoring Plan provides information on:

- Information on all designed monitoring systems.
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7 of this SMP.

4.2 Site-Wide Inspection

Site-wide inspections will be performed once every three years. These periodic inspections must be conducted when the ground surface is visible (i.e., no snow cover). Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs. During these inspections, an inspection form will be completed as provided in Appendix E – Site Inspection Form. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage.
- An evaluation of the condition and continued effectiveness of ECs.
- General site conditions at the time of the inspection.
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection.
- Confirm that site records are up to date.

Inspections of all remedial components installed at the Site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report (PRR). The inspections will determine and document the following:

- Whether ECs continue to perform as designed
- If these controls continue to be protective of human health and the environment
- Compliance with requirements of this SMP and the Environmental Easement
- If Site records are complete and up to date

Reporting requirements are outlined in Section 7.0 of this SMP.

Inspections will also be performed in the event of an emergency such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, verbal notice to the NYSDEC must be given by noon of the day following discovery. In addition, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the Site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential contamination to the environment and the public.

5 Operation and Maintenance Plan

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

6 Periodic Assessment/Evaluations

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the Site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

The Site engineering controls are passive and are not vulnerable to changing or extreme weather conditions. Storm water management is not anticipated to be a concern because the Site is graded for positive drainage. Remaining contaminated materials are below the Site cover systems, which is anticipated to withstand foreseeable rain, snow, and flooding and protect against long-term direct contact exposures. Based on the thickness and integrity of the Site cover systems, contaminated materials are not anticipated to be released from the Site during extreme weather events, including flooding.

If Site conditions change, Cobey with NYSDEC consultation, will evaluate the need to develop a vulnerability assessment. Potential future vulnerability assessments will be provided as part of the PRR.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed for the Site during site management, and as reported in the PRR.

Site maintenance activities (i.e., site inspection) will be performed in such a way to minimize energy usage, emissions, and waste generation.

6.2.1 Timing of Green Remediation Evaluations

For potential future major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the Project Manager feels appropriate (e.g. during significant maintenance events or in conjunction with storm recovery activities).

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

6.2.2 Frequency of System Checks and Other Periodic Activities

Transportation to and from the Site and use of consumables in relation to visiting the Site in order to conduct system checks have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

6.3 Remedial System Optimization

An RSO study will be conducted any time that the NYSDEC or the RP requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document.
- The management and operation of the remedial system is exceeding the estimated costs.
- The remedial system is not performing as expected or as designed.
- Previously unidentified source material may be suspected.
- Plume shift has potentially occurred.
- Site conditions change due to development, change of use, change in groundwater use, etc.
- There is an anticipated transfer of the site management to another RP or agency.
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the Site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

7 Reporting Requirements

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the site inspection form provided in Appendix E. This form is subject to NYSDEC revision. All site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7.1 and summarized in the PRR.

Table 7.1 – Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency[2]
PRR[1]	Triennial

Notes:
1. Activities and results of each site inspection will be summarized in the respective Periodic Review Report.
2. The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period.
- Name, company, and position of person(s) conducting monitoring/inspection activities.
- Description of the activities performed.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet).
- Type of samples collected (e.g., soil/fill).
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.).
- Sampling results in comparison to appropriate standards/criteria.
- A figure illustrating sample type and sampling locations.

- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format).
- Any observations, conclusions, or recommendations.
- A determination as to whether limited remaining contamination have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event.
- Name, company, and position of person(s) conducting maintenance activities.
- Description of maintenance activities performed.
- Any modifications to the system.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet).
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event.
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities.
- Description of non-routine activities performed.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet).
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

The next PRR will be submitted to the NYSDEC in 2023 and triennially thereafter. In the event that the Site is subdivided into separate parcels with different ownership, a single PRR will be prepared that addresses the Site described in the Environmental Easement (Appendix A). The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the PRR. The report will include:

- Identification, assessment, and certification of all ECs/ICs required by the remedy for the Site.
- Results of the required triennial site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.
- Data summary tables of constituents of concern by media (e.g., soil, groundwater, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted, if applicable.
- Results of all analyses, copies of all laboratory data sheets and the required laboratory data deliverables for all samples collected during the reporting period, if applicable, will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific BCA.
    - Any new conclusions or observations regarding limited remaining contamination based on inspections or data generated for the media being monitored, if applicable.
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan.
    - The overall performance and effectiveness of the remedy.

7.2.1 Certification of Institutional and Engineering Controls

Following the inspection of the reporting period, a Professional Engineer licensed to practice in NYS will prepare, and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:*

- *The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction.*
- *The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the NYSDEC.*
- *There are no apparent changes that would impair the ability of the control to protect the public health and environment.*
- *There are no apparent changes that would constitute a violation or failure to comply with any site management plan for this control.*
- *Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control.*
- *If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document.*
- *Use of the Site is compliant with the environmental easement.*
- *The site inspection demonstrates that engineering control systems are performing as designed and are effective.*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices.*
- *The information presented in this report is accurate and complete.*
- *No new information has come to my attention, including groundwater monitoring data from wells located at the Site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-Site contamination are no longer valid.*
- *The assumptions made in the qualitative exposure assessment remain valid* (add this statement every five years).

Based on my inquiry of Cobey, Inc. and persons under my direction who performed the activities summarized herein, I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [insert name of Professional Engineer] of [business address], am certifying as Cobey's representative for the Site. I certify that the New York State Education Department has granted a Certificate of Authorization to provide Professional Engineering services to the firm that prepared this Periodic Review Report."

The signed certification will be included in the PRR.

The PRR will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The PRR may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be prepared and submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

7.4 Remedial Site Optimization Report

In the event that an RSO is to be performed (see Section 6.3, upon completion of an RSO, an RSO report must be submitted to the NYSDEC for approval. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager.

8 References

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Tables

TABLE 6-1
SUMMARY OF ANALYTICAL RESULTS - MINIMUM AND MAXIMUM DETECTED CONCENTRATIONS IN SOIL SAMPLES
REMEDIAL ACTION WORK PLAN
COBEY SITE

PARAMETER[1]	NYSDEC TAGM VALUES[2]	EASTERN U.S. BACKGROUND RANGE[2]	MIN. DETECTED[3] CONCENTRATION	MAX. DETECTED[3] CONCENTRATION
VOLATILE ORGANIC COMPOUNDS (ug/kg)				
Chloromethane	-	-	16	16
Carbon Disulfide	2,700	-	2	12
cis-1,2-Dichloroethene	-	-	5	5
Chloroform	300	-	2	7
2-Butanone	300	-	4	27
Trichloroethene	700	-	220	220
Benzene	60	-	2	11
2-Hexanone	-	-	14	14
4-Methyl-2-pentanone	1000	-	2	4
Tetrachloroethene	1400	-	1	2
1,1,2,2-Tetrachloroethane	600	-	3	59
Toluene	1,500	-	1	56
Ethylbenzene	5,500	-	2	33
Styrene	-	-	20	20
Xylenes	1,200	-	2	28
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)				
4-Methylphenol	900	-	120	120
Naphthalene	13000	-	42	720
2-Methylnaphthalene	36400	-	83	230
Acenaphthylene	41000	-	66	210
2,6-Dinitrotoluene	1000	-	120	120
Acenaphthene	50000	-	47	690
Dibenzofuran	6,200	-	47	670
Fluorene	50000	-	69	900
Phenanthrene	50,000	-	43	6000
Anthracene	50,000	-	57	2500
Carbazole	-	-	40	570
Di-n-butylphthalate	8100	-	47	120
Fluoranthene	50,000	-	53	8500
Pyrene	50,000	-	78	9700
Butylbenzylphthalate	50000	-	130	790
Benzo(a)anthracene	224	-	51	3700
Chrysene	400	-	66	3800
Bis(2-Ethylhexyl)phthalate	50,000	-	41	650
Benzo(b)fluoranthene	1,100	-	89	6400
Benzo(k)fluoranthene	1,100	-	39	1900
Benzo(a)pyrene	61	-	57	5100
Ideno(1,2,3-cd)pyrene	3,200	-	100	3700
Dibenzo(a,h)anthracene	14	-	110	960
Benzo(ghi)perylene	50,000	-	89	4100

Table obtained from the Remedial Action Work Plan, Cobey, LLC Site, Buffalo Lakeside Commerce Park - Portions of Parcels 1 and 2, prepared for The Krog Corporation (Malcolm Pirnie, June 2006)

MALCOLM PIRNIE

TABLE 6-1
SUMMARY OF ANALYTICAL RESULTS - MINIMUM AND MAXIMUM DETECTED CONCENTRATIONS IN SOIL SAMPLES
REMEDIAL ACTION WORK PLAN
COBEY SITE

PARAMETER[1]	NYSDEC TAGM VALUES[2]	EASTERN U.S. BACKGROUND RANGE[2]	MIN. DETECTED[3] CONCENTRATION	MAX. DETECTED[3] CONCENTRATION
PESTICIDES / PCBs (ug/kg)				
Aldrin	41	-	2.6	500
4,4'-DDE	2100	-	3.9	13.8
4,4'-DDT	2100	-	5	32
alpha-Chlordane	540	-	29.3	500
gamma-Chlordane	540	-	2.1	2.1
Aroclor 1242	1,000	-	150	370
Aroclor 1254	1,000	-	350	1300
Aroclor 1260	1,000	-	74	3820
Heptachlor	100	-	3.2	3.2
METALS (mg/kg)				
Aluminum	SB	33,000	2,950	54,000
Antimony	SB	-	7.0	16.6
Arsenic	7.5 or SB	3 - 12	3.0	61.7
Barium	300 or SB	15 - 600	40.2	327
Beryllium	0.16 or SB	0 - 1.75	0.73	9.61
Cadmium	(10)	0.1 - 1	0.707	19.9
Calcium	SB	130 - 35,000	14,200	296,000
Chromium	(50)	1.5 - 40	4.36	4,700
Cobalt	30 or SB	2.5 - 60	1.89	16.0
Copper	25 or SB	1 - 50	5.0	640
Iron	2,000 or SB	2,000 - 550,000	1,780	244,000
Lead	(1000)	4 - 500	1.9	3,300
Magnesium	SB	100 - 5,000	3,070	38,200
Manganese	SB	50 - 5,000	194	10,400
Mercury	0.1	0.001 - 0.2	0.022	0.67
Nickel	13 or SB	0.5 - 25	6.93	96.9
Potassium	SB	8,500 - 43,000	655	6,120
Selenium	2 or SB	0.1 - 3.9	2.3	35.9
Silver	SB	-	2.27	1,170
Sodium	SB	6,000 - 8,000	6.26	1,400
Thallium	SB	-	2.4	4.8
Vanadium	150 or SB	1 - 300	8.4	1,150
Zinc	20 or SB	9 - 50	5.4	2,380
Cyanide	-	-	0.99	43

Notes:
(1) Only those parameters detected in at least one sample are shown. Concentrations of 'non-detect' are not included.
(2) Soil Cleanup Guidelines and Eastern U.S. Background Range from NYSDEC TAGM 4046 (1/24/94). Value in parentheses are NYSDEC revised values for nonresidential sites but have not yet been incorporated into TAGM 4046.
- Soil cleanup guideline or background range not available.ropriate QA/QC for samples collected from surface

Table obtained from the Remedial Action Work Plan, Cobey, LLC Site, Buffalo Lakeside Commerce Park - Portions of Parcels 1 and 2, prepared for The Krog Corporation (Malcolm Pirnie, June 2006)

TABLE 6-2

MALCOLM PIRNIE

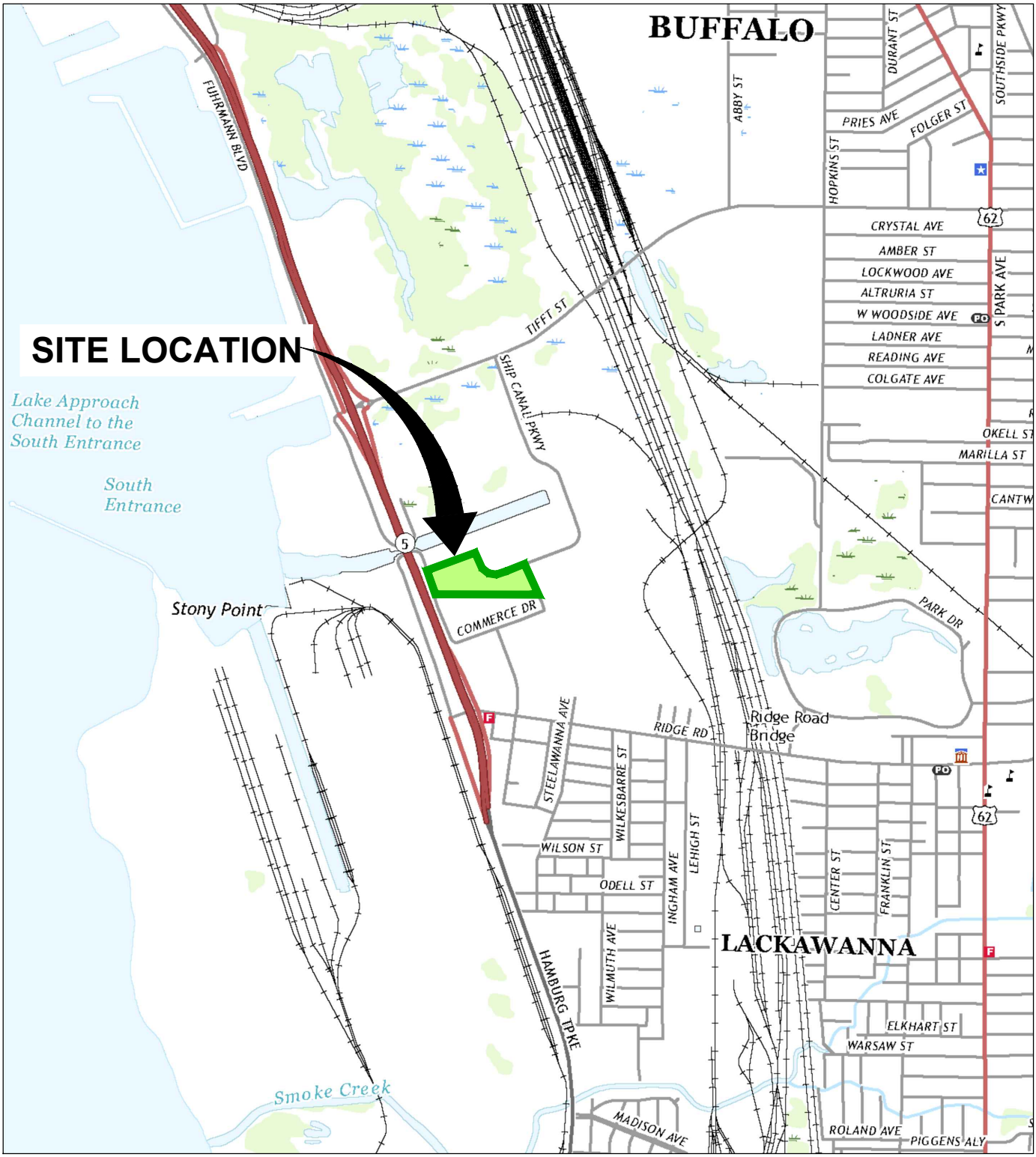
SUMMARY OF ANALYTICAL RESULTS - MINIMUM AND MAXIMUM CONCENTRATION DETECTED IN GROUNDWATER SAMPLES
REMEDIAL ACTION WORK PLAN
COBEY SITE

PARAMETER [1]	MIN. DETECTED CONCENTRATION	MAX. DETECTED CONCENTRATION	NYSDEC Class GA Standards[2]
VOLATILE ORGANIC COMPOUNDS (ug/L)			
4-Methyl-2-pentanone	4	4	-
2-Hexanone	9	9	50
SEMI-VOLATILE ORGANIC COMPOUNDS (ug/L)			
Di-n-butylphthalate	3	4	50
PESTICIDES / PCBs (ug/L)			
None Detected	-	-	-
METALS (ug/L)			
Cyanide	10	90	200
Aluminum	150	1630	-
Barium	23.2	175	1000
Calcium	45100	171000	-
Copper	10.9	10.9	200
Iron	231	11700	300
Lead	3.8	5.1	25
Magnesium	6940	55700	35000
Manganese	13.6	846	300
Potassium	1080	61000	-
Selenium	8.7	114	10
Silver	35.9	41.2	50
Sodium	14700	64600	20000
Thallium	16.6	16.6	0.5
Zinc	10.0	86.2	2000
OTHER			
pH	6.6	12.25	-

Notes:
(1) Only those parameters detected in at least one sample are shown. Concentrations of 'non-detect' are not included.
(2) NYSDEC Water Quality Guidance Values for Class GA Waters from NYS Ambient Water Quality Standards and Guidelines (June 1998).
- Not available.

Table obtained from the Remedial Action Work Plan, Cobey, LLC Site, Buffalo Lakeside Commerce Park - Portions of Parcels 1 and 2, prepared for The Krog Corporation (Malcolm Pirnie, June 2006)

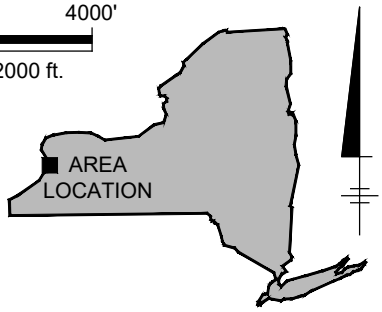
Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., BUFFALO SE, NEW YORK, 2019.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



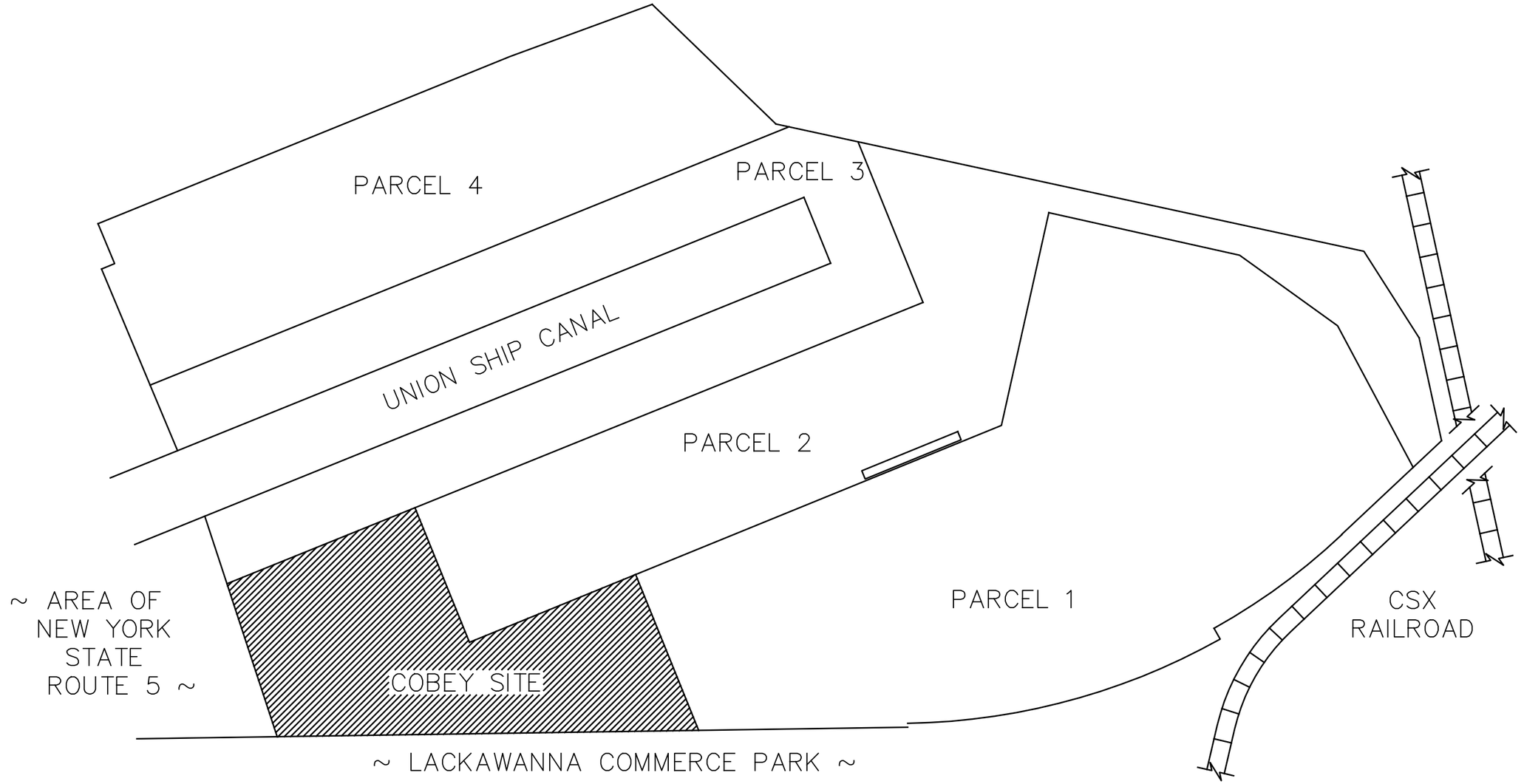
COBEY, INC
BUFFALO, NEW YORK
SITE MANAGEMENT PLAN

