COMMUNITY HEALTH AND SAFETY PLAN
FOR
REMEDIAL ACTION
ACTIVITIES

AT

LOWER DARBY CREEK AREA OPERABLE UNIT 1 (OU1)
(CLEARVIEW LANDFILL) SITE

PHILADELPHIA AND DARBY TOWNSHIP, PHILADELPHIA AND DELAWARE COUNTIES PENNSYLVANIA
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 3, PHILADELPHIA, PENNSYLVANIA

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1.0 INTRODUCTION

This Community Health and Safety Plan (CHASP) has been written by the United States Environmental Protection Agency (USEPA) to help explain the selected cleanup plan for the Clearview Landfill (Landfill), the potential risks that implementation of the cleanup plan could pose to the community and how those risks will be managed by USEPA. It has been written using known information about the waste and chemicals at the Landfill, and about the possible risks and concerns from the future cleanup work. Should the work, the site conditions, or the concerns change, or if new information becomes available, this CHASP will be updated or amended.

1.1 GOAL OF THE CHASP

This CHASP describes the work that will be done at the Landfill as part of the cleanup, and explains the potential risks and safety procedures that will be used to protect the community and the environment while the cleanup work is being done.

This plan describes the steps of the cleanup, looks at the potential concerns or hazards from this cleanup, and describes the methods that will be used to protect the community. This plan provides clear, easily understood, and easily accessible safety information to the public. It includes information on how the community will be informed about the cleanup work. It also lists ways to contact the USEPA if there are comments, questions, or concerns.

The focus of this CHASP is on the concerns and safety of the public. Separate project Health and Safety Plans (HASPs) that address worker safety will be written by the Remedial Action (RA) contractor performing the cleanup work.

Generally, USEPA follows this basic approach when developing this CHASP:

- First, identify possible hazards and community concerns that could happen during work activities.
- Second, look at safety procedures that will be put in place before the project begins and during the work, to decrease possible hazards and impacts.
- Third, develop procedures that could be taken in case something goes wrong. Because of the safety procedures that will be in place, it is not very likely that the anything will go wrong during the work.
- Finally, as cleanup work is conducted and safety procedures are implemented, lessons learned, additional safety measures, etc. are incorporated into updates of the CHASP, as appropriate.

The Eastwick Lower Darby Creek Area (ELDCA) Community Advisory Group (CAG) (www.edlcacag.org) provided input regarding the community concerns and safety procedures related to the cleanup activities at the Landfill. Copies of this CHASP will be made available for everyone to view on the LDCA website (www.epa.gov/superfund/lowerdarby), the USEPA Command Post for the Remedial Action and at the Eastwick Free Library.

1.2 SITE DESCRIPTION AND BACKGROUND INFORMATION

1.2.1 Location of the Site

The Clearview Landfill is located north of the Philadelphia International Airport, along the east banks of the Darby Creek and the Cobbs Creek. The official address for the landfill is S. 83rd Street and Buist Avenue in the Eastwick Neighborhood of Philadelphia, Pennsylvania (See **Figure 1**). However, the landfill is much larger and extends from Darby and Cobbs Creeks into and under portions of the Eastwick Regional City Park. The southern end of the Clearview Landfill is near S. 84th St. and impacted areas related to the landfill extend nearly as far as S. 78th St.

The historic Clearview Landfill footprint resided partially in Delaware County (Darby Township) and partially in Philadelphia County (City of Philadelphia) including the Eastwick City Park east of the current Site and a portion of the Eastwick residential neighborhood (Eastwick Neighborhood). During the mid-1970s when development of the Eastwick residential neighborhood began, a considerable amount of waste was excavated and moved from the City of Philadelphia portion of the Site to the Delaware County portion, where excavated materials were subsequently placed, graded and partially covered with fill. As a result, the present areal extent of the Clearview Landfill lies almost entirely within Delaware County.

1.2.2 Description of the Site

It is estimated that at its largest, the Landfill and associated activities covered about 64 acres. Originally the Landfill was located in both Philadelphia County and Delaware County. When the Eastwick residential neighborhood was being built in the 1970s, some of the waste was moved to the Delaware County area of the Landfill. As a result, much of the Landfill is now located on private property in Delaware County, which is about 44 acres.

1.2.3 Site Background

The Landfill was used as a disposal area from the 1950s to the 1970s for materials such as, but not limited to, municipal and industrial waste, incinerator ash and construction and demolition debris.