SITE LOCATION MAP

ARCADIS

FIGURE
1

~ BUFFALO URBAN DEVELOPMENT CORPORATION ~



200' 0' 200' 400'

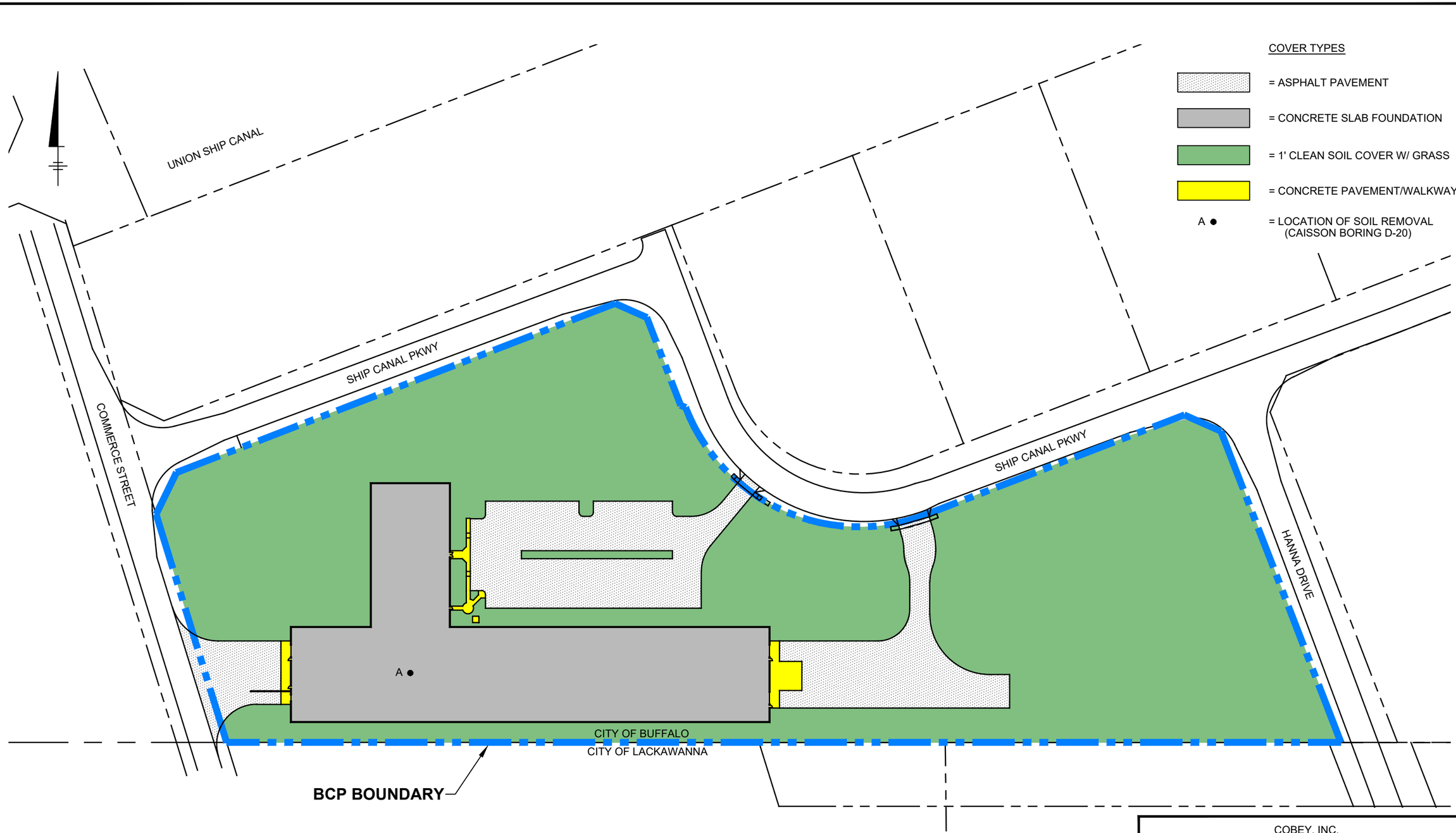
SCALE: 1 INCH = 200 FEET

COBEY, INC.
BUFFALO, NEW YORK
SITE MANAGEMENT PLAN

PARCEL MAP

ARCADIS

FIGURE
2



COBEY, INC.
BUFFALO, NEW YORK
SITE MANAGEMENT PLAN

SITE COVER SYSTEMS

ARCADIS

FIGURE
3

Appendix A

Environmental Easement

ENVIRONMENTAL EASEMENT

THIS INDENTURE made this 26th day of June, 2006, between 9505 MAIN ST. LLC having an office at 9505 Main Street, Clarence, New York 14031 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("brownfield sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of environmental easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that environmental easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a brownfield site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and;

WHEREAS, Grantor, is the owner of real property located in the City of Buffalo, Erie County, New York known and designated on the tax map of the City of Buffalo as tax parcels Section 132.19, Block 2, Lot 1, Section 132.19, Block 2, Lot 2 and Section 132.20, Block 1, Lot 13, being the same as that property conveyed to Grantor by deed on May 18, 2006 and recorded in the Land Records of the Erie County Clerk at page 9264, liber 11113 of Deeds, comprised of approximately 12 acres, and hereinafter more fully described in Schedule A attached hereto and made a part hereof (the " Controlled Property"); and;

WHEREAS, the Commissioner does hereby acknowledge that the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established at this Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36;and

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein and the terms and conditions of Brownfield Cleanup Agreement Number B9-0710-05-12,

Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant to Article 71, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The following controls apply to the use of the Controlled Property, run with the land are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees, and any person using the Controlled Property:

A. The Controlled Property may be used for commercial/ industrial use as long as the following long-term engineering controls are employed:

(i) any soil on the Controlled Property must be covered by a barrier layer approved by NYSDEC such as concrete, asphalt or structures or must be covered with a minimum 12 inch layer of clean soil and this barrier layer must be maintained; and

(ii) any proposed soil excavation on the Controlled Property below the barrier layer requires approval of NYSDEC in accordance with the Site Management Plan approved by NYSDEC for this Controlled Property and the excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations, directives, and the Site Management Plan.

(iii) use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for drinking water or industrial purposes, as appropriate, provided the user first obtains permission to do so from the regulatory Agency

(iv) use of the Controlled Property for day care, child care, or medical care is prohibited without the express written waiver of the prohibition by the regulatory Agency

B. The Controlled Property may not be used for a higher level of use such as unrestricted/ residential use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state

in at least fifteen-point bold-faced type:

This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant of Title 36 to Article 71 of the Environmental Conservation Law.

D. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

E. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Controlled Property, including:

1. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

2. The right to give, sell, assign, or otherwise transfer the underlying fee interest to the Controlled Property by operation of law, by deed, or by indenture, subject and subordinate to this Environmental Easement;

3. The right to mortgage, lease, grant easements, licenses and other interests in the Controlled Property provided that same are subject to the terms of this Environmental Easement.

5. Enforcement

A. This environmental easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated

because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this environmental easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person intentionally violates this environmental easement, the Grantee may revoke the Certificate of Completion provided under ECL Article 27, Title 14, or the Satisfactory Completion of Project provided under ECL Article 56, Title 5 with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach. Grantor shall then have a reasonable amount of time from receipt of such notice to cure. At the expiration of said second period, Grantee may commence any proceedings and take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement in accordance with applicable law to require compliance with the terms of this Environmental Easement.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar its enforcement rights in the event of a subsequent breach of or noncompliance with any of the terms of this Environmental easement.

6. Notice. Whenever notice to the State (other than the annual certification) or approval from the State is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing its County tax map number or the Liber and Page or computerized system tracking/ identification number and address correspondence to:

Division of Environmental Enforcement
Office of General Counsel
New York State Department of Environmental Conservation
625 Broadway
Albany New York 12233-5500

Such correspondence shall be delivered by hand, or by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner

prescribed by Article 9 of the Real Property Law.

8. Amendment. This environmental easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This environmental easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

9505 MAIN ST. LLC

By: _____
Robert J. Castle

Title: Manager

Date: June 21, 2006

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation

By: _____
Denise M. Sheehan, Commissioner

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ERIE)

On the 26th day of June, in the year 200_, before me, the undersigned, personally appeared Robert J. Castle, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Susanne Marie Parish
Notary Public - State of New York

SUSANNE MARIE PARISH
Notary Public, State of New York
No. 01PA6082091
Qualified in Niagara County
Commission Expires Oct. 21, 2006

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Albany)

On the 6th day of September in the year 2006 before me, the undersigned, personally appeared Denise M. Sheehan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Mark D. Sanza
Notary Public - State of New York

MARK D. SANZA
Notary Public, State of New York
No. 02SA6010701
Qualified in Albany County
Commission Expires July 20, 2010

Doc #: 221316.1

SCHEDULE A

ALL THAT PIECE OR PARCEL OF PROPERTY situate in Lot No. 18 in the Ogden Gore Tract and in Township No. 10, Range 8, City of Buffalo, County of Erie and State of New York bounded and described as follows:

BEGINNING at a point on the easterly boundary of existing Commerce Street, 60.00 feet wide, as delineated on Parcel No. 360 of Map No. 327 and acquired by The People of The State of New York for the former construction of Furhrmann Boulevard – Hamburg Turnpike by Liber 10082 of Deeds at page 121, at its intersection with the southerly boundary of the City of Buffalo and the northerly boundary of the City of Lackawanna; thence northerly along the said easterly boundary of existing Commerce Street as delineated on said Parcel No. 360 and forming an interior angle of 107° 10' 09", a distance of 298.86 feet to a point on the southeasterly boundary of Ship Canal Parkway; thence northeasterly along the last mentioned boundary of Ship Canal Parkway and forming an interior angle of 136° 57' 30", a distance of 58.01 feet to a point on the southerly boundary of Ship Canal Parkway, 66.00 feet wide; thence along the last mentioned boundary Ship Canal Parkway the following 6 courses and distances (1) easterly and forming an interior angle of 136° 57' 30", a distance of 588.56 feet to a point on a southwesterly boundary of Ship Canal Parkway; thence (2) southeasterly along the last mentioned boundary of Ship Canal Parkway and forming an interior angle of 135° 00' 00", a distance of 43.04 feet to a point on a westerly boundary of Ship Canal Parkway, 71.00 feet wide; thence (3) southerly along the last mentioned boundary of Ship Canal Parkway, a distance of 118.07 feet to a point on a southwesterly boundary of Ship Canal Parkway; thence (4) southeasterly along the last mentioned boundary of Ship Canal Parkway and forming an interior angle of 225° 00' 00", a distance of 7.07 feet to a point; thence (5) southerly and southeasterly on a curve to the left, having a radius of 233.00 feet, an arc distance of 366.00 feet to a point of tangency on a southerly boundary of Ship Canal Parkway, 66.00 feet wide; thence (6) easterly and along the last mentioned boundary of Ship Canal Parkway, a distance of 346.02 feet to a point on the southwesterly boundary of Hanna Drive; thence southeasterly along the last mentioned boundary of Hanna Drive and forming an interior angle of 135° 00' 00", a distance of 50.11 feet to a point on the westerly boundary of Hanna Drive, 66.00 feet wide; thence southerly along the last mentioned boundary of Hanna Drive and forming an interior angle of 135° 00' 00", a distance of 417.57 feet to a point on the said southerly boundary of the City of Buffalo and the said northerly boundary of the City of Lackawanna; thence westerly along the said southerly boundary of the City of Buffalo and the said northerly boundary of the City of Lackawanna and forming an interior angle of 68° 54' 51", a distance of 1,394.64 feet to the point of beginning.

klc

Appendix B

Excavation Work Plan

Cobey, Inc.

Excavation Work Plan

Cobey-Buffalo Lakeside Park – Parcels 1 & 2

Site C915202

February 2022

Excavation Work Plan

Cobey-Buffalo Lakeside Commerce Park – Parcels 1 & 2

Site No. C915202

February 2022

Prepared By:
Arcadis of New York, Inc.
50 Fountain Plaza, Suite 600
Buffalo
New York 14202
Phone: 716 667 0900
Fax: 716 842 2612

Prepared For:
Michael Durkin
President
Cobey, Inc.
1 Ship Canal Parkway
Buffalo, New York 14218

Our Ref:
30109090

Contents

This *Excavation Work Plan* (EWP) has been prepared as an appendix to the October 2021 Site Management Plan (SMP) to support future invasive (i.e., subsurface) activities at the Cobey, Inc. (Cobey) Buffalo Lakeside Commerce Park – Parcels 1 & 2 Site (Site) located in Buffalo, New York.

1 Notification

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the Site's cover system, the Site owner or their representative will notify the NYSDEC contacts listed in the table below. The contact information provided below will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Section 1.3 of the SMP.

NYSDEC		
Megan Kuczka	270 Michigan Avenue Buffalo, NY 14203-2915	T: 716.851.7220 Megan.Kuczka@dec.ny.gov
Andrea Caprio Regional Remediation Engineer	270 Michigan Avenue Buffalo, NY 14203-2915	T: 716.851.7220 Andrea.Caprio@dec.ny.gov
Kelly Lewandowski Site Control	625 Broadway Albany, NY 12233	Kelly.Lewandowski@dec.ny.gov
NYSDOH		
Gregory Rys	584 Delaware Avenue Buffalo, NY 14202	T: 716.847.4385 Gregory.Rys@health.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any modifications of truck routes, and any work that may impact an engineering control.
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of constituents of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.
- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this EWP.
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix C of the SMP.

- Identification of disposal facilities for potential waste streams.

- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

2 Soil Screening Methods

Visual, olfactory and instrument-based (e.g., photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination). A qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the certificate of completion (COC).

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 7 of this EWP.

3 Soil Staging Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points. Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected, and damaged tarp covers will be promptly replaced. Stockpiles will be inspected by the qualified environmental professional at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained on-site during active site work and available for inspection by the NYSDEC.

4 Materials Excavation and Load-Out

A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material. The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this EWP.

The presence of utilities and easements at the site will be investigated by the qualified environmental professional, the owner of the property, the remedial party (if applicable), and contractors. It will be determined whether a risk or impediment to the planned work under the SMP is posed by utilities or easements on the site. A site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for inspecting that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking. The qualified environmental professional will be responsible for inspecting the egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed by the contractor as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

5 Materials Transported Off-Site

All transportation of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows:

- Proceed east on Ship Canal Parkway
- Turn left onto Tifft Street
- Proceed north or south on NY-5, as desired

All trucks loaded with site materials will exit the vicinity of the site using only this approved truck route. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside of the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited. Trucks will be prohibited from stopping and idling in the neighborhood outside the site.

6 Materials Disposed of Off-Site

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from the site is proposed for unregulated off-site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from the site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate (e.g., hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction, and demolition [C&D] recycling facility). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include, but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted soil cleanup objectives (SCOs) is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart Part 360-15 registered or permitted Facility).

7 Materials Reused On-Site

The qualified environmental professional as defined in 6 NYCRR Part 375 will observe that procedures defined for materials reuse in this SMP are followed and that unacceptable material (i.e. contaminated) does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents listed, and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances [October 2020 or date of current version, whichever is later] guidance values. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for on-site reuse will be segregated and staged as described in Sections 2 and 3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of site excavation activities and proximity to nearby site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing will not be reused on-site.

8 Fluids Management

All liquids to be removed from the site (including but not limited to; excavation dewatering; decontamination waters; and groundwater monitoring well purge and development waters) will be handled, transported, and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a State Pollutant Discharge Elimination System (SPDES) permit.

9 Cover System Restoration

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the Brownfield Cleanup Agreement. The existing cover systems are comprised of either a four-inch gravel subbase followed by 2-inches of asphalt or 4-inches of concrete (for the driveway, parking lot and pedestrian walkways) or a minimum of 12 inches of clean soil underlain by a demarcation layer. The demarcation layer, consisting of orange snow fencing material, will be replaced to provide a visual reference to the top of the remaining contaminated soil defined in the SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

10 Backfill from Off-Site Sources

All materials proposed for import to the site will be approved by the qualified environmental professional, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in the SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards for commercial/industrial use are listed in Appendix 5 of Division of Environmental Remediation (DER) DER-10 Technical Guidance for Site Investigation and Remediation (DER-10). Soils that

meet ‘‘general’ fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for the site, will not be imported onto the site without prior approval by the NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAs and 1,4-dioxane. Solid waste will not be imported to the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

11 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed by the contractor and inspected by the qualified environmental professional once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained on-site during active site work and available for inspection by the NYSDEC. Necessary repairs and corrective actions should be taken as follows:

- All necessary repairs shall be made immediately.
- Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.
- All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.
- Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

12 Excavation Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. The NYSDEC project manager will be promptly notified of the discovery.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (i.e., target analyte list [TAL] metals, target compound list [TCL] volatiles and semi-volatiles [including 1,4-dioxane], TCL pesticides and polychlorinated biphenyls [PCBs], and PFAs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes

will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

13 Community Air Monitoring Plan

Air monitoring station locations shall be determined based on wind directions at the beginning of each shift. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. Exceedances of action levels listed in the Community Air Monitoring Plan (CAMP), included as Appendix D to the SMP, will be reported to NYSDEC and New York State Department of Health (NYSDOH) Project Managers.

14 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

15 Dust Control Plan

Particulate monitoring must be conducted according to the CAMP provided as Appendix D to the SMP. If particulate levels at the site exceed the thresholds listed in the CAMP or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the site.

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger areas will be done in stages to limit the area of exposed, non-vegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.
- Travel speeds over haul roads will be limited.
- The number and size of excavation areas open at one time will be limited.
- Excavation and materials in on-site staging areas will be covered with polyethylene sheeting.

16 Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

Arcadis of New York, Inc.
50 Fountain Plaza, Suite 600
Buffalo
New York 14202
Phone: 716 667 0900
Fax: 716 842 2612
www.arcadis.com

Appendix C

Health and Safety Plan

Site Specific Health and Safety Plan

Revision 17i

Project Name:	Cobey-Buffalo Lakeside Commerce Park – Parcels 1 & 2 NYSDEC Site No. C915202 One Ship Canal Parkway Buffalo, New York 14218
Project Number:	30109090
Client Name:	Cobey, Inc.
Date:	1/14/2022
HASP Expires	1/14/2023
Revision:	

Approvals:

HASP Developer: Paolo Filippetti

Project Manager: Michael Nasca

HASP Reviewer: Veronica Bean

Revised: 10/26/2020

Arcadis Field and Embedded Staff COVID-19 Guidance

Check the Orange Line Daily

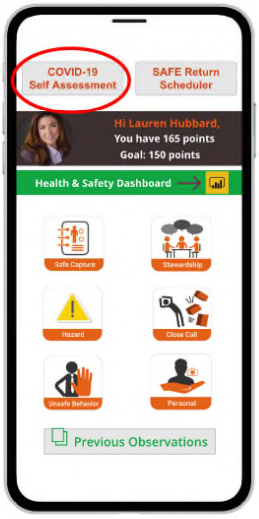
ARCADIS Design & Consultancy for natural and built assets

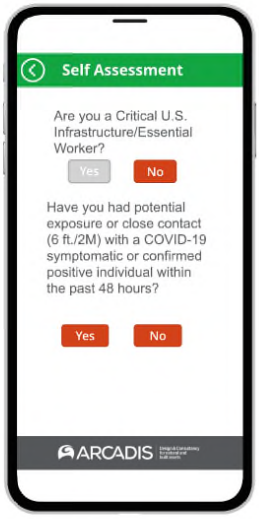
COVID-19 HEALTH AND SAFETY PROCEDURES

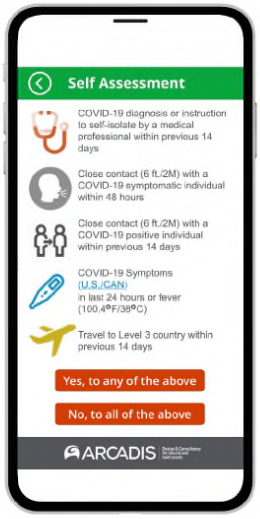
ARCADIS Design & Consultancy for natural and built assets

COVID-19 SELF ASSESSMENT

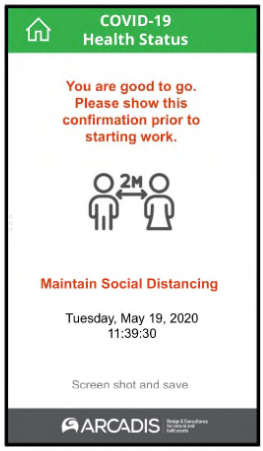
Arcadis staff visiting offices and project sites must complete the COVID-19 Health Screening Self-Assessment Questionnaire prior to each visit. Arcadis staff can now use the H&S App to complete their daily (or multiple times a day, if appropriate) COVID-19 Health Screening Self-Assessment. The data entered into the H&S App COVID-19 Health Screening Self-Assessment form is not stored.



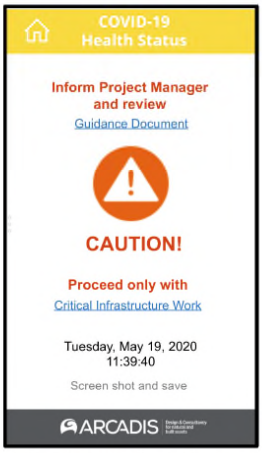




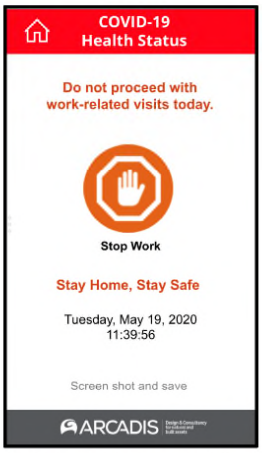
Upon completion of the COVID-19 Health Screening Self-Assessment in the H&S App, the user will receive a green, yellow or red completion message (as shown below).



Green – proceed to the office or project site



Yellow (Caution) – critical infrastructure/essential worker must contact the Project Manager and review the "H&S App Yellow Caution Status Guidance"



Red – do not proceed to the office or project site

Arcadis Culture of Caring

Arcadis is committed to a Culture of Caring that ensures each Arcadis employee, part time as needed employee (PTAN), temporary agency employee under Arcadis day to day control, Inexperienced Workers and contractor (cumulatively referred to here as "field staff") goes home at the end of the day free from injury or illness. I certify that the following has been performed with all Arcadis field staff on this project either in person or by Skype:

☐ Reviewed the HASP including a discussion of hazard identification and controls.

☐ If conducting activities deemed by Arcadis to be "High Risk", frontline management has reviewed applicable H&S standards (Job Safety Analysis [JSA] when authorized by H&S) for these activities with field staff.

☐ If permit to work is required, frontline management has reviewed the permit(s) with field staff.

☐ Reviewed proactive H&S engagement expectations/injury prevention actions.

☐ Reviewed Stop Work Authority.

☐ Reviewed the incident reporting process and expectations including when WorkCare should be contacted by staff (WorkCare incident intervention for all minor, non-emergency injuries) and that the WorkCare phone number is programmed into field team cell phone.

☐ For Inexperienced Workers, a mentor has been assigned for the new task being performed.
#

For short service employees (SSEs), PTANS* and temporary agency employees* :

☐ Provided coaching and mentoring on Arcadis H&S expectations during project work. Reviewed in detail specific hazards and controls and provided a resource who can be contacted if individual has questions regarding planned or unplanned work tasks.

Mentor/Resource # Michael Nasca (Name) 716-440-6465 (Phone Number)

Signed:

_____ Project Manager

* Upon hiring/contracting for the first time.

Emergency Information

Site Address: One Ship Canal Parkway
Buffalo, New York 14218

Emergency Phone Numbers:

Emergency (fire, police, ambulance)		911
Emergency (facility specific, if applicable):		
Emergency Other (specify):		
Primary Client Contact:	Michael Durkin	716-222-2222
WorkCare (non-life-threatening injury/illness):		1-888-449-7787
Project H&S:	Paolo Filippetti	585-770-4702
Task Manager:	Meghan M. Platt	315-657-6916
Project Manager:	Michael Nasca	716-440-6465
Corporate H&S Specialist:	Alac MacAdam	720-409-1139
Corporate H&S Director:	Andrew McDonald	410-923-7820

Hospital Name and Address: Mercy Hosptital of Buffalo
565 Abbott Rd
Buffalo, NY 14220

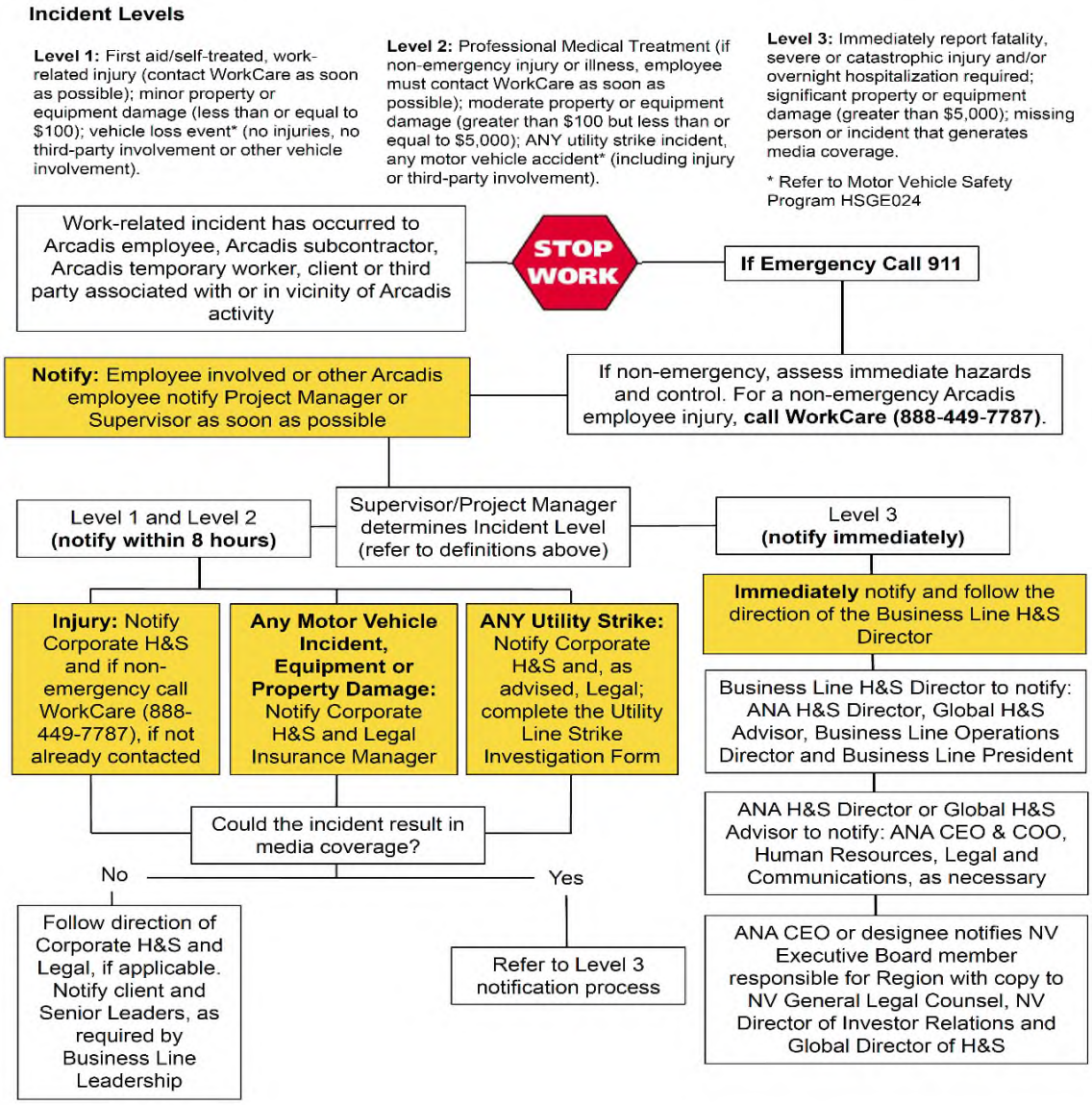
Hospital Phone Number: 716-859-5600

Supplemental Client Contact Information:

Other Important Phone Numbers:

Poison Control Center	1-800-222-1222
Nat. Response Ctr. (spills in reportable quantities)	1-800-424-8802
U.S. Coast Guard (spills to water)	1-800-424-8802

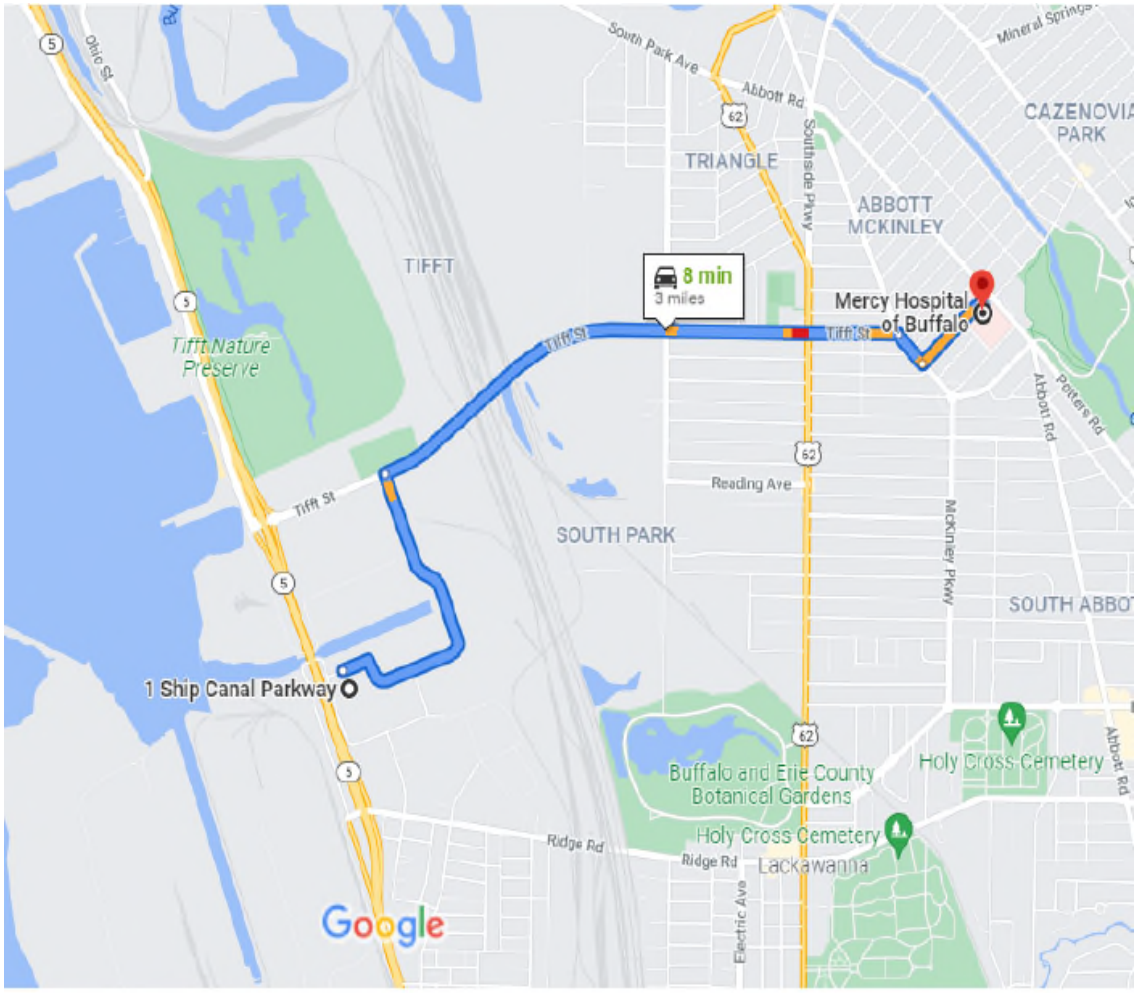
Incident Reporting Protocol Within Arcadis



Client Incident Reporting Protocol

1.) Dial 911/Facility Emergency Number/ Work Care
2.) Contact PM/Supervisor - Michael Nasca
3.) Contact Corporate H&S- Andrew McDonald
4.) Contact Client- Michael Durkin

Route to the Hospital



Cobey Inc
1 Ship Canal Pkwy, Buffalo, NY 14218, United States

1. Head west toward Commerce Dr — 194 ft
2. Turn right onto Commerce Dr — 0.1 mi
3. Turn right onto Ship Canal Pkwy — 1.0 mi
4. Turn right onto Tifft St — 1.7 mi
5. Turn right onto McKinley Pkwy — 0.1 mi
6. Turn left onto Lorraine Ave — 0.2 mi
7. Turn right
   Destination will be on the right — 108 ft

Mercy Hospital of Buffalo
565 Abbott Rd, Buffalo, NY 14220, United States

Site Type

The project site is an active facility with the following attributes:

Industrial

Surrounding Land Use and Topography

The Site consists of the following: an approximate 90,000 square foot manufacturing building and driveway/ loading/parking areas. The Site is zoned for industrial (manufacturing and processing) use and is currently operated by Cobey as a manufacturing operation for specialized systems and compressor packages used by the petrochemical, power generation, and air separation industries. The properties adjoining the Site and in the neighborhood surrounding the Site primarily include properties zoned for commercial, industrial, institutional, and residential use.
Per the Supplemental Investigation Report (Malcolm Pirnie, January 2001), the groundwater flow direction at the Former Railroad Yard is generally north and west, toward the canal, which is consistent with that described during previous investigations.

Simultaneous Operations (SimOps)

SimOps is expected or will be conducted in proximity to Arcadis work activities on the project site. SimOps creates unique hazards that could affect Arcadis employees and subcontractors and SimOps hazards identified on site will be addressed in the JSA or similar governing document (i.e. permit) for affected Arcadis work tasks. If the SimOps work activities create a high hazard to Arcadis staff or subcontractors, Arcadis will utilize stop work until the SimOps activity is complete or will coordinate work activities with SimOps workers and/or client to ensure SimOps work hazards are mitigated.

Site Background

The Site is located in Buffalo, Erie County, New York and is identified as property tax parcel 132.19-2-1.1 on the City of Buffalo Tax Maps. Historically, the site consisted of parcels 132.19-2-1, 132.19-2-2 and 132.20-1-13 but were combined on May 18, 2006. The approximately 12.3-acre property is further identified by two former parcel identifiers including the Former Railroad Yard (Parcel 1) and the Former Manufacturing Area (Parcel 2). These parcels are part of the 113-acre Buffalo Lakeside Commerce Park (BLCP), formerly known as the Hanna-Furnace or Union Ship Canal site. The two other parcels associated with the BLCP include the Union Ship Canal with a surrounding 200-foot buffer zone (Parcel 3) and Parcel 4 (remaining area north of Parcel 3). The BLCP is bounded by property owned by the Buffalo Urban Development Corporation (BUDC) to the north, CSX railroad tracks to the east, New York State Route 5 to the west, and Lackawanna Commerce Park to the south. The boundaries of the Site are more fully described in the Environmental Easement included as Appendix A of the Site Management Plan. The owner of the Site at the time of issuance of this SMP is Cobey, Inc.

Project Tasks
The following tasks are identified for this project:

1	Site Cover Inspections (soil, asphalt, and concrete)

Supplemental requirements associated with the above task(s):
Not applicable

[X] Required Checklists/Work Forms

Tailgate Safety Briefing Form
Vehicle Inspection Checklist

[ ] Required Permits

Not Applicable

[X] Required H&S Standards

Motor Vehicle Safety Program_ARC HSGE024
Personal Protective Equipment_ARC HSGE015

Short Service Employees (SSEs)
SSEs (employees who are employed with Arcadis for less than 1 year or are Inexperienced Workers) are not anticipated to be working on this project. If staffing changes occur during this project and SSEs are utilized, the project team working in conjunction with the SSE's administrative supervisor will ensure requirements of ARC HSGE019 "Short Service Employees" are completed. SSE's will be identified in the project Tailgate Safety Meeting Form.

Roles and Responsibilities

	Name	Role	Short Service Employee
1	Michael Nasca	Project Manager (PM)	No
2	Meghan Platt	Associate Project Manager (APM)	No
3	Meghan Platt	Task Manager	No
4	Michael Higgins	Field Technical Lead	No
5	Paolo Filippetti	Site Safety Officer (SSO)	No

Training

All Arcadis employees are required to have the following training to be on site:	Selected Arcadis employees are required to have the following additional training:	Names or Numbers from above
Defensive Driving - Smith On-Line	BBP (Bloodborne Pathogens)	
H&S Program Orientation (non-certificate)	First Aid/CPR	
HAZCOM GHS/EAP (non-certificate)	None	
Hazwoper 40-Hour	None	
Hazwoper 8-Hour Annual Refresher	None	
PPE (non-certificate)	None	
Client specific:	None	
	None	
Other:	Other:	

The Arcadis Fundamental H&S Principles

Staff working on any of the task(s) listed above must utilize the six Arcadis Fundamental H&S Principles to ensure work is conducted safely. These principles include: 1) Use of TRACK, 2) H&S Planning, 3) Stop Work Authority, 4) "If Not Me Then Who", 5) Stewardship, and 6) Incident Reporting. Every project team member plays an important role in project health and safety. This is more than just having a HASP, training, or PPE. Proactive staff engagement with these principles is critical to a safe work environment.

General Task Hazard Assessment and Risk Control (HARC)

General:	Hazards Applicable to All Project Tasks

The 12 hazard category HARC ratings are not available in this General THA. The mitigated and unmitigated ratings for the hazards presented are based on the Risk Assessment Matrix below. Modify hazards and ratings as necessary to meet project needs.

Risk Assessment Matrix		Likelihood Ratings			
Consequences Ratings		A	B	C	D
People	Property	0 Almost Impossible	1 Possible but Unlikely	2 Likely to Happen	3 Almost Certain to Happen
1-Slight or No Health Effect	Slight or No Damage	0-Low	1-Low	2-Low	3-Low
2-Minor Health Effect	Minor Damage	0-Low	2-Low	4-Medium	6-Medium
3-Major Health Effect	Local Damage	0-Low	3-Low	6-Medium	9-High
4-Fatalities	Major Damage	0-Low	4-Medium	8-High	12-High

Hazard #1

Driving - On road - Injury or vehicle damage from motor vehicle accident or incident

Suggested FHSHB Ref:	3.4	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:	HIGH	Smith System (on line)
Mitigated Risk:	MEDIUM	JSAs
Comments:	Use Smith System "5-Keys" when driving. See Driving JSA for details.	

Hazard #2

Driving - Driver - Injury, death or property damage due to driver distraction, fatigue, etc.

Suggested FHSHB Ref:	1/14/2022	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:	HIGH	Smith System (on line)
Mitigated Risk:	LOW	Driver awareness and use of stop work authority
Comments:	Use route planning. Keep eyes moving while driving. See Driving JSA.	

Hazard #3

Biological - skin/eye irritation or damage from poisonous plants

Suggested FHSHB Ref:	3.17.11	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:	LOW	Job Briefing/Site Awareness
Mitigated Risk:	LOW	Field H&S Handbook (see ref. above)
Comments:	Use skin pre-treatment lotions when available.	