1.2.3.1 Site History

The Landfill was closed in 1973, but illegal dumping continued for some years after it was officially closed. In 2001, the Clearview Landfill, along with the Folcroft Landfill, were officially made a Superfund Site by the USEPA after being listed on the National Priorities List under the title of Lower Darby Creek Area Superfund Site. The USEPA removed some highly contaminated waste containing polychlorinated biphenyls (PCBs) from the Landfill in 2012. After multiple scientific studies, the USEPA chose the cleanup plan to address the rest of the waste and contamination at the Landfill.

In 2016, USEPA started a Residential Yard Removal Action to cleanup residential yards which had levels of contaminants potentially related to the Clearview Landfill that presented a health threat. The primary contaminants addressed by this yard cleanup include a group of chemicals referred to as polycyclic aromatic hydrocarbons (PAHs) and, to a much lesser extent, lead. Twenty-seven yards were cleaned up in the fall of 2016 through soil excavation and backfilling with the clean soil. The yard cleanup included removing up to the top 2 feet of soil and, after backfilling, restoring each property to pre-excavation conditions. More information on this yard cleanup is available at www.epaosc.org/ldca. Additional yards will be addressed by the removal action in 2017.

1.2.3.2 Current and Future Land Uses

Most of the Landfill in Delaware County is not in use; however, several businesses operate in the Southern Industrial Area (SIA) part of the Landfill. There are several buildings in the SIA that are being used by those businesses. These businesses will be permanently relocated to an off-site location as part of the cleanup plan. The SIA and other parts of the Landfill can only be entered by vehicle using the main access road through South 84th Street.

As is described in Section 2.0 of this plan, the landfill cleanup will include the construction of a new cover over the landfill waste that will be densely planted with trees. Most of this cover will be on the Delaware County portion of the landfill, however, certain parts of the City Park will also be affected. The densely planted landfill cover will also serve as ecological habitat and could potentially be used for light recreational use, i.e., walking trails, if allowed by the private property owner. Some of the open space in the Eastwick City Park will be converted to vegetated areas with trees and shrubs or for stormwater management and wetlands. These areas will not be accessible for recreational activities other than walking trails, as permitted by the property owner (City of Philadelphia). The remaining areas of the City Park that are left as open grassy areas will be available for the same uses as is currently available in the City Park.

2.0 PROJECT SUMMARY AND CLEANUP PLAN

2.1 OVERVIEW AND DESCRIPTION OF THE CLEANUP PLAN

This overall goals for the cleanup are to control the source of contamination (Landfill waste and soil) to prevent people and wildlife from contacting with Site waste and contaminants, reduce the amount of contamination reaching groundwater and surface water, and prevent movement of contaminated soils and waste into nearby creeks and residential areas. To achieve these goals USEPA selected a cleanup plan that includes an Evapotranspiration (ET) Cover, an underground trench to capture contaminated shallow groundwater (called leachate) before it reaches the creeks and engineered wetlands to treat the captured leachate. An ET cover is made of a thick (2 to 4 feet) layer soil and is planted with many trees. It will be placed over contaminated material, such as soil or landfill waste, to minimize precipitation from reaching the waste. The soil in the ET cover acts like a sponge and soaks up precipitation that falls on it. The water soaked up by the ET cover will either evaporate or the trees will take up the water. A small amount of water may make it through the cover. Minimizing the amount of precipitation that reaches the waste beneath the cover will help prevent the leaching of additional contaminants into groundwater. The ET cover and other parts of the Landfill cleanup plan will prevent anyone from coming into contact with contaminants, and will reduce the spread of contamination to the groundwater. It will also prevent the movement of waste into nearby water bodies and residential areas.

2.2 STEPS OF THE CLEANUP PLAN

Below are the steps that will be included in the cleanup plan. Where applicable, start and completion dates for each activity are included:

1. A preliminary investigation will determine the extent of the contamination. (Started – August 2015; Completed – March 2017)

2. The ET Cover will be installed, maintained, and monitored. It will cover approximately 50 acres. The businesses that are within the boundaries of the ET Cover will be permanently relocated off of the landfill, and their buildings and structures will be torn down.

3. Construction of the cover will involve bulldozers, backhoes, and other heavy equipment. During the installation of the cover, the earth, rock, and waste materials will be graded and consolidated by the heavy equipment.