Hazard #4

Biological - bites or stings from exposure to insects or arachnids

Suggested FHSHB Ref:	3.17: 2,3,7,8,9,10	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:	LOW	Job Briefing/Site Awareness
Mitigated Risk:	LOW	PPE (see HASP "PPE" section)
Comments:	Do body check daily.	

Hazard #5

Biological - cuts, scrapes, skin/eye puncture from exposure to physically damaging plants

Suggested FHSHB Ref:	3.17.11	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:	MEDIUM	Job Briefing/Site Awareness
Mitigated Risk:	LOW	Field H&S Handbook (see ref. above)
Comments:		

General Task HARC (continued)

Hazard #6		
Environmental - Thermal stress - Injury or illness from heat or cold		
Suggested FHSHB Ref:	3.16	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Field H&S Handbook (see ref. above)
Mitigated Risk:		PPE (see HASP "PPE" section)
Comments:	Use job rotation or rest breaks. Stay hydrated and eat regularly.	
Hazard #7		
Environmental - Inclement weather -Injury or equipment damage from inclement weather		
Suggested FHSHB Ref:	3.12	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Weather Monitoring
Mitigated Risk:		Cont./Emerg. Planning
Comments:	Use 30/30 rule for lightning. See FHSHB for details.	
Hazard #8		
Motion - Musculoskeletal - Injury from lifting, twisting , stooping, or awkward body positions		
Suggested FHSHB Ref:	3.29.1	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Engineering Controls (specify in comments)
Mitigated Risk:		Admin. Controls (specify in comments)
Comments:	Use proper lifting techniques. Use job rotation when applicable. See FHSHB for details.	
Hazard #9		
Motion - Musculoskeletal - Injury from repeated work activity or body motion		
Suggested FHSHB Ref:	3.29.2	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Engineering Controls (specify in comments)
Mitigated Risk:		Admin. Controls (specify in comments)
Comments:	Use proper lifting techniques. Use job rotation when applicable. See FHSHB for details.	
Hazard #10		
Sound - Noise - Injury or illness due to noise exposure		
Suggested FHSHB Ref:	3.15	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Engineering Controls (specify in comments)
Mitigated Risk:		PPE (see HASP "PPE" section)
Comments:	Increase distance from source if possible. Maintain equipment.	
Hazard #11		
Gravity - Falls - Injury due to slips and trips		
Suggested FHSHB Ref:	3.26.4, 4.11	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Site Awareness
Mitigated Risk:		Housekeeping
Comments:	Use footwear appropriate for site conditions, plan routes and do not hurry while walking.	

Task Specific HARC

Task 1:	Site Cover Inspections (soil, asphalt, and concrete)

HARC Unmitigated Hazard Types (H-High, M-Medium, L-Low): FHSHB Ref: 3.9

Biological		Chemical		Driving		Electrical	
Environmental		Gravity		Mechanical		Motion	
Personal Safety		Pressure		Radiation		Sound	

Hazard #1

Environmental - Sun or wind -Skin injury from sun or wind exposure

Suggested FHSHB Ref:	3.12	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Job Briefing/Site Awareness
Mitigated Risk:		Field H&S Handbook (see ref. above)
Comments:		

Hazard #2

Biological - skin or eye irritation or injury from exposure to mammal, reptile, amphibian, fish, bird or invertebrate sprays, excretions, urine or saliva

Suggested FHSHB Ref:	Commerce Park –	To mitigate this hazard, use TRACK and the following:
Overall Unmitigated Risk:		Job Briefing/Site Awareness
Mitigated Risk:		PPE (see HASP "PPE" section)
Comments:		

Hazard Communication (HAZCOM)/Global Harmonization System (GHS)

☐ HAZCOM/GHS for this project is managed by the client or general contractor

List the chemicals anticipated to be used by Arcadis on this project per HAZCOM/GHS requirements.
(Modify quantities as needed)

	Preservatives	Qty
X	Not applicable	
	Hydrochloric acid	<500 ml
	Nitric acid	<500 ml
	Sulfuric acid	<500 ml
	Sodium hydroxide	<500 ml
	Zinc acetate	<500 ml
	Ascorbic acid	<500 ml
	Acetic acid	<500 ml
	Isopropyl alcohol	Lakesid
	Formalin (<10%)	< 4 gal.
	Methanol	<500 ml
	Sodium bisulfate	<500 ml

	Decontamination	Qty
X	Not applicable	
	Alconox	≤ 5 lbs
	Liquinox	≤ 1 gal
	Acetone	≤ 1 gal
	Methanol	≤ 1 gal
	Hexane	≤ 1 gal
	Isopropyl alcohol	≤ 4 gal
	Nitric acid	≤ 1 L
	Other:	

	Calibration	Qty.
X	Not applicable	
	Isobutylene/air	1 cyl
	Methane/air	1 cyl
	Pentane/air	1 cyl
	Hydrogen/air	1 cyl
	Propane/air	1 cyl
	Hydrogen sulfide/air	1 cyl
	Carbon monoxide/air	1 cyl
	pH standards (4,7,10)	≤ 1 gal
	Conductivity standards	≤ 1 gal
	Other:	

	Fuels	Qty.
X	Not applicable	
	Gasoline	######
	Diesel	≤ 5 gal
	Kerosene	≤ 5 gal
	Propane	1 cyl
	Other:	

	Kits	
X	Not applicable	
	Hach (specify):	1 kit
	DTECH (specify):	1 kit
	Other:	1 kit

	Remediation	Qty.
X	Not applicable	

	Other:	Qty.
X	Not applicable	
	Spray paint	≤ 6 cans
	WD-40	≤ 1 can
	Pipe cement	≤ 1 can
	Pipe primer	≤ 1 can
	Mineral spirits	≤ 1 gal

	DOT(1):	Qty.
	MOT eligible soils	
	MOT eligible water	
	MOT eligible solids	
	MOT eligible liquids	

(1) Attach applicable Materials of Trade (MOT) generic shipping determination. SDS not generally applicable to this category.

This project will not utilize materials that are subject to the HAZCOM Standard under OSHA (or State OSHA) regulations. SDSs are not required for this project.

Contractors on this project are anticipated to use materials subject to the HAZCOM Standard under OSHA (or state OSHA) regulations. Contractor SDSs are not required for this project.

This project will not be utilizing materials subject to the HAZCOM Standard in bulk storage. In this HASP, bulk storage means any material stored on the project site in a bulk packaging >119 gallons (> 450 L) liquid capacity or a palletized quantity of a material in packagings ≤119 gallons (≤450 L) liquid capacity.

Air Monitoring

X	There are no atmospheric chemical, radiological, or particulate hazards on this project requiring air monitoring.
	Air monitoring is the responsibility of the client or subcontractor.

Constituents of Interest:

Time Weighted Averages (TWAs) are ACGIH 8-Hr Threshold Limit Values (TLVs) unless noted.

None			
TWA	NA	LEL/UEL (%):	NA
STEL	NA	VD (Air = 1):	NA
IDLH	NA	VP (mmHg):	NA

None			
TWA	NA	LEL/UEL (%):	NA
STEL	NA	VD (Air = 1):	NA
IDLH	NA	VP (mmHg):	NA

TWA - Time Weighted Average (ACGIH TLV unless noted)
STEL - Short Term Exposure Limit
IDLH - Immediately Dangerous to Life and Health
LEL/UEL - Lower /Upper Explosive Limit
RGD - Relative Gas Density
VP - Vapor Pressure

Notes:

Required Monitoring Instruments, Action Levels and Monitoring Frequency

Gray fields below are not automated. Make necessary selections from drop down menus.

Air monitoring for volatile organics is not required.

			Computed action levels have been manually
<	NA		Continue working
	NA	- NA	Levels sustained > 5 minutes, monitor continuously and review engineering controls and PPE. Proceed with caution.
>	NA		Stop work and contact SSO

Particulate/aerosol monitoring is not required. Re-evaluate if visible dusts or aerosols cannot be controlled.

Action levels are in mg/m3			Computed action levels have been manually adjusted.
<	NA		Continue working
	NA		Levels sustained > 5 minutes, monitor continuously and review engineering controls and PPE. Proceed with caution.
>	NA		Stop work and contact SSO

Breathing zone air monitoring using the above instruments will be performed at the following frequency:

Select

Multigas (including LEL/O2 and Hg vapor) monitoring is not required.

LEL/O2 Meter	0-5% LEL	Continue work
LEL/O2 Monitoring Not Required	>5-10% LEL	Continually monitor, review engineering controls, proceed with caution
	>10% LEL	Stop work, evacuate, contact SSO
	19.5%-23.5% O2	Normal, continue work
	<19.5% O2	O2 deficient, stop work, evacuate, contact SSO
	>23.5% O2	O2 enriched, stop work, evacuate, contact SSO

Additional Gas/Vapor Monitoring is Not Required

		1/2 TLV	Stop Work Action Level	Comments
	Ammonia	12.5 ppm	25 ppm	
	Carbon dioxide	2500 ppm	5000 ppm	
	Carbon monoxide	12.5 ppm	25 ppm	
	Chlorine	0.05 ppm	0.1 ppm	
	Hydrogen cyanide	2.35 ppm (skin)	4.7 ppm* (skin)	
	Hydrogen sulfide	0.5 ppm	1 ppm	
	Nitrogen dioxide	0.1 ppm	0.2 ppm	
	Phosphine	0.025 ppm	0.05 ppm	
	Sulfur dioxide	0.125 ppm	0.25* ppm	
	Mercury vapor	0.0125 mg/m3	0.025 mg/m3	

* Ceiling or STEL value

All air-monitoring instruments must be calibration checked daily, if used, per manufacturer's instructions. Calibration checks, including calibration gases used, must be documented.

Compound specific monitoring using indicator tubes or chips is not required.

Indicator:		≤TWA	Continue work
	Tube	>TWA	Stop work, review engineering controls and PPE, contact SSO
Compound(s):			

Indicator tube/chip monitoring frequency: Not applicable

Personal Protective Equipment (PPE)

See JSA or Permit for the task being performed for required PPE. If work is not conducted under a JSA or Permit, refer to the governing document for PPE requirements. At a minimum, the following checked PPE is required for all tasks during field work (outside of field office trailers and vehicles) not covered by a JSA or Permit on this project:

Minimum PPE required to be worn by all staff on project:						Specify Type:
X	Hard hat		Snake chaps/guards		Coveralls:	
X	Safety glasses		Briar chaps		Apron:	
	Safety goggles		Chainsaw chaps		Chem. resistant gloves:	
	Face shield		Sturdy boot		Gloves other:	
	Hearing protection	X	Steel or comp. toe boot		Chemical boot:	
	Rain suit		Metatarsal boot		Boot other:	
	Other:			X	Traffic vest, shirt or coat:	Class II
					Life vest:	

Task specific PPE: Insect repelant

Comments:

Use of an insect repelant may be appropriate based on site conditions

Medical Surveillance

Medical surveillance is not required for this project.

Client and DOT mandated drug and alcohol testing is not required for this project and will not be performed.

Hazardous Materials Shipping and Transportation

No samples will be transported or shipped on this project. No supplies containing gaseous, powdered, granulated, and/or liquid materials will be transported or shipped. Additionally, no materials containing explosive, magnetic, or radioactive materials will be transported or shipped. A shipping determination is not required.

Traffic Safety and Traffic Safety Plans (TSPs)

The scope of work on this project will not expose Arcadis workers or subcontractors to vehicular traffic. A traffic safety plan will not be required.

Arcadis Commercial Motor Vehicles (CMVs)

CMVs operated by Arcadis employees on public roadways will not be utilized on this project. Arcadis defines a CMV as any single vehicle with a gross vehicle weight rating (GVWR) ≥10,001 pounds or a truck and trailer combination with a combined GVWR ≥10,001 pounds (GVWR of truck + GVWR of trailer = ≥10,001 pounds).

Site Control

The scope of work on this project does not require use of site control.

Decontamination

The scope of work does not require implementation of decontamination protocols.

Sanitation

The project scope is a mobile work operation. The project field team will have reasonable access to restroom facilities within 10 minutes of the work area where the mobile work activity is actively taking place. Potable water will be carried by the field team in the vehicle used for the project. Unless alternate requirements are stipulated in a plan supplement (i.e. Heat Injury and Illness Prevention Plan), permit or JSA, bottled or water coolers with potable water will be provided to project workers at 1 gallon/worker/day.

Safety Briefings

Arcadis will lead all safety briefings on this project and will document the safety briefing on a Tailgate Safety Briefing form or logbook. Safety briefings will be conducted once at the beginning of each work day unless the Site Safety Officer deems more frequent safety briefings will be required based on work being conducted. All project workers, including Arcadis subcontractors, will be required to attend the safety briefing. Site visitors and project workers not on duty during the morning safety briefing will receive the safety briefing upon their arrival onto the project site for the day.

Employee Health and Safety Engagement

The CPM or APM is responsible for reviewing and establishing H&S engagement goals for the project. These goals are summarized below.

Hazard Observations (via H&S App or TIP) required at the following frequency on this project:

1 per event
Close Call reporting (via H&S app) goals for this project:
as needed
Other (specify):

Safety Equipment and Supplies

Safety equipment/supply requirements are addressed in the JSA or Permit for the task being performed. If work is not performed under a JSA or Permit, the following safety equipment is required to be present on site in good condition unless otherwise noted (Check all that apply):

X	First aid kit		Insect repellent:
	Bloodborne pathogens kit	X	Sunscreen
X	Fire extinguisher		Air horn
	Eyewash (ANSI compliant)	X	Traffic cones
X	Eyewash (bottle)		2-way radios
	Drinking water		Heat stress monitor
	Other:		Poisonous plant pre/post exposure lotion/soap

Control of Ticks and Poisonous Plants

Work on this project has a low tick exposure hazard. Use of inspect repellent (DEET and/or permethrin) is recommended. Wear light colored clothing to help identify presence of ticks on staff. Keep shirt tails inside pants.

Work on this project has a low poisonous plant exposure hazard. First aid kits should be equipped with post exposure soap as a precaution. Inspect work area for presence of hazard prior to initiating work at the location. Wear disposable gloves during work and while removing outer footwear.

International Travel

International travel is not required for this project.

Spill Control and Containment

Spill control and containment planning and implementation is not required for this project.

Use of Electronic Devices in Areas of Increased Safety Risk

Electronic device use and distractions to be discussed and documented in the job briefing/safety briefing.

Signatures

I have read, understand and agree to abide by the requirements presented in this health and safety plan. I understand that I have the absolute right to stop work if I recognize an unsafe condition affecting my work until corrected.

Printed Name	Signature	Date

Add additional sheets if necessary

You have an absolute right to STOP WORK if unsafe conditions exist!

Attachment A
Forms

Control Number: TSM-

TSM + project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year

TAILGATE HEALTH & SAFETY MEETING FORM

Project Name:			**Project Location:**
Date:	**Time:**	**Conducted by:**	**Signature/Title:**

Issues or concerns from previous day's activities:

Task anticipated to be performed today:

☐ Additional permits/checklists attached

USE TRACK! Evaluate the hazards (h) for the tasks being performed today and rank as Low (L), Medium (M) or High (H). Use relevant JSAs, FHSHB, permit or other work standard to communicate controls (c) to be used to eliminate or mitigate identified hazards.

☐ [illegible] (L M H)
h:
c:

☐ [illegible] (L M H)
h:
c:

☐ [illegible] (L M H)
h:
c:

☐ Electrical (i.e., utilities, lightning) (L M H)
h:
c:

☐ Pressure (i.e., gas cyl., wells) (L M H)
h:
c:

☐ Environment (i.e., heat, cold, ice) (L M H)
h:
c:

☐ Chemical (i.e., fuel, acid, paint) (L M H)
h:
c:

☐ Biological (i.e., ticks, poison ivy) (L M H)
h:
c:

☐ Radiation (i.e., alpha, sun, laser) (L M H)
h:
c:

☐ Sound (i.e., machinery) (L M H)
h:
c:

☐ Personal (i.e. alone, night) (L M H)
h:
c:

☐ Driving (i.e. car, ATV, boat, dozer) (L M H)
h:
c:

Comments:

☐ Refer to the attached Hazard Analysis Sheet(s) or JSA

Signature and Certification: I have read and understand the project specific HASP for this project.

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB,** I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call **WorkCare at 1.888.449.7787** and then notify the field supervisor.

Utility strike, motor vehicle accident or 3rd party property damage - field supervisor will immediately notify the Project or Task Manager

Arcadis Weekly Vehicle Inspection Form

Vehicle # / License Plate # | | **Lease Plan # / Last 6 of Vin #** | |

	Inspection Date												
	Odometer reading												
	Driver / Inspector Name												
	Check the appropriate box and enter repair date for identified repairs:	OK	Needs Repair	Repair Date	OK	Needs Repair	Repair Date	OK	Needs Repair	Repair Date	OK	Needs Repair	Repair Date
Interior	Horn operational												
	Door Locks operational												
	Seat Belts in good repair												
	Seats and Seating Controls												
	Steering Wheel - No Excessive Play												
	Interior Lights and Light Controls												
	Instrument Panel/Gauges												
	Wiper Controls operational												
	Heat/Defrost/Air Conditioning working												
	Rear View Mirror present												
	Backup Camera/Sensors working												
	Jack and Lug Wrench present												
Exterior[1]	Lights and Signals operational												
	Tires properly inflated/good tread depth												
	Spare Tire properly inflated												
	Doors operational												
	Windows Not Cracked/Damaged												
	Side View Mirrors												
	Body Panels and Bumpers												
Engine & Brakes	Engine Start & Running Smoothly												
	Fluid Levels, No Noticeable Leaks												
	Belts tight, no cracks												
	Brakes operational, no squeaking												
Emergency Equipment[2]	First Aid Kit, inspected weekly												
	Fire Extinguisher properly secured												
	Fire Extinguisher inspected weekly												
	Orange/Yellow emergency warning light												
	Roadside Assistance Information												
	Recommend spotter cones available												
Cargo	Cargo Secure and Properly Distributed												
	Securing Devices in Good Condition												
Registration	License Plate /Tags												
	Registration and Insurance												
	City/State Inspection Decal												
	Lease Plan information/Fuel Card												

[1] **Note all damages to the vehicle on the back of this page**

[2] **Emergency Equipment required per Motor Vehicle Standard ARC HSGE024**

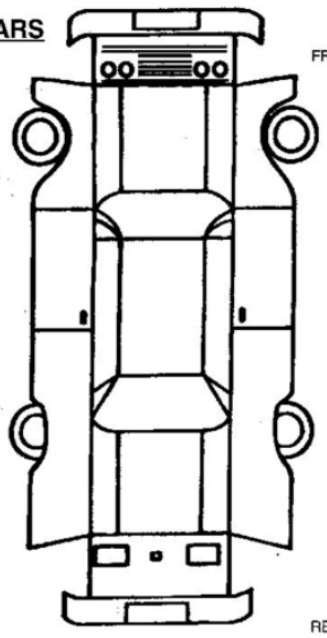
Note All Vehicle Damage Below

All Vehicle Damage must be reported to Sue Berndt (Corporate Legal), Andrew McDonald (Corporate H&S), and Roger Elliot (Corporate Fleet Manger)

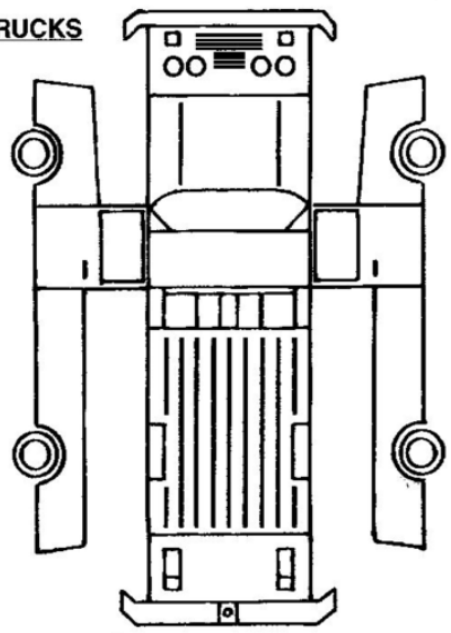
CODES:

B-BENT
BR-BROKEN
BU-BULGE
C-CHAFED
CH-CHIPPED
CPM-COVERED WITH PROTECTIVE MATERIAL-UNABLE TO DETERMINE DEFECTS IF ANY
CSA-CHAFED AND SCRATCHED ALL OVER
CR-CRACKED
D-DENTED
DMC-DUST AND MUD COVERED UNABLE TO DETERMINE OTHER DEFECTS IF ANY
G-GOUGED OR CUT
GC-GLASS CRACKED
HS-HAIRLINE SCRATCH
M-MISSING
P-PUNCTURED
R-RUSTY
S-SCRATCHED
SC-SCRAPED
SM-SMASHED
ST-STAINED AND/OR SOILED
T-TORN

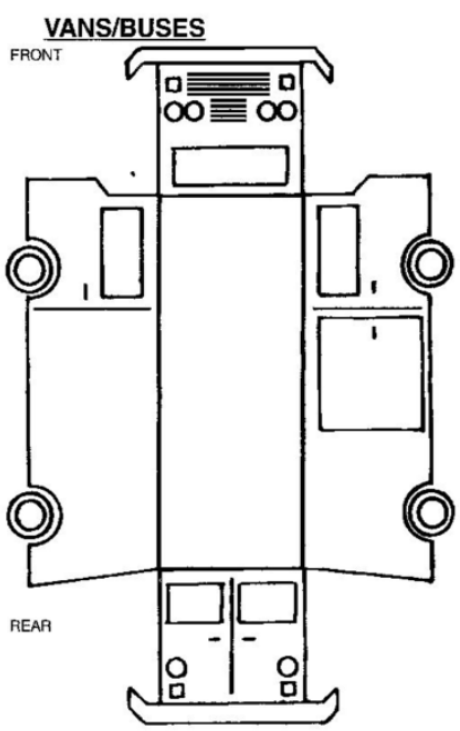
CARS



TRUCKS



VANS/BUSES



-INDICATE ON DIAGRAM-
-GIVE DIMENSIONS-
-CIRCLE WHERE APPLICABLE-

Notes:

Tread guide: If a tread gauge is not available coins may be used to determine remaining tread. 2/32” is the minimum by law in most states (top of Lincoln’s head on penny), 4/32” is minimum recommended for wet surfaces (top of Washington’s head on quarter), 6/32” is minimum recommended for snowy surfaces (top of Lincoln Memorial on penny).Vehicle tires should be replaced if the tread depth is less than 6/32”.

2/32” remaining 4/32” remaining 6/32” remaining

Reference JSA 10907 For Weekly Vehicle Inspection

Attachment B
JSAs

Job Safety Analysis

General

JSA ID	7272	**Status**	(3) Completed
Job Name	General Industry-Site inspection/walk – commercial/manufacturing	**Created Date**	4/9/2012
Task Description	Walkover-building	**Completed Date**	04/18/2012
Template	True	**Auto Closed**	False

Client / Project

Client	Arcadis AGMI
Project Number	000000100000
Project Name	GENERAL OVERHEAD
PIC	
Project Manager	

User Roles

Role	Employee	Due Date	Completed Date	Supervisor	Active
Developer	Byers, Susan E.	10/31/2017	4/9/2012	Hubbard, Lauren	o
HASP Reviewer	Hubbard, Lauren	4/23/2012	4/18/2012	Polinsky, Heather	þ

Job Steps

Job Step No.	Job Step Description		Potential Hazard	Critical Action	H&S Reference
1	PPE verification	1	Lack of adequate PPE at the facility could lead to injury	Prior to traveling to the site, ask the facility representative/escort for information on the types of PPE required. Verify that all necessary PPE is being worn and that PPE is in good working condition.	ARC HSGE015
2	Site safety orientation	1	Inability to quickly and safely exit an unfamiliar facility during an emergency	At the start of the site walk, ask the facility representative/escort for information regarding alarms, evacuation routes, and assembly areas.	
		2	Inability to recognize hazards prior to handling chemicals	At the start of the site walk, ask the facility representative/escort for the location of Safety Data Sheets.	
3	Building inspection and site walk	1	Slips, trips and falls	Use caution when walking on uneven or wet surfaces. Use proper footwear with good traction. Pay attention to where you are walking-including foot placement. Walk in designated areas and pathways. Maintain a safe distance from open holes and unprotected edges. Use handrails on stairways.	ARC HSIH008, ARC HSGE007, ARC HSFS021, ARC HSFS003, ARC HSIH013, Elevated Heights JSA, FHSB
		2	Acute exposure to hazardous chemicals	Wear appropriate gloves and eye protection when examining containers holding chemicals, wastes, and other potentially hazardous materials. Note the location of nearby eyewash stations and safety showers. Do not handle containers that are unlabeled or that are leaking. Do not open any chemical containers.	
		3	Falling from ladders	Climb ladders slowly, one person at a time. Maintain three points of contact. Do not climb fixed ladders that require fall protection (above 24 feet). Do not use portable ladders.	
		4	Falling from elevated heights	Do not walk on elevated areas (greater than 4 feet above lower level) unless protected with a guardrail. Do not walk on scaffolding.	
		5	Falling from roofs	Do not walk on building roofs unless edges are protected with guardrails and skylights are guarded with railing or screens.	
		6	Hearing damage	Wear hearing protection when noise exceeds 85 dBA and in any areas labeled as requiring hearing protection.	
		7	Hazardous atmosphere or entrapment in a confined space	Do not enter confined spaces, crawl spaces, tanks, utility vaults, or trenches.	

3	Building inspection and site walk	8	Vehicle / pedestrian accidents	Use caution when walking in areas with vehicle or forklift traffic. Establish eye contact with equipment operators. Maintain a safe distance from moving vehicles and equipment.	
		9	Heat illness	If the site walk involves the inspection of outdoor areas in weather conditions that pose a risk for heat illness (based on temperature, humidity, and sunshine), apply sunscreen and bring drinking water to the site walk.	
		10	Entrapment and pinch points in automatic gates	Do not walk through or underneath automatic gates designed for vehicles or forklifts.	

PPE — Personal Protective Equipment

Type	Personal Protective Equipment	Description	Required
Eye Protection	safety glasses		Required
Foot Protection	steel-toe boots		Required
Hand Protection	chemical resistant gloves (specify type)	as appropriate for chemical hazards	Required
Head Protection	hard hat		Required
Hearing Protection	ear plugs	In excessive noise areas	Required
Miscellaneous PPE	traffic vest--Class II or III		Required

Supplies

Type	Supply	Description	Required
Communication Devices	mobile phone		Required
Miscellaneous	flashlight		Recommended

Review Comments

Reviewer		Comments
Employee: **Role** **Review Type** **Completed Date**	Hubbard, Lauren HASP Reviewer Approve 4/18/2012	

Job Safety Analysis

General

JSA ID	8121	**Status**	(3) Completed
Job Name	General Industry-Driving - passenger vehicles	**Created Date**	8/24/2012
Task Description	Driving a car, van, or truck on public roadways.	**Completed Date**	05/30/2013
Template	True	**Auto Closed**	False

Client / Project

Client	Arcadis AGMI
Project Number	000001410000
Project Name	HEALTH & SAFETY
PIC	
Project Manager	

User Roles

Role	Employee	Due Date	Completed Date	Supervisor	Active
Developer	Moyers, Samuel	12/18/2012	5/30/2013	Hubbard, Lauren	þ
HASP Reviewer	Santaniello, Julie	6/13/2013	5/30/2013	Hubbard, Lauren	þ
Quality Reviewer	Lujan, Teresa	6/17/2013	6/17/2013	Lujan, Teresa	o

Job Steps

Job Step No.	Job Step Description		Potential Hazard	Critical Action	H&S Reference
1	Pre-Trip Inspection	1	Failing to perform pre-trip inspections may cause mechanical failure, accident or injury	Perform walk around of vehicle with particular attention to tire inflation and condition. Check lights, wipers, seatbelts for proper operating condition. Properly adjust seat and mirrors prior to vehicle operation. Use or review vehicle inspection checklist as required under the MVSP.	ARC HSGE024 Motor Vehicle Safety Standard (MVSP)
		2	Scrapes, cuts, burns to hand if inspecting engine fluids and/or tires. Eye splash hazard if inspecting engine fluids. Pinch or crush hazards when opening or closing hood, trunk or tailgate.	Wear protective gloves and safety glasses as described below when checking under hood or tires. Use TRACK and keep hands clear when opening/closing hood, trunk, or tailgate to avoid crush or pinch hazard.	
		3	Improperly secured cargo may dislodge creating injury, property damage or road hazard.	Ensure all cargo is properly secured to prevent movement while the vehicle is in opertation. This includes cargo in the cab of the vehicle.	
2	Driving a motor vehicle on public streets	1	Failing to observe traffic flow ahead increases risk of hard braking resulting in potential impact of vehicle ahead, being struck by another vehicle from behind and decreases decision making time.	Use Smith System Key #1, "Aim High in Steering". **Look ahead (15 seconds if possible) to observe traffic flow and traffic signals.** Adjust speed accordingly to keep vehicle moving and avoid frequent braking. Select lane of least traffic and adjust speed based on observed signal timing when possible. Avoid following directly behind large vehicles that obscure view ahead.	Smith System "5-Keys" is a registered trademark of Smith System Driver Improvement Institute, Inc.
		2	Failing to observe vehicles, pedestrians, bicyclists and other relevant objects in vicinity of your vehicle increases risk of side swipes, rear ending, and third party injury.	Use Smith System Key #2, "Get the Big Picture". **Maintain 360 degrees of awareness around vehicle.** Check a mirror every 6-8 seconds, maintain space around the vehicle, choose a lane that avoids being boxed in. Look for pedestrian activity ahead in crosswalks or sidewalks. Watch for construction zone approach signs and act early by executing lane changes and reducing speed.	

2	Driving a motor vehicle on public streets	3	Failing to keep your eyes moving increases risk of not seeing relevant vehicles, pedestrians and objects in your vicinity that may impair your ability to make timely and appropriate driving decisions and also increases risk of accident.	Use Smith System Key #3, "Keep Your Eyes Moving". **Move your eyes every 2 seconds and avoid staring while evaluating relevant objects.** Scan major and minor intersections prior to entering them. Check mirrors.	
		4	Failing to maintain space around and in front of your vehicle increases risk of striking another vehicle or being struck by another vehicle. Insufficient space shortens time for effective driving decision making resulting in increased accident risk.	Use Smith System #4, "Leave Yourself an Out". **Use 4 second rule when following a vehicle.** Avoid driving in vehicle clusters by adjusting speed and using lanes that permit maximum space and visibility. When stopped, keep one car length space in front of vehicle ahead or white line.	
		5	Failing to communicate with other drivers and pedestrians increases risk of striking vehicles, pedestrians, or being struck by other vehicles, especially from the rear.	Use Smith System Key #5, "Make Sure They See You". **Brake early and gradually when stopping to reduce potential of being rear ended.** Keep foot on brake while stopped. Use turn signals and horn effectively. Establish eye contact with other drivers and pedestrians to extent practical. Use vehicle positioning that promotes being seen.	
		6	Distractions within the vehicle takes focus off driving, increases risk of accident decreases time for making effective driving decisions.	**Cell phone use (any type or configuration) is prohibited while the vehicle is in motion.** Familiarize yourself with vehicle layout and controls (radio, temperature controls, etc.) prior to operating unfamiliar vehicles. Set controls prior to operating vehicle. Use GPS in unfamiliar areas to avoid use of paper maps/directions while driving. Set GPS prior to vehicle operation. Pull over and stop to modify GPS functions. Avoid consuming food or drink while driving.	
3	Parking	1	Parking vehicle in areas of clustered parked vehicles or near facility entrance may impair visibility to oncoming traffic in lot and increase exposure to pedestrian traffic.	**Use pull through parking or back into parking space when permitted or practical.** When practical and safe to do so, park away from other vehicles and avoid parking near the facility entrance or loading docks. If available, use a spotter to aid in backing activity. Back no further than necessary and back slowly. Get out and look (GOAL) if uncertain of immediate surroundings. Tap horn prior to backing.	

PPE — Personal Protective Equipment

Type	Personal Protective Equipment	Description	Required
Eye Protection	safety glasses	While checking engine or tires	Required
Hand Protection	work gloves (specify type)	Leather or equivalent checking engine or tires	Required

Supplies

Type	Supply	Description	Required
Communication Devices	mobile phone		Required
	other	Vehicle kit (applies to company trucks)	Required
Miscellaneous	fire extinguisher	Applies to company trucks	Required
	first aid kit	Applies to company trucks	Required

Review Comments

Reviewer		Comments
Employee: **Role** **Review Type** **Completed Date**	Santaniello, Julie HASP Reviewer Revise 9/6/2012	Revise per suggested mark-ups
Employee: **Role** **Review Type** **Completed Date**	Santaniello, Julie HASP Reviewer Approve 5/30/2013	
Employee: **Role** **Review Type** **Completed Date**	Lujan, Teresa Quality Reviewer NA 6/17/2013	Very good write up. The reminder of the 5 Key Smith Driving rules are essential in everyday driving. The practice of these has and will make you a better driver and keep you safe.

Attachment C
HS Standards

Implementation Date 26 March 2007	Arcadis HS Standard Name Motor Vehicle Safety Program	ARCADIS Design & Consultancy for natural and built assets
Revision Date 27 March 2018	Arcadis HS Standard No. ARC HSGE024	Revision Number 19

EXECUTIVE SUMMARY

The following is a requirements summary applicable to the Motor Vehicle Safety Program (MVSP):

- The MVSP applies to all Arcadis drivers operating Arcadis owned, leased, rented, or personal motor vehicles used for business purposes and all Arcadis owned, leased or rented motor vehicles used for non-business (personal) purposes.
- Arcadis expects 100 percent compliance with all applicable driving laws and regulations.
- Employees operating Arcadis owned, leased or rented vehicles for personal use must have written supervisor's approval.
- All Arcadis drivers with an assigned driving function for Arcadis may have their Motor Vehicle Record (MVR) reviewed by approved representatives of Corporate Human Resources, Health and Safety and/or Legal Departments.
- Newly hired drivers with an assigned driving function for Arcadis and a clean MVR must complete, at a minimum, on-line defensive driving training within 30 days of hire.
- Existing Arcadis drivers with an assigned driving function for Arcadis must participate, at a minimum, in on-line defensive driving training at intervals prescribed by Health and Safety.
- Weekly vehicle inspections are required for all Arcadis owned, leased, or rented vehicles used during the previous 7 days. Inspections will be documented.
- All Arcadis owned, leased, or rented motor vehicles will be properly maintained in accordance with manufacturer's recommendations. All defects affecting safe operation of the motor vehicle will be promptly repaired.
- Arcadis employees are prohibited from modifying Arcadis owned or leased vehicles unless the modification is approved in writing by Corporate Health and Safety and/or Corporate Procurement.
- Arcadis prohibits use of electronic devices, including electronic devices in hands free mode, while driving any vehicle for Arcadis.

1. POLICY

It is the policy of Arcadis to implement sound defensive driving training and education to employees. It is also Arcadis policy to provide administrative management that ensures vehicles are well maintained and driven by qualified employees.

2. PURPOSE AND SCOPE

2.1 Purpose

Arcadis is committed to providing a healthy and safe work environment for our employees, subcontractors, clients and visitors. To this end, Arcadis embraces this Health and Safety MVSP Standard.

This standard and accompanying requirements provides consistent practices with regards to defensive driving and vehicle administration for Arcadis vehicles.

2.2 Scope

Generally, this Standard applies to all employees operating motor vehicles for Arcadis.

2.2.1 Business Driving

This MVSP applies to the operation of any motor vehicle during the conduct of Arcadis business. It applies to every Arcadis Driver operating an Arcadis, rental, leased or personal vehicle used for company business.

2.2.2 Area Involved

This MVSP applies to the operation of motor vehicles for company business in any country in which Arcadis employees or temporary agency employees are working.

2.2.3 Exceptions

2.2.3.1 Operation of Commercial Motor Vehicles

Additional requirements apply to the operation of commercial motor vehicles (CMVs). Refer to the Arcadis Transportation Safety Program for Commercial Motor Vehicles (CMV Program) for additional information. When client requirements are more restrictive than this MVSP, the more restrictive requirement will apply for all work activities involving driving for that client.

2.2.3.2 Drivers without an Assigned Driving Function for Arcadis

Drivers without an assigned driving function for Arcadis are still subject to the requirements of Section 5.1 and all of Section 6.0 of this standard.

3. DEFINITIONS

Definitions relating this MVSP can be found in Exhibit 1.

4. RESPONSIBILITIES

The following have responsibilities under this standard:

4.1 **Corporate Health and Safety Department (Health and Safety)** – Has the responsibility for: revising and updating this standard, communicating MVSP requirements to employees. They also ensure this MVSP is being implemented effectively. Health and Safety has a primary focus of identifying defensive driving education and training resources. Health and Safety is also responsible for stewarding programs involving vehicle inspections and maintenance requirements. Health and Safety has the authority to request and evaluate motor vehicle reports (MVRs) on Arcadis drivers at any time.

4.2 **Health and Safety MVSP Specialist (MVSP Specialist) –** Is the primary contact for all issues related to implementation of this MVSP, including reporting of all accidents and incidents involving a motor vehicle. The MVSP Specialist will coordinate with other Corporate departments, as required, related to MVSP implementation requirements.

Contact the MVSP Specialist for all MVSP related reporting, questions or concerns.

4.3 **Corporate Human Resources Department (Human Resources)** – Has the responsibility to review applicable portions of this standard for the purposes of ensuring consistency with Human Resource's policies and procedures regarding motor vehicle operation. Human Resources have a primary focus of ensuring administrative procedures concerning vehicle use are followed by employees. Human Resources has the authority to request and evaluate MVRs on Arcadis drivers at any time.

4.4 **Corporate Legal Department (Legal) –** Has the responsibility to provide oversight of the requirements stipulated in this standard to ensure Arcadis risks are properly managed. Legal has the authority to request and evaluate MVRs on Arcadis drivers at any time.

4.5 **Corporate Purchasing (Purchasing)** – Has the responsibility to oversee leasing and maintenance management vendors and facilitate maintenance issues associated with Arcadis owned or leased vehicles. Purchasing will also work with Health and Safety on safety equipment needs for owned or leased vehicles.

4.6 Health and Safety Managers and Specialists – Are responsible for facilitating and educating staff on MVSP requirements. These individuals may also perform audits or conformance assessment to ensure compliance with the requirements of this standard.

4.7 Arcadis Managers and Supervisors (including Project and Task Managers) – These managers and supervisors provide stewardship concerning the requirements of this standards to lower tier managers and employees. In addition, they assure that appropriate time is provided to ensure implementation of MVSP requirements and facilitate maintenance request approvals.

4.8 Arcadis Employees – Each employee has the responsibility to adhere to this MVSP and to communicate Health and Safety concerns, issues and questions to their supervisor or to Health and Safety staff. In addition, all employees have the responsibly to use TRACK prior to any driving activity and will follow all applicable Arcadis, federal, state, provincial, and local jurisdiction regulatory; and client requirements when driving an Arcadis owned, leased, rented vehicle.

5. PROCEDURE

5.1 General Procedure and Requirements

Only Arcadis Drivers as defined in Exhibit 1 are permitted to drive Arcadis vehicles. Exceptions to this policy are limited only to individuals authorized by the Arcadis Driver or fleet administrator to perform short term driving and parking activities involving Arcadis vehicles such as maintenance employees and valets. Use of joint venture and temporary agency employees working with or for Arcadis to operate Arcadis vehicles requires pre- approval of the Business Line President and Legal.

Employees must report all moving violations that may affect their driving status for Arcadis.

Arcadis Drivers who drive Arcadis vehicles or personal vehicles used for Arcadis business will maintain a valid driver's license, appropriate for the vehicle they are operating, that is free from any driving restrictions or suspension. An Arcadis Driver who is asked to drive for business purposes in any type of vehicle, shall notify their supervisor or designated Arcadis contact by the next business day if:

- Their license is suspended, revoked, or restricted;
- They receive a moving violation while driving for Arcadis-related business; or

- Receive a moving violation during non-business related driving in any type of motor vehicle that might affect their driving status with Arcadis.