4. Storm water and erosion controls will be installed around construction areas, including along the east bank of Darby Creek and in the City Park.

5. Soils with high levels of PCBs will be excavated and disposed of at a proper disposal facility.

6. The soil with contamination levels that are above the safety limits will be dug up and placed under the new ET Cover.

7. An underground trench will be constructed and maintained along the landfill creek. This trench will collect some of the contaminated groundwater and prevent it from reaching the creeks. Instead the groundwater collected in the trench will be piped to new wetlands that will be constructed on the landfill and maintained to treat this contaminated groundwater.

8. The USEPA will monitor the performance of all of the parts of the cleanup and perform routine maintenance and repairs as needed. This monitoring and maintenance will last for at least several decades.

9. Certain legal restrictions will be placed on the areas where the cleanup is conducted to protect the cleanup plan and prevent anyone from being exposed to contamination in the future. Fishing restrictions, warnings may also be required. These restrictions will also be monitored and maintained to make sure they are followed.

3.0 POTENTIAL HEALTH RISKS, HAZARDS AND NUISACES DURING CLEANUP ACTIVITIES & THE PROCEDURES USED TO ADDRESS THEM

This section describes in general the potential health risks, physical hazards and nuisances that could occur during the Clearview Landfill cleanup process as well as the approaches and procedures that will be used to address them. This section also includes the concerns that the community expressed related to the activities that will be performed as part of the landfill cleanup.

The proposed approaches and procedures to address risk, hazards and nuisances are described below to the level of detail that is possible during the Remedial Design phase of the cleanup. Some details are simply not known at this point in the Superfund process because they must be developed with the help of the contractor(s) that will be performing the cleanup (known as the "Remedial Action" [RA] Contractor) and, in part, they are responsible for implementing the community health and safety measures. This CHASP is intended to be a 'living document" that can be updated, as necessary. Additional details and/or revisions to this CHASP will be made once the RA contractor is selected by USEPA. The procurement of the RA contractor cannot start until the Remedial Design is complete. The earliest that the RA contractor will be selected is in mid-2018.

A critical part of this CHASP is educating and communicating with community members, as their safety is the focus of this plan. Community members and residents must understand how this plan was developed, what steps will be taken to protect their health during the cleanup, and stay informed as to how the cleanup is progressing and the safety measures are working. Section 5.0 of this CHASP discusses this aspect of the plan in detail.

3.1 EXPOSURE TO CONTAMINANTS

Exposure to landfill and cleanup-related contaminants during this project is a concern of the community. The contents of the wastes that are in the landfill are unknown and may contain chemicals that are hazardous to human health or the environment. Surface soil (defined as the top 2 feet of soil) on the landfill, portions of the City Park and the Eastwick Neighborhood are also known to be contaminated. Excavation, surface grading, and handling of exposed waste and/or contaminated soil (including trucking off site) are all activities that create the potential for exposure if the materials are not managed properly and proper contingency plans not developed for emergency situations.

The main ways that exposure to landfill contaminants could occur during construction include:

- Dust generation during excavation and transportation;

- Citizens trespassing in work areas and contacting exposed waste or contaminated soil;
- Water and/or wind erosion of exposed waste, contaminated soil, and sediment into creeks or the neighborhood;
- Construction vehicle accidents on the construction site or neighborhood streets that result in the spill and release of contaminated materials, fuel oil, etc.; and, spills of fuel oil or other supplies when moved from tanks or tankers.

Less likely ways that could create the potential for exposure to landfill contaminants and/or physical hazards include:

- Failure of a portion of the landfill slope that allows material to move down the side of hill and into the creeks or Park;
- Failure of erosion and sediment controls in place while working on the creek bank which could allow for large scale erosion of construction materials or landfill contents into the adjacent creeks and further downstream; and,
- Encountering and rupturing or buried drums, cylinders, etc. that could release chemicals into the air, land or water.

3.1.1 Planning for and Addressing Potential Exposure to Contaminants

Human exposure to contaminants can happen when a chemical is present in a media (soil, water or air) and a person comes into contact one of those media in some way, i.e., touching, eating, drinking, breathing, etc. Exposure to a chemical can affect a person's health. How a person's health is affected is based on the nature of the chemicals, the amount of chemical that is present in the media, how often and for how long a person is in contact with the contaminated media, as well as other personal factors, e.g., genetics, lifestyle, etc. The presence of waste and contaminants on or in the landfill does not mean that residents are being exposed. Preventing contact with contamination above safe levels will make sure that there are no negative health impacts to residents and community members. There are several ways that the USEPA is planning to prevent exposure to contamination during and after the cleanup work at the landfill. These will be updated as necessary throughout the cleanup process and communicated to the Eastwick residents and other stakeholders.