If one of these issues occurs, the employee's supervisor will contact the MVSP Specialist. The MVSP Specialist (or his/her designate), in cooperation with Human Resources and Legal, as deemed necessary, will evaluate the employee's driving status (especially in instances of license suspension, revocation or restriction) and, as appropriate, corrective action recommendations will be made.

Employees who fail to report a driving violation to their supervisor that might affect their driving status for Arcadis purposes (a restricted driver) will face disciplinary action which may include termination if the conviction is discovered through routine MVR pulls, criminal background checks or other official documentation transmitted or made available to Arcadis. Arcadis will work to the extent practical with employees who report driving violations that might affect their driving status for Arcadis purposes if Arcadis operations management can accommodate a driving restriction for the driver or other suitable arrangement is made consistent with Human Resources and Legal policies.

All Arcadis Drivers driving an Arcadis motor vehicle or personal vehicle for Arcadis business will:

Arcadis prohibits use of cellular phones, including hands free mode, when driving vehicles for Arcadis.

- Wear seat belts at all times in any vehicle with seat belts (this includes taxis and shuttle buses equipped with seat belts);
- Have a valid unrestricted operator's license appropriate for the vehicle being driven;
- Operate and license the vehicle in accordance with applicable laws;
- Operate the vehicle consistent with client driving rules, speed limits, and requirements when operating the vehicle on project sites;
- Drive defensively as learned through training, education, and experience;
- Exercise caution when taking any prescription or over-the-counter medication that may cause drowsiness or an altered mental state;
- Not use controlled substances, illegal drugs, or be under the influence of alcohol while driving on Arcadis business;

- Not drive in a manner that could be deemed reckless or aggressive by other drivers;
- Not use radar/laser-type detectors;
- Not pick up hitchhikers;
- Not smoke in company vehicles; and
- For drivers with an assigned driving function for Arcadis, if permanently assigned an Arcadis motor vehicle will ensure the vehicle is maintained as directed by the Arcadis maintenance vendor.

Use of headlights at all times, even during daylight hours, is recommended. Additionally, Arcadis expects all drivers to use pull through parking or back into parking places consistent with their defensive driving training specified in this standard and as permitted by local laws.

5.2 MVR Review

5.2.1 New Hire MVR Review

MVSP Guide-005 provides details of the MVR review process.

Human Resources will perform a MVR review on potential new hires of positions that have an assigned driving function for Arcadis. The MVR review process for potential new hires follows an established review process that will result in a Pass, Conditional, or Restricted status. A MVR review resulting in Restricted status will prevent hiring of the candidate unless excepted as specified in Section 5.2.5. Human Resources will communicate the MVR review results to the new hire candidate and hiring manager prior to finalizing the new hire process.

5.2.2 Existing Employee MVR Review

Human Resources may perform a MVR review on existing employees with an assigned driving function for Arcadis at a frequency stipulated by Corporate. The MVR review process for existing employees follows an established review process that will either result in a Pass, Conditional, or Restricted status. Human Resources will communicate the MVR review results to the employee and their administrative supervisor when a Conditional or Restricted status is identified from the MVR review.

5.2.3 Post-Accident MVR Review

Any vehicle related accident classed as a preventable Motor Vehicle Accident (MVA) will require a MVR review for the employee involved in the MVA. Preventable VLEs are not generally subject to the MVR review process; however, Corporate reserves the right to perform a MVR review on any employee involved in a vehicle related accident regardless of accident classification. The MVSP Specialist will report the need to run a MVR to **Human Resources** upon determination of a preventable MVA and **Human Resources** will communicate the MVR results to the employee and their supervisor.

5.2.4 Commercial Motor Vehicle MVR Reviews

Detailed requirements concerning MVR review and evaluation for drivers participating in the Arcadis CMV Program is not addressed in this standard. MVR reviews related to CMV drivers are performed by Arcadis Director of Transportation Safety or his/her approved designate.

5.2.5 Appeals

MVR reviews that result in Restricted driving status for a potential new hire or existing employee may be appealed to the applicable Business Line President through the applicable Business Line H&S Director. The Business Line President may elect to maintain the restriction or overturn the restriction. An overturned restriction may be referred by the Business Line President to the Accident Review Committee for additional corrective action based on the circumstances of the restriction.

5.3 Defensive Driving Training, Evaluation, and Education Requirements

The Arcadis Learning Center provides instructions on how to enroll into defensive driving training courses or tutorials

5.3.1 New Hire Defensive Driving Training

All new hires (regardless of driving assignment) with an active driver's license will complete on-line defensive driving training prescribed by Health and Safety within 30 days of employment.

New hires with conditional driving status may be required to complete on-line defensive driving training prior to operating a vehicle for Arcadis.

5.3.2 Existing Employee Defensive Driving Training

On a frequency defined by Corporate Health and Safety, in cooperation with operations senior management, employees who have an assigned driving function for Arcadis shall complete an on-line defensive driving training course designated by Health and Safety or an equivalent course approved by Health and Safety.

Note: For existing employees hired before the implementation date of this policy, the supervisor will determine if the employee drives on average 5 or more days per month to warrant participation in this training.

In furtherance of Arcadis' goal of promoting safe driving, employees who do not have an assigned driving function for Arcadis are also eligible to voluntarily participate in the same on-line defensive driving training concurrent with prescribed timeframes for any assigned Arcadis driver training.

If a client requires classroom or hands-on defensive driver's training, the Arcadis Learning Center will arrange for the required classroom training. The Arcadis required on-line training will not be required for those driving employees who attend classroom training (hands-on or subject matter training) consistent with a Health and Safety recognized defensive driving system during the same calendar year.

All Arcadis drivers are expected to review and be familiar with the contents of the Operator's Manual(s) for the vehicles they will be operating. Additional training may be provided or required at the request of an employee's supervisor, Health and Safety, or as required by a client.

Supervisors should discuss with their direct reports about their abilities to operate large vehicles and address direct report concerns.

5.3.3 Inexperienced Drivers

New hires or existing employees having an assigned driving function for Arcadis and known to have only possessed a valid driver's license for less one year or experienced drivers that are unfamiliar with driving large vehicles may warrant additional evaluation and training in the operation of the vehicle(s) they are expected to drive while working for Arcadis. Supervisors are encouraged to review with their direct reports their license and driving history to ensure the driver is comfortable and

knowledgeable of expected vehicle operation. If determined by the supervisor that additional evaluation is warranted, a Commentary Drive (see Section 5.4) should be considered. The supervisor may schedule an additional TIP at a later date to ensure safe driving of larger vehicles is being performed.

Supervisors may opt to enroll drivers in additional defensive driving on-line training or hands-on defensive driver training if the driver expresses concerns about their ability to safely drive a vehicle.

5.3.4 Drivers Requiring Training or Evaluation due to Corrective Action from MVR Review

Any driver subject to Corrective Action arising from an MVR review will be trained or evaluated as prescribed in the MVR evaluation process (MVSP Guide-005).

5.3.5 Additional Defensive Driving Training and Education Requirements for Employees Involved in a Vehicle Loss Event

Corrective actions associated with an employee involved in a preventable or non-preventable VLE will be determined by the supervisor based on the severity and circumstances of the incident as determined by the Incident Reporting and Investigation H&S Standard (ARC HSMS010).

5.3.6 Additional Criteria for Temporary Agency Employees

Temporary agency employees are only permitted to drive Arcadis Vehicles or Rental Vehicles under the following requirements:

- The temporary agency employee's MVR is clear of any violation for the prior three (3) years and lists no prior critical violations. Critical violations include such issues as:
    - Alcohol-related offenses
    - Driving while impaired or under the influence of alcohol or drugs
    - Homicide, negligent homicide, or manslaughter by vehicle
    - Fleeing or attempting to elude police officer
    - Hit and run
- If a temporary agency employee receives a convicted violation or has an accident while driving, regardless of fault or preventability, on Arcadis business, they are

immediately prohibited from driving Arcadis vehicles, rental vehicles or a personal vehicle for Arcadis business unless otherwise permitted by the applicable Business Line President or the ANA Director of Health and Safety.

5.4 Sources for On-Line and Video Based Defensive Driving Training

The on-line defensive driving training or equivalent training will be provided by, or based on, a nationally recognized defensive driving training company such as Smith System or other recognized provider as approved by Health and Safety and arranged through the Arcadis Learning Center. Video based defensive driving training modules will be arranged through the Arcadis Learning Center.

5.5 Commentary Drive Program

The Commentary Drive evaluates driver understanding of safe driving behaviors by having the driver verbalize their observations to the Commentary Drive observer when operating the vehicle. The observer will use a standard Commentary Drive Evaluation Form to document driver understanding of safe driving principles such as the Smith System “5 Keys”. The observer will also provide real time feedback on questionable driving behaviors. Commentary Drives are expected to last a minimum of 1 hour behind the wheel driving time.

MVSP Guide-001 provides criteria for observers used in Commentary Drives.

Employees performing observer functions for Commentary Drives must be current on Health and Safety defensive driving on-line training obligations as described in Section 5.3 above and meet additional criteria in MVSP-Guide 001.

5.6 Driving TIPs

The driving TIP may be used to evaluate driver performance and provide solutions related to questionable driving behaviors for routine driving evaluations under the Arcadis Behavior Based Safety (BBS) Program. Solutions generated using the TIP process will be consistent with the expectations of the Arcadis BBS Program.

5.7 Sources of Hands-On Defensive Driving Training

When used, hands-on defensive driving training will be provided by, or based on, a nationally recognized defensive driving training course such as Smith System or other provider approved by Health and Safety. The trainer

must be certified in the program upon which they are instructing and can be either internal or external to Arcadis. Arrangements for hands-on defensive driving courses are handled by the Arcadis Learning Center.

5.8 Additional Training and Education for Other Driving Conditions

Working together, supervisors, managers, and Health and Safety have the responsibility of determining additional training for employees driving under special conditions such as CMVs, towing trailers, riding and operating all-terrain vehicles or other non-routine driving conditions. Training approved by Health and Safety will be arranged through the Arcadis Learning Center.

5.9 Driving Distractions and Electronic Device Use While Operating a Motor Vehicle

Arcadis strictly prohibits employee use of personal or company-provided electronic devices (as defined in Exhibit 1) while the vehicle is on motion or stopped in traffic. This includes use of these devices in hands-on mode or hands-free mode while the employee is operating any motor vehicle for Arcadis purposes.

Electronic devices used for navigation must be secured in the vehicle with a mount designed for such purpose.

Guidance for vehicle controls and settings: If the driver needs to do more than push a button or flip a switch one time to complete the desired action, then the driver should not be performing the function while the vehicle is in operation or stopped in traffic. For example, the driver should not be repeatedly pushing the "seek" button on the radio to find a radio station they like or adjust the seat while simultaneously driving the vehicle.

To avoid distractions that could result in an accident, reading, grooming, eating and drinking should be avoided while operating a motor vehicle.

5.10 Additional Defensive Driving Procedures

Arcadis promotes additional defensive driving techniques to assist in the elimination or minimization of MVAs and VLEs. These techniques include:

- When a second Arcadis employee is available, and where it is safe to do so, all vehicle backing operations should use a spotter to assist with the backing operation.
- As a best practice, use of the cone program (or similar program) to promote awareness of hazards around parked vehicles.
- To assist drivers in their potential lack of familiarity with the location in which they are driving, one of the following should be utilized by drivers traveling to unfamiliar locations:
    - The use of GPS systems programmed prior to operating the vehicle, and/or
    - Pre-Trip Route Planning using Google® Maps or MapQuest®, and/or
    - Preparation of a Journey Management Plan (JMP) using the template provided in the Excel Standard HASP Template

MVSP Guide-007 provides best practices for spotting and cone placement

When the driver is the only occupant of the vehicle, use of a GPS device is preferred. Maps and JMPs should preferably be used by passengers in the vehicle to assist the driver in navigating to the desired destination.

5.11 Vehicle Inspections and Maintenance

All company owned or leased vehicles will be maintained in safe operating condition. To ensure vehicles are properly maintained, a daily pre-trip visual inspection must be informed prior to operating the vehicle. The pre-trip inspection should include, but is not limited to:

- Seat belts;
- Doors and door locks;
- Lights;
- Mirrors;
- Horn;
- Back up alarms, if equipped;
- Back up cameras, if equipped;
- Parking brake;
- Instrument panel;

- Steering;
- Windows;
- Windshield wipers;
- Tires; and
- Emergency equipment.

A more comprehensive weekly documented inspection (daily if required by the client, manager or supervisor or if vehicle is operated in harsh environments) is also required. Rental vehicles operated by Arcadis for more than one week also must also use the documented weekly inspection process. Inspections are required to be documented on the Weekly Vehicle Inspection Checklist or equivalent.

Documented vehicle inspections are required weekly and use of approved fuel cards is also required.

Deficiencies identified in inspections or at any other time will be managed through the Arcadis vehicle leasing company vendor or maintenance provider specified by Corporate Purchasing. Routine maintenance (gasoline, oil, etc.) will also be managed through these vendor(s) using approved fuel cards. Use of assigned fuel cards is critical to help ensure maintenance schedules are maintained for the vehicle. Records of vehicle inspections should be maintained at the office or project location where the vehicle is assigned.

Employees operating company owned or leased vehicles (including qualifying rental vehicles) required to be maintained under the CMV program will follow inspection and maintenance requirements specified in the CMV program. **Use of Weekly Vehicle Inspection checklist for CMV operation is not permitted.**

5.12 Safety Equipment for Arcadis Vehicles

All Arcadis owned or leased vehicles are expected to have, at a minimum, a 2.5 lb. A,B,C fire extinguisher (permanently mounted), first aid kit and an orange strobe or oscillating light. The amber warning light may be permanently affixed or removable; however, owned or leased vehicles obtained after April 4, 2016 must have permanently installed amber warning lights installed in or on the vehicle. Rental vehicles and Arcadis owned, leased, or rented vehicles will be subject to equivalent requirements, if used for field work unless otherwise excepted from a specific safety equipment requirement by the project specific HASP or Job

Arcadis Trucks:
- ü Fire Extinguisher
- ü First Aid Kit
- ü Amber Warning Light

Safety Analysis. Rental vehicles are not required to have fire extinguishers and amber warning light permanently mounted.

All Arcadis owned or leased vehicles obtained on or after June 1, 2012 will be required to be equipped with back up alarms. Arcadis owned or leased vehicles obtained prior to June 1, 2012 will be required to have a functioning back up alarm if used for project work with client mandated back up alarm requirement.

All Arcadis owned or leased pickup trucks with an open bed obtained on or after April 4, 2016 will be required to be equipped with a rear window protector.

Refer to MVSP Guide-010 for additional recommendations for safety and emergency equipment that may be required for specific project needs.

All Arcadis vehicles managed under the Arcadis approved vendor maintenance program have Emergency Roadside Assistance. Documentation, including the phone number, for the vendor providing assistance must be maintained in the glove box of the vehicle.

5.13 Securing Loads in Vehicles

All luggage, equipment and supplies loaded into a vehicle operated by Arcadis will be stowed in a manner that will prevent appreciable movement. Luggage, equipment and supplies placed in the passenger compartment of vehicles will be placed in a manner that will prevent rapid forward movement in the event of a hard stop or frontal collision. Objects will not be placed on the dashboard of vehicles unless they are secured in place by friction mats, suction cups, or similar securing device.

Securing straps, tiedowns (all types) and securing nets used to secure loads on trucks must be inspected prior to each use. Damaged, worn or frayed securing straps or tiedowns must not be used.

Chemicals transported in Arcadis vehicles must conform to the requirements of the Arcadis Transportation Safety Program for HazMat Shipping and Transportation.

Arcadis CMVs are subject to additional load securement requirements specified by the Arcadis Transportation Safety Program for CMVs.

5.14 Vehicle Modification

Arcadis employees are prohibited from modifying Arcadis owned or leased vehicles unless the modification is approved in writing by Corporate Health and Safety and/or Corporate Procurement.

5.15 Electronic Logging Devices (ELDs) and Telematics

Selected Arcadis vehicles are equipped with ELDs and/or telematic devices as designated by Corporate Health and Safety or Corporate Procurement. Arcadis employees are prohibited from tampering with devices or rending these devices in operable. ELD use is currently restricted to specific Arcadis CMV drivers.

5.16 Special Considerations for Rental Vehicles

Rental vehicles will be treated and driven in a manner equivalent to an Arcadis owned or leased vehicle. Additionally, Arcadis employees renting vehicles will plan and select a vehicle appropriate for the conditions anticipated when driving. Careful planning is required to preferentially use Arcadis owned or leased vehicles for off road use instead of using rental vehicles when reasonable, practical and permitted under contract (client or rental company) terms. Due to operating unfamiliarity typically encountered when renting vehicles, use of TRACK to identify and mitigate atypical or unfamiliar vehicle functionality or performance is required.

MVSP Guide-006 provides safety best practices information for rental vehicles. Arcadis drivers must be 21 years of age to rent vehicles.

6. VEHICLE USE AND INSURANCE

6.1 Non-Business Use of Company Vehicles

Non-business use during business hours and/or having non-business related passengers in an Arcadis Vehicle or Rental Vehicle during such business use is prohibited. In the event of an accident in these situations, the employee is personally liable for injuries and damages associated with such an accident and the employee, and not Arcadis, will be responsible for all rental charges. Operating an Arcadis Vehicle or Rental Vehicle for strictly personal use on weekends, evenings and holidays is prohibited, unless prior approval by the employee's supervisor is given, and the vehicle possession is necessary due to remote location and assignments, and the employee has all required personal automobile liability insurance. Supervisors should assess the requirement and may place any other appropriate limitations on such use.

Use of an Arcadis Vehicle or Rental Vehicle to commute to and from work should be limited to those situations where there is a sound business reason to do so and must be authorized by the operations manager.

6.2 Insurance

Arcadis has vehicle insurance coverage for Arcadis Vehicles and Rental Vehicles. If an accident occurs or damage is sustained, there is a $2,000 deductible for damage to the Arcadis Vehicle ("collision") and a $10,000 deductible for damage to another vehicle, property damage or injury to another party ("liability"). These deductibles are paid by the relevant Arcadis employee overhead.

If an accident should occur during non-business hours while an employee is driving an Arcadis Vehicle or Rental Vehicle, in accordance with state law, the Arcadis employee could be personally liable for injuries and damages associated with such an accident.

6.2.1 Vehicle Rental in the United States

As stated above, Arcadis has insurance for all Arcadis Vehicles. When renting for business in the United States, the rental should be arranged through World Travel, and there is no need to accept the insurance coverage offered by Arcadis preferred rental car vendors (currently Enterprise and National).

6.2.2 Vehicle Rental Outside of the United States

If an Arcadis employee is renting a vehicle for business **outside of the United States, the employee must accept the insurance offered by the local rental car company in order to be fully covered under the company's Foreign Package policy.** In addition, check with Corporate H&S about any additional coverage that may be needed for the country in which you are renting.

6.2.3 Personal Vehicles

Employees who drive their own vehicle for company business, as a condition for performance of his or her duties, shall comply with all minimum state requirements for auto insurance as required by their state. This requirement includes auto liability insurance with the minimum amounts of coverage meeting or exceeding that state's requirements. If requested, employees shall provide a current insurance card which

indicates the amount of coverage as adequate proof of insurance coverage.

If a personal vehicle is damaged or involved in an accident while being driven for company business, the insurance covering that personal vehicle is primary. Arcadis does not reimburse employees for personal auto insurance deductibles.

7. TRAINING

See section 5.3 of this standard for training requirements.

8. REFERENCES

Arcadis Transportation Safety Program for Commercial Motor Vehicles

The following MVSP Guides are located here:

MVSP Guide-001, Staff Approved for Conducting Commentary Drives

MVSP Guide-002, Guidelines for Conducting Commentary Drives

MVSP Guide-003, Automated Enforcement Conviction Evaluation Criteria

MVSP Guide-004, Criteria for Defining a Motor Vehicle Accident

MVSP Guide-005, Guide for MVR Corrective Actions

MVSP Guide-006, Rental Vehicle Safety Requirements and Best Practices

MVSP Guide-007, Spotter and Cone Program Best Practices

MVSP Guide-008, MVSP Restricted Driving Appeal Process

MVSP Guide-009, ***Reserved***

MVSP Guide-010, Safety Requirements for Arcadis Vehicles

MVSP Guide-011, Reporting Requirements for all Vehicle Damage

Incident Reporting and Investigation H&S Standard (ARC HSMS010)

9. RECORDS

Records will be maintained as follows:

- MVRs pulled as required under this MVSP and associated notifications, approvals, releases, and findings information will be maintained by Human Resources.
- TIP results, incident reports and near miss reports related to MVSP activities will be maintained in the 4-Sight database.
- Commentary Drive documentation will be provided to the employee unless otherwise specified by the MVSP Specialist.
- Any training certificates or documentation arranged through the Arcadis Learning Center (hands-on defensive driving, defensive driving on-line, defensive driving videos, etc.) will be maintained by the Arcadis Learning Center.