3.1.1.a Waste and Contaminated Soil Excavation and Handling

As discussed above, a main part of this cleanup project is the installation of the ET Cover over the landfill. It will cover approximately 50 acres. In addition, at least the top two feet of the contaminated soil that is outside of the cover will be excavated, including residential properties where soil is above one or more of the soil cleanup levels established in the Operable Unit (OU) 1 Record of Decision (ROD). The ROD is the

document that explains the remediation plan for the clean-up of this site. The soil that is dug up will be moved underneath the cover.

The following approaches will be used to protect the community during these activities:

- Three Work Zones will be established that include the Support Zone, Contaminant Reduction Zone and Exclusion Zone. The purposes of the Work Zones are to make that contamination stays within the contaminated areas and does not get transported into currently clean areas, as well as preventing unauthorized access of workers or residents into areas that could result in injury.

    - Administrative, site management, clerical, site visitors, and other support functions are based in the support zone. Surveys of work areas within the support zone will be conducted as needed to make sure that this zone remains uncontaminated. If contamination is detected, zone boundaries shall be adjusted until corrective steps are taken and survey results indicate that this zone is again uncontaminated.

    - Each restricted area will have associated control point(s), allowing access to the restricted area. These control points are designated as contamination reduction zones to ensure that the rest of the Site remains uncontaminated. All instruments, tools, equipment, and other items brought into a restricted area will be decontaminated prior to being released from the control point to ensure that contamination is not spread from restricted areas.

    - All personnel within the exclusion zone will at minimum wear safety toe boots, a high visibility safety vest, safety glasses, and a hard hat. Additional Personal Protective Equipment (PPE) requirements will be established in the HASP developed by the RA Contractor. All personnel entering the exclusion zone will work under the buddy system. All personnel entering the exclusion zone, or their buddy, will have a site radio to remain in communication with other site personnel.

    - All of the procedures and protocols to follow in each of these zones will pertain to site workers and USEPA staff. These will be detailed in the HASP developed by the RA Contractor.

- Temporary fencing, warning/information signs, construction staff spotters and/or other appropriate steps will be used in the City Park and Neighborhood to make sure that equipment operators are aware of any nearby residents and to prevent residents from crossing into areas that are unsafe or unauthorized.

- USEPA will notify residents at least 48 hours prior to commencing excavations on their property and convey the potential hazards associated with excavation and other work activities. Wherever practicable, excavations will be backfilled (partially or completely) the same day. When it is necessary to leave excavations open overnight, temporary fencing will be used to secure the excavation area to prevent slip, trip and fall hazards to residents. Prior to leaving an open excavation area for the night, USEPA or RA contractor personnel will meet with residents/tenants to discuss the current state of the property, potential hazards, and plans for the next day, etc.

- At the end of each work day on residential properties, visible soil and dust on hardened surfaces outside of residents' houses (e.g., driveways and sidewalks, etc.) will be cleaned using brooms and hoses, as appropriate.

- Tarps or an equivalent material will be used to cover stockpiled materials and excavated soils to prevent dust from being created. A Dust Control Plan will be developed prior to beginning excavation work.

- Any time visible dust is present during construction activities in areas where the surface is not clean (below soil cleanup levels), dust suppression will be implemented using a water truck, hose or equivalent to wet soil and roadways to remove any airborne dust caused by site operations.

- Residents that could be impacted by dust, noise, etc., will be notified by USEPA at least 48 hours prior to commencing work that will generate dust. Although dust suppression steps are expected to be successful based on previous experience at the Site during the Residential Yard Removal Action, as a precaution, USEPA will recommend to potentially impacted residents to keep doors and windows closed to avoid nuisance dust entering their homes. During residential yard excavation activities, a minimum of 5 homes on either side of the excavation work will be asked to follow recommendations for closed doors and windows.

- Air monitoring for air particulates upwind and downwind of excavation areas will occur for the duration of excavation activities in contaminated areas and at the discretion of the USEPA Remedial Project Manager (RPM), currently Josh Barber, or the Site Safety Office (SSO), whom has yet to be selected.