10. APPROVALS AND HISTORY OF CHANGE

Approved By: Julie Santaniello, CSP - Corporate H&S, Manager of Technical Programs

History of Change

Revision Date	**Revision Number**	**Standard Developed/Reviewed By or Revised By**	**Reason for change**
26 March 2007	01		Original document
18 August 2007	02		Change in required on-line defensive drivers training
22 October 2007	03		Changing over to new template format and addition of the “Comments on My Driving?” program

Revision Date	Revision Number	Standard Developed/Reviewed By or Revised By	Reason for change
21 January 2008	04		Change to new template; change to 2008 organization job titles; change to prohibit texting/emailing while driving
13 June 2008	05		Addition of Sections 5.10 and 5.11 on other defensive driving techniques and cone placement.
6 October 2008	06		Clarified who is required to complete online training in Section 5.3 and modified section on when hands-on defensive driving is required after an accident.
8 April 2009	07		Incorporated references to the CMV program and vehicle inspection requirements. Incorporated Vehicle Use Policy. Added fatigue management requirements. Deleted references to the Commentary Drive which is obsolete.
3 November 2009	08		Incorporated Smith System videos as a corrective action, Commentary Drive Program and revised Exhibit 2 and added new Exhibit 4.
1 November 2010	09		Deleted Comments on my driving section as program was discontinued.
25 May 2011	10		Revised content and restructured selected exhibits and standard sections. Most content duplicated in the Vehicle Use policy removed. Vehicle Use policy incorporated by reference
August 16, 2011	11		Replaced section 5.7, added new definitions and guide references, clarified fatigue management recommendations, modified terminology for BBS program, provided MVR report clarifications.

Revision Date	Revision Number	Standard Developed/Reviewed By or Revised By	Reason for change
May 2, 2012	12		Comprehensive restructuring, Revisions to training and MVR processes, expanded rental vehicle safety, inclusion of additional MVSP guidance documents, roles and responsibilities clarification. Inclusion of vehicle safety equipment information. Formalization of the ARC process.
14 March 2013	13		Clarified MVR review and training for new hires. Clarified standard conflict with other corporate department policies. Restructuring of section 5.2. Removal of assigned driving function. Revision to headlight use. Section 4.2 MVSP Specialist e-mail link address updated
8 December 2013	14		Added definition for assigned driving function, Restructured MVR review requirements, newly licensed driver requirements, and add references to new MVSP Guides. Title changes and minor editing throughout.
29 January 2014	15	Sam Moyers	Addition of new section 5.13 addressing load securement to harmonize with other H&S standards and guidance. Addition of pre trip visual inspection information to harmonize with other H&S standards and guidance. Clarification of expectations in the cone and spotter program. Revised header and footer to current standard and modified revision history table.
4 February 2014	16	Sam Moyers	Section 5.1 was modified to clarify Arcadis parking expectations
22 September 2015	17	Sam Moyers	Revised appeal process and relinked revised MVSP Guide-005. Rebranding. Revised signature block

Revision Date	Revision Number	Standard Developed/Reviewed By or Revised By	Reason for change
6 May 2016	18	Sam Moyers	Revised with new section 6 dealing with insurance issues. New section 5.3.6 dealing with temporary agency employees. Both were included from integrated **Human Resources** Vehicle Use Policy. Revised sections 5.3.5, 5.9 and 5.12 to clarify current policy. Added a definition for field work in Exhibit 1. Added additional references concerning cell phone prohibition.
27 March 2018	19	Sam Moyers/Julie Santaniello	Revised Executive Summary and Exhibit 1 concerning electronic devices, Revised sections 5.9, 5.10, and 5.13 to reflect current policies. New section 5.15 for ELDs and telematics. Added definition of “electronic device” in Exhibit 1. Minor editorial corrections throughout. Fixed broken links. Combined MVSP guides into one document.

EXHIBIT 1 - DEFINITIONS

Arcadis vehicle or Arcadis motor vehicle: Any motor vehicle owned or leased by Arcadis employee.

> Note: ATV/UTV/Snowmobile operation is addressed in Arcadis Speciality Vehicle H&S Standard ARC HSFS001

Arcadis driver or driver: Any Arcadis U.S. employee or temporary agency employee who drives an Arcadis vehicle, leased vehicle, rental vehicle, or personal vehicle for business reasons whether the use of the vehicle includes operation from the local office or for travel while away from the local office.

Arcadis employee: Any full-time, part-time, temporary, as needed employee, and interns employed by Arcadis U.S.

Assigned Driving Function for Arcadis: Any Arcadis driver who drives on average 5 or more days per month in the interest of Arcadis.

Business use of Arcadis owned, leased, rented, or personal motor vehicle: For the purposes of this standard, business use of an Arcadis, rental, leased or personal vehicle including but not limited to: attending meetings; driving to and from a client location; driving to dinner while out of town on business; and driving to an office supply store to pick up office supplies. Use of the vehicle for business would not include personal use as described below.

Corporate: As used in this standard and materials incorporated by reference, the term “Corporate” means Corporate Health and Safety, Corporate Human Resources, and/or Corporate Legal departments unless otherwise specified.

Electronic Device: Any portable electronic device not required for safe operation of a motor vehicle including, but not limited to, cell phones, computer tablets, laptops, watches (iWatch, etc.) and global positioning systems (GPSs).

Field Work: As used in this standard means any Arcadis work activity outside of an office environment.

MVSP Guide-004 provides detailed MVA information and FAQs

Manager: The employee’s administrative supervisor or an Operations Manager.

Motor vehicle accident (MVA): Any incident on a reasonably anticipated route during the course of work where an Arcadis owned, leased, or rented motor vehicle is:

- On a public or established private roadway or parking area involving a third party motor vehicle, excluding load securement failures by a third party motor vehicle.
- On a public roadway involving damage to public or private property, excluding road debris damage.
- Involved in any type of pedestrian impact resulting in injury or property damage.

- Involved in an Arcadis load securement failure or mechanical component failure on a public or established private roadway involving a third party motor vehicle or public property damage.

- On a public roadway involving damage or injury associated with another Arcadis operated vehicle, including load securement failures.

Personal use of Arcadis vehicle, leased vehicle or rented motor vehicle: For the purposes of this standard, personal use of an Arcadis vehicle, leased vehicle or rental vehicle include but are not limited to supervisor approved: driving to dinner with a non-business-related person(s) in the vehicle; driving for the purposes of personal entertainment or personal business; using an Arcadis vehicle or rental vehicle for staying over period of time not required for business (e.g., staying over a weekend to visit friends, etc.).

Potential New Hire or Candidate: For the purpose of this standard means an individual who has had a written offer made and accepted for employment with Arcadis.

Preventable MVA: A MVA where the Arcadis driver was as fault or was determined through the Arcadis LNL Investigation process failed to exercise reasonable care while driving an Arcadis vehicle. The classification of Preventable MVA is assigned by Corporate Health and Safety.

Rental vehicle: For the purposes of this policy, any motor vehicle rented from an established rental car company for Arcadis business whether the use of the vehicle is operated from the local office or for travel while away from the local office.

Supervisor: The employee's administrative supervisor (project supervisor if approved by the administrative supervisor).

Hiring managers should review contracts for driving related issues involving temp agency employees

Temporary agency employee: A temporary agency employee utilized by Arcadis for temporary work. Temporary Employee Agency agreements shall provide for standard automobile insurance and other terms consistent with this policy.

Vehicle loss event (VLE): Any incident involving a motor vehicle that does not meet the definition of a MVA. VLEs may be preventable or non-preventable based on findings of the Arcadis LNL Investigation process and is assigned by Corporate Health and Safety.

EXECUTIVE SUMMARY

Through the use of personal protective equipment (PPE), ARCADIS employees are protected from occupational hazards in the event that engineering and administrative controls are not sufficient or practical. PPE will be provided to ARCADIS full time and permanent part time employees who regularly conduct field work or visit project sites outside of office environments at no cost following training on the proper use and maintenance of PPE.

Project managers are responsible for assessing potential hazards on a worksite and determining the applicable PPE.

Project personnel are responsible for understanding and utilizing "Stop Work Authority" should a hazard present itself that was not previously identified or has been identified in concentrations that are higher than anticipated.

This minimum level of PPE (hard hat; safety glasses; class II high-visibility vest, shirt or coat; and protective footwear with safety toe cap) is expected to be worn on all project sites unless in a field trailer or vehicle, unless a specific exemption has been established within an approved HASP or modification to a task specific JSA or Permit to Work upon completion/review of the hazard analysis.

PPE selection will be based on an evaluation of the performance characteristics of the PPE relative to the following:

- The requirements and limitations of the tasks or work environment
- The task-specific conditions and duration of the work
- The hazards and potential hazards identified at the site

PPE may be categorized into levels A, B, C or D.

- Level A offers the highest skin and respiratory protection
- Level B offers a high degree of respiratory protection with lesser levels of skin protection
- Level C is used when the concentration and type of airborne substance is known, and the criteria for using an air purifying respirator are met
- Level D offers the least skin and respiratory protection

PPE training will include, at minimum:

- When and what PPE is necessary
- How to put on, adjust, wear and take off the PPE
- Limitations of the PPE
- Proper care, maintenance, useful life, and proper disposal of PPE

1. POLICY

It is the policy of ARCADIS to assess the workplace to identify and assess hazards in order to appropriately implement controls for those hazards. In addition, it is ARCADIS policy to supply personal protective equipment (PPE) for employees in a working environment where engineering and administrative controls are not feasible or effective in the control of hazards. ARCADIS will train and supply this PPE at no cost to the employee.

2. PURPOSE AND SCOPE

2.1 Purpose

The purpose of PPE is to shield or isolate individuals from the chemical, physical and biologic hazards that may be encountered in their work environment. A hazard analysis or assessment will be performed before a job task is begun to evaluate if PPE is necessary to protect an employee from identified hazards and determine the type of PPE required. This analysis will include the identification of hazards/suspected hazards and their routes of exposure.

Combinations of protection may be needed to provide the appropriate level of protection for any given work environment. The level of PPE may change during a job, so periodic task evaluation will be conducted to ensure that the most appropriate PPE is being used. Over-protection, as well as under-protection, can create additional hazards and should be avoided where possible.

Subcontractors and other non-ARCADIS employees must supply their own PPE. ARCADIS will not supply PPE to any non-ARCADIS employees unless specific arrangements and agreements are made with the other party.

This Health and Safety Standard (HSS) provides guidance on the proper selection, use, care and maintenance of PPE.

2.2 Scope

Whenever possible, engineering, substitution and administrative controls will be used to reduce or eliminate hazards. When such controls are not feasible, practical or adequate, PPE will be used to protect employees from exposure to hazards during ARCADIS-related work tasks.

3. DEFINITIONS

Definitions related to personal protective equipment can be found in Exhibit 1.

4. RESPONSIBILITIES

4.1 ARCADIS Management

ARCADIS Management is responsible for providing resources for the acquisition of PPE and for the conduct of hazard assessments.

4.2 Project Managers

Project Managers are responsible, as part of the project hazard assessment, for determining PPE necessary to complete the project. In addition, the Project Manager is responsible for determining client requirements with respect to PPE. Project Managers notify health and safety staff of biological, chemical and physical hazards present or potentially present on the site, as well as verifying that any specific state and/or local requirements for PPE have been identified. Project Managers are also responsible for ensuring that project staff has the appropriate and applicable training for PPE use prior to those staff beginning work.

4.3 Corporate Health and Safety

Corporate Health and Safety is responsible for keeping this standard up-to-date with current regulatory requirements and best practices and for assisting in determining the appropriate PPE for a particular task and work environment and for assisting in the identification of appropriate vendors of such PPE.

4.4 Health and Safety Staff

Project Health and Safety Staff including designated Writers and Reviewers of Project Health and Safety Plans (HASPs) are responsible for developing control processes and techniques on specific projects based on the physical, chemical and biological hazards expected to be encountered on project facilities.

It is the responsibility of the Site Safety Officer (SSO) to verify that any employee-owned PPE brought to the job site is adequate for the task, properly fitted to the employee, and has been properly maintained and is cleaned in accordance with this standard.

4.5 ARCADIS Staff

ARCADIS staff is responsible for completing PPE training as required by this policy and standard, and for following all hazard control processes designated by the Project Manager, Project Health and Safety Staff and the project HASP. Employees must choose appropriate, properly fitted PPE where required, and are responsible for inspecting their PPE for wear, damage and effectiveness. Employees that bring their own PPE to the job site must ensure that the equipment is adequate for the task (e.g., meets minimum ANSI requirements, AUS requirements and client requirements), and has been properly maintained in a sanitary and reliable condition in accordance with this standard.

If project personnel believe that a hazard is present that was not previously identified or is at levels that are higher than expected, they should stop work and notify project health and safety staff or the project manager immediately and not proceed until authorized.

Staff are expected to comply with minimum PPE requirements as established by ARCADIS policy and HASP requirements and/or task specific PPE requirements detailed in the task specific Job Safety Analysis (JSA) or Permit to Work.

5. PROCEDURE

5.1 Minimum PPE Requirements

All full time and permanent part time employees that regularly conduct field work or visit project sites outside of office environments will be issued a field bag that contains, at a minimum, the following PPE:

- An ARCADIS branded hardhat
- Two pair of safety glasses, one clear pair and one tinted pair, or one pair of prescription safety glasses with transitional lenses
- Hearing protection
- A minimum, Type 2 reflective vest in either orange, lime green or yellow

Office locations will stock extra bags with the equipment listed above for use by other staff that do not regularly go to field locations. Additional PPE and H&S equipment will be issued to staff based on the hazards they face on specific projects (i.e. respirators, goggles, chaps, etc.).

ARCADIS has established the following minimum PPE requirement for field activities that must be worn unless excepted by the HASP, JSA or Permit to Work:

- Type I Hardhat (Class G rating if there is potential danger of contact exposure to low voltage conductors)
- Safety Glasses (Z87.1)
- Class 2 reflective traffic vest, coat or shirt in either orange, lime green or yellow
- Protective Footwear, e.g. steel toe safety shoes (minimum I/50 Impact resistance for the toe area which is an impact resistance rating of at least 50-foot pounds; C/50 Compression resistance for the toe area which correlates to 1750 pounds of compression resistance).

This minimum level of PPE is expected to be worn on all project sites unless in a field trailer or vehicle, unless a specific exemption has been established within an approved HASP or modification to a task specific JSA or Permit to Work upon completion/review of the hazard analysis.

The goal in this section is to specify PPE for work that is not governed by a JSA or Permit to Work to avoid conflicts in PPE requirements. The PPE specified in a JSA/Permit to Work is automatically the PPE requirement for all work governed by the JSA/Permit to Work. As a result, it is critical to take the time during JSA/Permit development to consider and identify the proper PPE required for the activity. Please note that the template JSA

PPE information may not be the appropriate PPE for your project and should be adjusted accordingly.

Note: Project Teams must check and comply with state, local and/or client requirements for specific minimum PPE requirements and adjust the HASP, JSA or Permit to Work process accordingly.

Temporary full time/part time employees (temp staff) will be provided all of the above PPE; however, standard steel toed safety boots will only be provided to temp staff employees with the approval of the administrative supervisor and Project Manager. If the administrative supervisor or Project Manager elects to not provide protective footwear or other non-specialty required footwear to temp staff, the employee will be informed of the requirement to provide their own footwear meeting project health and safety requirements prior to hire.

No ARCADIS staff should arrive at a field or project site without this minimum PPE.

5.2 The PPE Program

The basic objectives of a PPE program are to protect the wearer from safety and health hazards; and to prevent injury to the wearer from incorrect use and/or malfunction of the PPE. This document serves as the overall ARCADIS PPE program and is used as guidance for the development of a project-specific PPE program which becomes part of a project-specific health and safety plan. A project-specific PPE program in combination with this HSS will address the following:

- PPE selection based upon site hazards (Hazard Identification/Assessment).
  - Identify the hazards/suspected hazards and their potential routes of exposure (e.g., skin, inhalation, ingestion or eye contact).
- The use and limitations of the equipment including limitations during temperature extremes and under certain medical conditions;
- The work mission duration;
- Maintenance, storage, decontamination and disposal of PPE;
- Training including proper fit and how to properly put on and take off PPE;
- PPE inspection procedures prior to, during, and after use; and
- Periodic evaluation of the effectiveness of the PPE program.

5.3 PPE Selection

The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress and impaired vision, mobility and communication. Over-protection, as well as under-protection and poor fit, can be hazardous and should be avoided where possible. Site or project-specific health and safety plans take into

consideration engineering, substitution, and administrative controls first as a means to eliminate/reduce the need for PPE. When it is not feasible or practical to eliminate the use of PPE, PPE must be properly fitted to each affected employee, and PPE selection will be based on an evaluation of the performance characteristics of the PPE relative to the following:

- The requirements and limitations of the tasks or work environment;
- The task-specific conditions and duration; and
- The hazards and potential hazards identified at the site.

The level of protection will be increased whenever it is shown that increased protection is necessary to reduce employee exposures to the hazards. It may be decreased when it is shown that this will not result in hazardous exposure to employees.

5.4 Levels of PPE Protection

For work on hazardous sites, a combination of PPE may be categorized into levels A, B, C, or D with level A offering the highest level of protection and D the lowest. Monitoring the effectiveness of PPE will be done throughout a project to ensure that the appropriate level of protection is being worn. These levels of protection are described below.

5.4.1 Level A Protection

Level A PPE offers the highest level of respiratory and skin protection and should be worn when:

- The hazardous substance has been identified and requires the highest level of protection of the skin, eyes, and respiratory system based on either:
  - The measured (or potential) high concentrations of atmospheric gases, vapors, or particulates; or
  - If site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates which are harmful to skin eyes, or the respiratory system.
- There is a known or suspected high degree of hazard to the skin and skin contact is possible.
- Conducting work in a confined, poorly ventilated area and the other criteria requiring Level A PPE have not been determined.

Level A equipment includes:

- NIOSH approved positive pressure, full-face piece self contained breathing apparatus (SCBA), or positive pressure supplied airline respirator with escape SCBA;
- Totally encapsulating chemical-protective suit (material based on the hazard);

- Chemical resistant outer **and** inner gloves (type and material based on the hazard);
- Chemical resistant boots with steel toe and shank;
- Disposable protective suit, gloves and boots (depending on suit construction, may be worn over the totally encapsulating suit);
- Coveralls (optional, as applicable);
- Long underwear (optional, as applicable); and
- Hard-hat - under suit (optional, as applicable).

5.4.2 Level B Protection

Level B PPE offers a high degree of respiratory protection with lesser levels of skin protection. Level B PPE should be worn when:

- The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection but less skin protection;
- The atmosphere contains less than 19.5 percent oxygen; or
- The presence of incompletely identified vapors or gases is indicated by direct reading organic vapor detection instruments, but the vapors and gases are not suspected of containing high levels of chemical harmful to the skin or capable of being absorbed through the skin. Level B is the minimum level of protection that should be worn when there is insufficient information to determine the hazards or potential hazards of the substance.

Level B PPE equipment includes:

- NIOSH approved positive pressure, full face piece self contained breathing apparatus 1(SCBA), or positive pressure supplied air respirator with escape SCBA;
- Hooded chemical resistant clothing (overalls and long sleeve jacket; coveralls; one or two piece chemical splash suit; disposable chemical resistant overalls) (materials based on the hazards);
- Chemical resistant outer **and** inner gloves (material based on the hazards);
- Chemical resistant boots with steel toe and shank;
- Coveralls (optional, as applicable);
- Outer chemical resistant boot covers (optional, as applicable);
- Hard hat (optional, as applicable); and

- Face shield (optional as applicable).