- Total particulates will be monitored by DustTRAK DRX Desktop Aerosol Monitor 8533 (DustTRAK) or equivalent for specific work tasks, e.g., excavation, that are determined to pose a potential for dust exposure or dust movement into residential areas. Dust monitors will be placed within the work zone, or along the work zone perimeter/site perimeter as required. Daily wind forecasts and local

reported conditions from the Philadelphia Airport will be utilized to place dust monitors in downwind and upwind locations as appropriate. At a minimum, DustTRAK(s) will be monitored intermittently throughout each work day. If necessary, real-time reporting of data to a website will be conducted. Following the conclusion of each day's work, at a minimum data will be downloaded from each deployed DustTRAK, and a summary of monitoring data will be emailed to the SSO and work supervisors, in addition to being posted in a location available for all personnel. Graphs depicting air monitoring data collected throughout each day will be posted to a publicly available USEPA website on a regular basis. The exact address for this website will be publicized at a future time. Additional information on how air quality data will be communicated with residents is discussed in Section 5.0.

- As part of the Residential Yard Removal Action, a Total Dust Action Level of 0.813 mg/m^3 (has been established to be protective of residents. Section 6.3.1 of the Health and Safety Plan (HASP) developed for the Residential Yard Removal Action details the calculations and assumptions used to determine safe dust levels and is included as Appendix A of this CHASP. This Total Dust Action Level was calculated using known maximum concentrations of contaminants within the areas being addressed. As these areas have been addressed by the yard cleanup activities in 2016, the levels of contaminants known to present in other residential yards will likely be lower. This can affect the calculated Total Dust Action Levels that are used. These levels will be reviewed and updated as appropriate as the yard cleanups continue as well as when the City Park and/or the Landfill are scheduled to be disturbed as part of the overall cleanup. For the current purposes of this CHASP, the Total Dust Action Level discussed here will continue to be used unless revised and updated in a future version of this CHASP. Total dust is normally visible at approximately 2 mg/m^3. Total dust will be monitored and calculated on a rolling 15-minute time-weighted average (TWA). Specific actions (see Table 3.1 below) will be taken when the total dust 15-minute TWA attains 75% of the Total Dust Action Level of 0.813 mg/m^3 which equals 0.610 mg/m^3 and when the 15-minute TWA Total Dust Action Level itself is exceeded.

TABLE 3-1

DUST ACTION LEVELS

Action Level	Monitoring Frequency	Action
15-min TWA > 0.610 mg/m^3 (75% of Total Dust Action Limit)	Continuous, if required	Evaluate dust source, implement additional dust suppression activities. Workers use Level D PPE
15-min TWA > 0.813 mg/m^3	Continuous	Stop work and implement dust suppression activities. Ensure resident doors and windows in vicinity are closed. Conduct work in Level C PPE

- Stormwater management as well as Erosion and Sediment controls (like berms, dikes, drains, sediment traps and silt fences) will be installed as required by the final Remedial Design. Temporary erosion controls also include stabilization of the construction entrance, sediment basins, silt fences, stone check dams, rip rap outlet protection, and coffer dams (creek bank restoration). These controls are designed to minimize the amount of stormwater that contacts contaminated, prevents stormwater that has contacted contaminated areas from moving into clean areas, residential areas or the nearby creeks, and minimizes the amount of soil and/or sediment that may be eroded during storm events the movement of that stormwater. Permanent features will include rip rap stormwater discharge outlet protection, channel stabilization, and site restoration. An erosion and sediment control plan (E&SCP) is included in the final Remedial Design Report and will be followed during construction to protect water resources.

3.1.1.b Hazardous Waste Management

Hazardous materials may be found during the course of conducting excavation or regrading of the landfill. Hazardous materials typically have high concentrations of one or more chemicals that can cause them to be toxic, corrosive or explosive. These materials may be sensitive to movement, light or other materials (for example, water) and have to be handled is specific ways. If such hazardous wastes are found during the project, the RA contractor will follow strict procedures during hazardous waste activities which may include the following:

- Develop a Waste Management Plan or equivalent prior to waste characterization, excavation and disposal;
- Determine the types of waste;

- Use of proper waste management procedures when working with the hazardous materials (such as double packing in non-reactive barrels, storing in water, etc.);
    - Identify off-site facilities to dispose of the waste; and
    - Excavate and dispose of the toxic waste off-site, according to appropriate federal and state laws.

Soil and/or dust may come to be located on residential streets due to vehicular traffic entering/exiting the work areas. This soil or dust should not be contaminated above cleanup levels because any vehicles operating in the Exclusion Zone will have to pass through the Contaminant Reduction Zone for decontamination prior to entering the Support Zone and leaving the site. However, as an added precaution, any soil located on neighborhood streets that is related to the cleanup will be removed, placed into an appropriate container and taken back to the landfill for inclusion under the new ET cover. Storm drains will be blocked to trap and prevent any remaining soil from entering the drains. The street surface will then be cleaned with a high pressure hose.

3.1.1.c Spill Prevention

Spills and leaks may occur during refueling operations, due to hydraulic equipment failure or construction vehicle accidents/failures. Spill response kits that contain sorbent materials, shovels and other tools/materials/equipment will be available during these activities to mitigate any spills at the fueling station, designated control points, or within construction areas. Only approved containers and portable tanks will be used for the storage and handling of combustible liquids. In the event of a spill or leak, site workers will notify their immediate supervisor and/or the SSO, and take immediate action to contain the spill. Extra absorbent materials will be located in the site storage area trailer.

If a spill, accident or mechanical failure occurs on a residential property, any residents who are present at that time will be notified during the same effort to notify the supervisor or SSO. If any steps such as short- or long-term evacuation are potentially necessary, USEPA or RA contractor staff will convey this to the residents and coordinate immediately with City of Philadelphia emergency first responders and/or OEM. Contact information should be on hand for resident points of contact for each property and each impacted resident will be contacted directly to notify them of the incident, discuss next steps, etc.

3.1.1.d Fire or Explosion

In the event of a fire or explosion, fire extinguishers are available at the command post, dress out trailer, fueling station, and site vehicles. All employees working at the Site will receive training on the proper use of fire extinguishers. Fire extinguishers will be inspected on a monthly basis. Should a fire or explosion be greater than can be handled safely on-site with fire extinguishers, site workers will evacuate as outlined in

the Site HASP, visit any nearby residential or recreational buildings that should be evacuated and recommend evacuation, and 911 will be contacted immediately. USEPA will also work with 911 emergency responders to notify and evacuate any potential residents whom are impacted by a nearby fire or explosion. To minimize the potential any fires or explosions impacting residents, the contractor will locate any fuel or chemical storage tanks/area and/or refueling way from residential or recreational structures. A strict no smoking, matches, or open flame policy will be enforced and safety signs will be posted as a reminder to site workers and visitors.

A direct phone line for the Philadelphia Office of Emergency Management (OEM) has also been provided to USEPA to contact them during emergencies, as well. OEM has the ability to send out mass messages to local residents that are signed up for that service. USEPA intends to reach out to local residents to educate them about the CHASP, emergency procedures and OEM protocol as well as encourage them to sign up for the OEM service. Additional details are discussed in Section 5.0 of the CHASP.

3.2 FLOODING AND STORMS

The landfill is located at the base of the Darby and Cobbs Creek watersheds, sitting in the 100-year floodplain and next to creeks that often times experience very fast flowing and high volume waters. About half of the surface runoff from the landfill drains directly towards Darby and Cobbs Creeks, and the other half drains towards City Park/Eastwick neighborhood. Both small and large precipitation events could cause erosion and runoff of contaminated waste and soils into these areas if the proper precautions are not in place. Large storms such as hurricanes can subject portions of the work area to flooding which also could erode and move contaminated materials as well as newly installed structures such as the stream bank stabilization measures that will be constructed during the cleanup. Therefore, storm water management and contingency planning for flood events are USEPA and community concerns that must be addressed.

3.2.1 Planning for Flooding and Storms

A stormwater analysis was conducted and a stormwater management plan was prepared as part of the Remedial Design. The focus of storm water management during the project is to safely control stormwater and make sure it does not cause any erosion of contaminated material or newly placed soil. The stormwater and erosion controls will ensure that smaller storms (for example, a 25-year magnitude storm) do not move soil that is contaminated into clean areas, residential areas, etc.

Much of the area that will be addressed by the cleanup sits higher than the 100-year and 500-year floodplain, and as a result, even large, infrequent storms like hurricanes would not subject these areas to flooding. However, these areas would be subject to impacts from heavy precipitation, and the stormwater management and erosion controls would minimize or eliminate most of the movement of contaminated

soils. In large, catastrophic storms it is often not possible to completely manage all generated stormwater and erosion due to the scale of these events.