5.4.3 Level C Protection

Level C PPE is used when the concentration and type of airborne substance is known, and the criteria for using an air purifying respirator are met. It should be worn when:

- Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;
- The types of air contaminants have been identified, concentrations measured, and an air purifying respirator is available that can remove the contaminants; and
- All criteria for the use of an air purifying respirator are met.

Level C PPE equipment includes:

- NIOSH approved full face or half mask air purifying respirator (with appropriate cartridges based on the hazards);
- Hooded chemical resistant clothing (overalls and long sleeve jacket; coveralls; one or two piece chemical splash suit; disposable chemical resistant overalls) (materials based on the hazards);
- Chemical resistant outer **and** inner gloves (select appropriate materials based on the hazards);
- Chemical resistant boots with steel toe and shank;
- Coveralls (optional, as applicable);
- Outer chemical resistant boot covers (optional, as applicable);
- Hard hat (optional, as applicable);
- Escape mask (optional, as applicable); and
- Face shield (optional, as applicable).

5.4.4 Level D Protection

Level D PPE offers the least skin and respiratory protection and should be worn when the atmosphere contains no known hazards, and work functions preclude splashes, immersions or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

Level D PPE equipment may include any or all of the following depending on the hazards of the site:

- Chemical resistant boots with steel toe and shank (optional, as applicable);
- Coveralls (optional, as applicable);
- Gloves (optional, as applicable);
- Outer chemical resistant boots (disposable) (optional, as applicable);
- Safety glasses or chemical splash goggles (optional, as applicable);
- Hard hat (optional, as applicable);
- Escape mask (optional as applicable); and
- Face shield (optional as applicable).

5.5 Combinations of Protection

Combinations of protection are acceptable if the task hazard analysis and the site conditions warrant modification of PPE levels.

5.6 Equipment List

5.6.1 Eye/Face Protection

All employees engaged in or working in or adjacent to areas with eye-hazardous activities or operations, such as but not limited to flying objects and hazardous chemicals shall wear appropriate eye protection.

It is strongly encouraged that eye protection be worn when present on any project site, including construction sites

- Safety glasses with side shields are required for impact protection and shall meet ANSI Standard Z87.1 requirements.
- Chemical goggles (for protection against chemical splash).
- Face shields (for face protection from chemical splash and are not a substitute for primary eye protection).
- Full-face respirators can provide eye and face protection in lieu of safety glasses, goggles or face shields.
- Shaded eye protection meeting the minimum shade requirements established in 29 CFR 1910.133 (for employees exposed to sources of injurious light radiation [e.g., welding, cutting, lasers]).
- For prescription eye protection contact your supervisor to fill out an AOSafety order form available on the ARCADIS Health and Safety website (The Source). For temporary staff, standard prescription safety glasses will be provided with the

approval of the administrative supervisor and Project Manager. If the administrative supervisor or Project Manager elects to not provide standard prescription safety glasses to temp staff, the employee will be informed of the requirement to provide their own prescription safety meeting project health and safety requirements prior to hire.

5.6.2 Respiratory Protection

Respirators will be provided and used in accordance with the ARCADIS Respiratory Protection Policy/Standard ARC HSGE017 and 29 CFR 1910.134.

5.6.3 Hearing Protection

Hearing protection will be provided and used in accordance with the ARCADIS Hearing Conservation Policy/Standard ARC HSIH008 and 29CFR 1910.95.

5.6.4 Foot Protection

Basic foot protection is required for all ARCADIS job sites and industrial locations. Specialized footwear will be provided as required by the nature of the work. Special foot protection may include, but is not limited to, chemically resistant, thermally shielded, metatarsal guards, etc.

One pair of leather safety boots will be provided as necessary by ARCADIS. The employee purchasing the footwear is required to ensure that it meets any of the consensus standards as specified by OSHA 29 CFR 1910.136 which include:

- ASTM F2413-11 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear

  Note: ASTM F2413-11 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear contains performance requirements for footwear to protect workers' feet from the following hazards by providing:

  1. Impact resistance (I) for the toe area of footwear (75 foot-pounds);
  2. Compression resistance (C) for the toe area of the footwear (75/ 2,500 pounds);
  3. Metatarsal impact protection (Mt) that reduces the chance of injury to the metatarsal bones at the top of the foot (75 foot-pounds);
  4. Conductive properties (Cd) which reduce hazards that may result from static electricity buildup; and reduce the possibility of ignition of explosives and volatile chemicals (electrical resistance zero â€“ 500,000 ohms);
  5. Electric hazard protection (EH) to protect the wearer when accidental contact is made by stepping on live electrical wire (capable of withstanding the application of 18,000 volts at 60 hertz for one minute

with no current flow or leakage current in excess of one milliampere, under dry conditions);

6. Static dissipative properties (SD) to reduce hazards due to excessively low footwear electrical resistance that may exist where SD footwear is required (must have a lower limit of electrical resistance of 106 ohms and an upper limit of 108 ohms when tested at 50-volts); and
7. Puncture resistance (PR) (when viewed at a 90° angle, the test pin tip must not visually penetrate beyond the face of the material nearest the foot after an applied force of 270 pounds, no signs of de-lamination or cracking after 1.5 million flexes and no sign of corrosion, de-lamination or deterioration after being exposed to a five percent salt solution for 24-hours.)

- ASTM F-2412-2005, "Standard Test Methods for Foot Protection," and ASTM F-2413-2005, "Standard Specification for Performance Requirements for Protective Footwear"

- ANSI Z41-1999, "American National Standard for Personal Protection -- Protective Footwear"

Safety shoes worn by ARCADIS staff during field work must be equipped with protective (safety) toe cap that has a minimum I/50 Impact resistance rating for the toe area which is an impact resistance rating of at least 50-foot pounds and a C/50 Compression resistance rating for the toe area which correlates to 1750 pounds of compression resistance.

Puncture resistant soles or in-soles equipped in the safety boots are project driven based on the Hazard Assessment. Some clients may require puncture resistant soles or in-soles.

The maximum expenditure or reimbursement for approved safety shoe purchases will be $150. Reimbursement requests must be approved by the employee's supervisor.

It should be noted that some clients may prohibit the use of athletic-style safety shoes ("safety sneakers") due to the difficulties created by these styles in supervising proper use of protective footwear.

5.6.5 Head Protection

Hard hats meeting ANSI Z89.1 will be provided to protect employees from impact, penetration, falling objects and/or limited electrical shock and burn, as appropriate for work site hazards. A hard hat must be replaced when it becomes damaged, contaminated (and contamination cannot be removed) or it has been struck by an object of sufficient size to potentially compromise its integrity.

Hardhats must resist penetration by objects, be water resistant and slow burning, and have a chin strap if it is worn while working at elevation. It must be worn square on the head and not be pushed back, to the side or forward.

Baseball-style caps will interfere with the ability of a suspension to work properly during an impact; they should not be worn under protective headgear.

There are two types and three classes of head protection described in ANSI standard.

Other hazard situations to consider are:

- In areas of heavy vegetation or in any area where hunters may be present, it is recommended that some type of brightly colored head protection be worn. For example, a bright orange or yellow baseball cap or stocking cap.
- If cold exposure is an issue, hardhat liners are available (made specifically for the particular hardhat) or if a hardhat is not required, some type of insulated head protection such as a stocking cap should be worn.
- Because it can degrade headwear material and reduce the level of protection, insect repellent should not be applied to or inserted into headwear. The headwear manufacturer should be consulted for instructions on the use of insect repellents and other chemicals on its' products.

5.6.6 Hand Protection

Appropriate hand protection will be provided if employee's hands are exposed to hazards while on the job.

Such as:

- pinch points
- sharp/pointed tools or objects
- incorrect or inadequate tool use
- improper use
- rotating/energized/automated parts
- abrasive materials
- inadequate job planning
- lack of/inadequate protection
- changing weather conditions and extreme temperatures
- hazardous material
- Jewelry and loose clothing.

Once these hazards are identified, the appropriate glove or hand protection must be selected. When choosing gloves, keep in mind:

- Hazardous Chemicals/Substances to be Contacted
- Nature of Contact (total immersion, splash, etc.)
- Duration of Contact
- Area of Protection (hand only, forearm, arm)
- Equipment (rotating, sharp edges, etc.)
- Grip (dry, wet, oily)
- Thermal Protection
- Abrasion/Cut/Puncture Resistance
- Tear/Tensile Strength
- Ergonomics (size, heat stress, dexterity)
- Decontamination/Disposal

In selecting chemically protective gloves, the toxic properties of the chemical(s) will be determined. Information provided on the manufacturer's label or by chemical compatibility charts regarding breakthrough time, permeation rate and degradation should be considered during selection.

5.6.7 Body Protection

Protective clothing, gloves, boots, and other protective equipment will be provided as appropriate for the hazards associated with the tasks being performed.

Long pants are required for all field work unless approval is granted by corporate H&S. Additional protection such as cooling vests may be required. In environments with potential biological hazards such as ticks, plants or snakes, gloves and long sleeves should be worn along with head protection of some kind to protect the scalp. In areas of roadway work or other vehicle traffic high visibility Class II safety vests will be worn.

Chemically Protective Clothing (CPC) will be selected by evaluating the performance characteristics of the CPC against the requirements and limitations of the site and task-specific conditions. This selection should be performed by an employee with training and experience taking into consideration:

- Permeation, degradation, penetration of the CPC by the chemical and;
- Durability, flexibility, fit, temperature effects, ease of decontamination, compatibility with other necessary equipment (e.g., hardhats, SCBA, etc.); and duration of use that could affect the employees ability perform the task.

Where required, appropriate Fire Resistant (FR) protective clothing must be used where there is a potential for electrical arc flash hazards (refer to the ARCADIS Electrical Safety

Standard HSFS006 for additional information). Jobs that expose workers to fire dangers require the use of FR protective clothing.

5.6.8 Specialized Equipment

All other specialized safety equipment required for an assignment (e.g., work gloves, specialized protective clothing, hip boots, field rain gear, personal floatation devices) will be provided by ARCADIS as specified in the HASP.

5.6.9 Extreme Cold Environments

Supervisors are responsible for ensuring that staff is properly equipped to protect themselves while working in extreme cold environments. The following is suggested as appropriate PPE for cold conditions:

- Hats/hat liners and gloves
- Thermal clothing
- Hi-Visibility clothing
- Winter footwear

Use of specialized equipment will be charged to projects in accordance with established policy and rental rates.

5.7 Maintenance/Storage/Disposal

5.7.1 PPE Maintenance and Disposal

PPE must be inspected by the user before and after each use for defects, rips, tears and/ or damaged parts. Damaged or compromised PPE will not be used and must be repaired before re-use or disposed. PPE must be disposed of according to the HASP and other project plans for the site. If non-disposable, PPE must be decontaminated and sanitized before being reused according to the HASP. Contaminated PPE which cannot be properly decontaminated by normal procedures must be disposed of accordingly.

Employees are responsible for using and maintaining PPE in a sanitary and reliable condition.

5.7.2 PPE Storage

All PPE must be stored to protect against dust, sunlight, extreme heat and cold, excessive moisture and damaging chemicals. Storage must be in accordance with the manufacturer's specifications and OSHA requirements.

5.7.3 Contaminated Boots

Single-use boots or boot covers which become contaminated on the job will be waste profiled, as necessary, and properly disposed. Work boots will be properly decontaminated upon exiting contaminated work zones (exclusion zones). Work boots that are damaged on the job must be replaced.

6. TRAINING

Training in the proper use of PPE will generally be provided in conjunction with HAZWOPER training or via coursework selected and approved by Corporate H&S. Training will be completed prior to the employee's use of PPE, when changes in the work place alter the use or type of PPE, and when inadequacies in the employee's knowledge or use of PPE are noted.

The training will include at a minimum:

- When and what PPE is necessary;
- How to put on, adjust, wear and take off the PPE;
- Limitations of the PPE; and
- Proper care, maintenance, useful life, and proper disposal of PPE.

Retraining will be conducted when the workplace changes making the earlier training obsolete, the type of PPE changes or when the employee demonstrates lack of use, improper use, or insufficient skill or understanding.

7. REFERENCES (regulation citation, technical links, publications, etc.)

29 CFR 1910.120 "Hazardous Waste Operations and Emergency Response"

29 CFR 1910 Subpart I "Personal Protective Equipment"

29 CFR 1910.136 Foot Protection

29 CFR 1910.6 Incorporation by reference

8. RECORDS - DATA RECORDING AND MANAGEMENT

Records of the PPE training are retained by the employee and in the ARCADIS training database. Medical clearance for respirator use is maintained by the employee and ARCADIS' medical vendor.

9. APPROVALS AND HISTORY OF CHANGE

Approved by: Tony Tremblay, CSP – Corporate H&S, Director of Technical Programs

History of Change

Revision Date	Revision Number	Standard Developed/Reviewed By or Revised By	Reason for change
20 February 2009	01	Miriam Koesterich/Mike Thomas	Original document
19 August 2011	02	Sue Byers/Mija Coppola	Updated footwear protection consensus standards, clarified contaminated work boot section and updated document format
2 February 2012	03	Tony Tremblay	Clarified temp staff PPE issues in sections 5.1 and 5.6.1
16 January 2013	04	Pat Vollertsen/Tony Tremblay	Added hand protection to section 5.1, added to employee responsibility in section 4.5, and added information on when eye protection should be worn in section 5.6
12 February 2013	05	Amanda Tine/Tony Tremblay	Added that PPE must be properly fitted. Added requirements for employees that bring their own PPE; Added Retraining information into Section 6
23 June 2014	06	Tony Tremblay	Identified minimum PPE requirements for ARCADIS field work in section 5.1 of HSS; Updated footwear protection consensus standard information in Section 5.6.4; and updated foot protection definition

Exhibit 1 – Definitions

Eye/Face Protection - Equipment designed to provide eye or face protection when exposed to hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

Foot Protection - Footwear designed to provide foot and toe protection when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and/or where an employee's feet are exposed to electrical hazards. These include such measures as safety toe cap and puncture resistant soles.

Hand and Body Protection - Equipment designed to provide protection to the hands and body during exposures to potential hazards such as potential for skin absorption of harmful substances, sharp objects, abrasive surfaces, punctures, temperature extremes and chemical contact.

Hazard Assessment - The process utilized to identify hazards in the workplace and to select the appropriate PPE to guard people against potential hazards.

Head Protection - Equipment designed to provide protection to the head during exposure to potential hazards such as falling objects, striking against objects or electrical hazards.

Hearing Protection - Equipment designed to provide protection to an individual's hearing during exposure to excessive noise levels and any 8hr work day with noise levels consistently 85dB or above.

Personal Protective Equipment (PPE) - Equipment designed to provide protection to the wearer from potential hazards to the eyes, face, hands, head, feet, ears, extremities and respiratory system.

Respiratory Protection - Equipment designed to provide protection to the wearer from potential inhalation hazards such as vapors, mists, particulates and gases.

Appendix D

Generic Community Air Monitoring Plan

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

Appendix E

Site Inspection Forms

ENVIRONMENTAL INSPECTION FORM

COBEY, LLC

Property Name: _____ Inspection Date: _____

Property Address: _____

City: _____ State: _____ Zip Code: _____

Property ID: (Tax Assessment Map)

Section: _____ Block: _____ Lot(s): _____

Total Acreage: _____

Weather (during inspection): Temperature: _____ Conditions:

SIGNATURE:

The findings of this inspection were discussed with appropriate personnel, corrective actions were identified and implementation was mutually agreed upon:

Inspector: _____ Date: _____

Next Scheduled Inspection Date: _____

SECURITY AND ACCESS

	Yes	No
1. Access controlled by perimeter fencing?	_____	_____
Are there sections of the fence material damaged or missing?	_____	_____
Are the fence or gate post foundations structurally sound?	_____	_____
2. "No Trespass" signs posted in appropriate languages?	_____	_____
Are the signs securely attached to the fencing or posts?	_____	_____
Are there sufficient signs; are the signs adequately spaced around the perimeter of the property?	_____	_____
3. Is there evidence of trespassing?	_____	_____
Is there evidence of illegal dumping?	_____	_____

COVER & VEGETATION

4. Final cover in acceptable condition?	_____	_____
Is there evidence of sloughing, erosion, ponding or settlement?	_____	_____
Is there evidence of unintended traffic; rutting?	_____	_____
Is there evidence of distressed vegetation/turf?	_____	_____

	Yes	No
5. Final cover sufficiently covers soil/fill material?	_____	_____
Are there cracks visible in the soil or pavement?	_____	_____
Is there evidence of erosion in the stormwater channels or swales?	_____	_____
Is there damage to the synthetic erosion control fabric in the channels or swales?	_____	_____

ACTIVITY ON SITE

6. Any activity on site that mechanically disturbed soil cover?	_____	_____

ADDITIONAL FACILITY INFORMATION

Development on or near the site? (Specify size and type: e.g., residential, 40 acres, well and septic)

COMMENTS

Item #

ATTACHMENTS

1. Site Sketch
2. Photographs
3. Laboratory Report (s)

CORRECTIVE ACTION FORM

COBEY, LLC

Property Name: _____

Property Address: _____

City: _____ State: _____ Zip Code: _____

Property ID: (Tax Assessment Map)

Section: _____ Block: _____ Lot(s): _____

Total Acreage: _____

Weather (during inspection): Temperature: _____ Conditions:

An inspection of the subject property on (date) identified the need for corrective action.

CORRECTIVE ACTION TAKEN

Description: (attach site sketch and photographs)

Date Completed:

SIGNATURE:

The corrective action described above was completed in accordance with all relevant requirements of the Remedial Action Work Plan.

Inspector: _____ Date: _____

ATTACHMENTS

1. Site Sketch
2. Photographs
3. Laboratory Report (s)

CERTIFICATION OF INSTITUTIONAL/ENGINEERING CONTROLS

COBEY, LLC

SITE DETAILS

SITE NO.

SITE NAME

SITE ADDRESS: ZIP CODE:

CITY/TOWN:

COUNTY:

PROPERTY ID (Tax Assessment Map):
Section: Block: Lots(s):

CURRENT USE:

CURRENT CERTIFICATION FREQUENCY:

VERIFICATION OF SITE DETAILS

		YES	NO
1.	Are the SITE DETAILS above, correct?	¨	¨
	If NO, are changes handwritten above or included on a separate sheet?	¨	
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	¨	¨
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	¨	
3.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	¨	¨
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	¨	
4.	Has a change-of-use occurred since the initial/last certification?	¨	¨
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?		

5. Has any new information come to your attention to indicate that assumptions made in the qualitative exposure assessment for offsite contamination is no longer valid (applies to non-significant threat sites subject to ECL 27-1415.7(c))? ¨ ¨

   If YES, is the new information or evidence that new information has been previously submitted included with this certification? ¨

6. Are the assumptions in the qualitative exposure assessment still valid (must be certified every five years for non-significant threat sites subject to ECL 27-1415.7(c))? ¨ ¨

   If NO, are changes in the assessment included with this certification? ¨

DESCRIPTION OF INSTITUTIONAL/ENGINEERING CONTROL

	Control Certification	
	YES	NO
ENVIRONMENTAL EASEMENT	¨	¨
Type in Restriction here	¨	¨

CONTROL CERTIFICATION STATEMENT

For each institutional or engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

(a) the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in-place, or last approved by the Department;

(b) nothing has occurred that would impair the ability of such control to protect public health and the environment;

(c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and

(d) access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.

(e) if a financial assurance mechanism is required under the remedial work plan for the site, the mechanism remains valid and sufficient for their intended purpose under the work plan.

CONTROL CERTIFICATIONS

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name), _____

(print business address), am certifying as _____ (Owner or Owner's Designated Site Representative (if the site consists of multiple properties, I have been authorized and designated by all site owners to sign this certification) for the Site named in the Site Details section of this form.

_____ _____

Signature of Site Owner or Representative Rendering Certification Date

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in this Certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name), _____

(print business address), am certifying as a Qualified Environmental Professional for the _____

_____ (Owner or Owner's Representative) for the Site named in the Site Details section of this form.

_____ _____ _____

Signature of Qualified Environmental Professional, for the Owner or the Owner's Representative, Rendering Certification | Stamp (if Required) | Date

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