There are also portions of the construction area that are within the 100-year and 500-year flood plains, including the City Park and portions of the Eastwick neighborhood. These areas are subject to excavation and/or construction of new features which would be impacted by flooding while under construction. Throughout the construction season, USEPA and RA contractor staff (yet to be designated) will be responsible for monitoring short- and long-term weather forecasts to identify any potential events that could impact the cleanup, e.g., flooding from snowmelt, precipitation and/or storm surge. Whenever there are potential impacts to the floodplain near construction areas, all efforts will be made to complete and/or stabilize work areas prior to the arrival of the impacts. This may include backfilling of excavated areas, stabilizing areas subject to flooding/erosion with large rip rap/rubble/boulders, redirection of floodwaters in specific areas, etc. As mentioned above, in large, catastrophic storms it may not always be possible to prevent erosion and damage. Plans for monitoring of potentially impacted construction areas during and after large storms or floods will be made, include potential testing for the spread of waste and/or contamination. These plans will need to be developed by the RA contractor as part of the RA work plan, and approved by USEPA.

Modelling performed as part of the Remedial Design confirmed that when the cleanup is completed, none of the features will cause a rise in the floodplain, which could make flooding more frequent. The project will follow the standards of the “Guidelines for Implementing Executive Order 11988, Floodplain Management and Executive Order 13690, Establishing A Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input” (Final, 10/8/15). This guideline requires an additional review of future changes in flooding which will make sure that that chance of flooding is minimized from federal construction projects.

3.3 NOISE

Construction of the cover and other parts of the cleanup plan will involve the use of heavy construction equipment such as bulldozers, backhoes, and other noisy equipment. Noisy activities on construction sites include the use of jackhammers, dump trucks and the dumping of their loads, cement mixers, cement cutters, electric saws, tamping machines and welding machines, as well as noise generated from hand tools such as sledgehammers and drills. The type of construction work to be conducted during the landfill cleanup will create some additional noise and, depending upon the type and of work and proximity to residents or park users, appropriate steps to manage potential exposure to excessive noise levels may be necessary.

3.3.1 Planning for and Addressing Noise

It may not always be possible to prevent excessive noise levels in nearby residential properties during construction activities. Excessive noise is currently considered to be anything emitting noise at or above 85 dBA. For reference, a typical vacuum cleaner emits a noise level of 80 dBA and a lawn mower emits on average 90 dBA. The RA contractor will make an effort to limit the effects of the project noise on the community by doing the following things:

- USEPA will notify residents 48 hours prior to commencing excavations;
- Heavy equipment will be used as far away from residential property as possible, to reduce public exposure to loud noise;
- USEPA will notify residents when equipment emitting loud noise such as heavy equipment or jackhammers, will be in use. Residents will be advised to close windows and doors, if possible, while this equipment is in operation during these periods;
- The Remedial Action Work Plan will include how and when the public will be notified when noise creating work will be done at the site and this CHASP will be updated with that information accordingly; and,
- When work is to be conducted on residential properties, USEPA and/or the RA contractor will communicate with the property owner and/or tenant to coordinate on hours of work, special accommodations (for example, quickly backfilling excavated areas around walkways), etc.

3.4 TRAFFIC

There will likely be 2 to 4 main entrance and/or exit points for worker vehicles, construction vehicles, deliveries, etc. The current main access road along S. 84th St. and S. 83rd are currently planned as an entrance/exit location. Additional access points could include S. 80th and S. 78th streets where they enter the City Park. The exact locations will be determined in concert with the RA contractor. Over the course of the cleanup which will potentially take 3-5 years (depending on the availability of funding), several thousand truckloads of soil will be needed just to supply to the soil material needed for the ET cover. Residents and businesses close to the Site may see increased truck traffic depending on their location as materials are brought and taken to and from the site. There are hazards associated with increased vehicular and equipment traffic as well as the fact that many vehicles will be very large, which can increase the chance and severity of injuries. There are many young children in the Eastwick neighborhood which creates the potential for additional unpredictable movement of pedestrians along the streets. Further, it is expected that

portions of the City Park recreational area will continue to be operational while work is ongoing in other portions of the Park. **Figure 1** shows the extent of disturbance as part of the landfill cleanup. As can be seen from this figure, much of the park will be disturbed and a temporary access road will be constructed in the City Park that runs parallel to the landfill. However, the recreation center and outdoor recreational areas, e.g. basketball courts, tennis courts and playground, will not be disturbed during the cleanup. Hours of work, marking of truck traffic patterns, additional street signs, flagging personnel, coordination with the City Park staff and community members will be necessary to ensure all are educated on traffic plans and minimize any potential injuries due to vehicles. Hours of work should also accommodate atypical work schedules for residents, where possible. Wear and tear on residential streets that may not have been constructed with these types of use should also be evaluated, coordinated with the appropriate government agencies and proper steps put in place to prevent or repair damage.

3.4.1 Planning for and Addressing Traffic

A temporary change or increase in traffic may occur because of the work being conducted on the site, but the USEPA and the RA contractor will make every effort to keep additional traffic to a minimum and follow any pre-designated traffic routes.

The USEPA and the RA contractor will take the following steps to help limit traffic issues:

- Coordinate with the City of Philadelphia Streets and Parks and Recreation Departments to determine the best approaches and tools that can be used to address these issues, e.g., installation of additional “Children at Play” signs along construction traffic ways.

- All personnel that operate vehicles will have a valid driver’s license. All traffic rules, regulations, and control signs will be obeyed at all times;

- Work areas will be clearly barricaded and the appropriate signs will be displayed to protect workers and residents;

- Spotters will be used to guide the operator of a vehicle when backing up and in other situations where the driver has limited visibility;

- Personnel working near roadways or directing traffic will remain aware of their position in relation to traffic and will wear high visibility clothing and use flags to safely direct traffic and/or pedestrians;

- The current South 84th St. access road will remain the primary access point for the site. While the exact details must be determined in coordination with the RA contractor, the current plan is for construction traffic to exit the site along South 83rd Street. Potentially 1 to 2 additional access points may be needed to facilitate traffic movement given the area that will be addressed by construction. Two other likely access points are South 80th St. and South 78th St. However, a school is located along S. 78th and any selected route must be taken into account potential sensitive areas such as this as well as intersections with increased pedestrian foot traffic;

- Roadways to be used as main access points for the Site will be evaluated and reinforced, as necessary, to support increased traffic volume and weight in coordination with the City of Philadelphia and Pennsylvania Department of Transportation;

- At the end of the main access road, there will be a turn-around area outside of the main gate so that unauthorized or accidental entrants can easily turn around and exit the area, to help avoid confusion and additional traffic;

- When vehicles are parked alongside the road for any length of time, traffic safety cones will be used behind the vehicle to alert other drivers of the potential hazard and to protect the workers inside or near the vehicle;

- To limit interference with residents and also tracking dirt onto roadways, the most direct route to the Command Post or other areas will be taken by all vehicles; and,

- The RA contractor will develop the RA work plan that will summarize any pertinent information including any detours, temporary changes, or road closures that could affect the nearby community prior to work beginning. Any additional work that would make it necessary to change traffic patterns will be included and added to this plan.

3.5 PHYSICAL HAZARDS

Active construction during work hours present possibility for injury for any residents or community members that may trespass or be too close to work areas, traffic lanes, etc. Heavy equipment, loading/unloading of materials, etc. will be moving frequently on and around the landfill and City Park at times. During non-work hours (e.g., evenings, weekends), it is likely that equipment and materials will be left at various locations on site, open excavation areas will be present as well as other potential physical hazards. Any climbing on equipment, walking in/near excavated areas presents a great opportunity for injury or death. Appropriate

spotters, safety equipment, fencing, security, etc. will need to be deployed to minimize the chance of injuries during and after work hours.

3.5.1 Planning for and Addressing Physical Hazards

Appropriate spotters, safety equipment, fencing, security, etc. will need to be deployed to minimize the chance of injuries during and after work hours. Temporary construction fencing or equivalent will be used to cordon off areas of the City Park in which equipment is operating and/or material is being handled as well as along any access roads that are on public property or in the Eastwick Neighborhood. Security guards will be use to patrol the site during non-work hours to prevent vandalism and trespassing. Site features such as signs, posts, markers, and guard rails will be replaced if they are disturbed during the project. Also, lighting, sidewalks, and asphalt paths in the City Park will be replaced or re-located with similar materials if they are disturbed. In addition, sculpture installations, plaques, benches, or similar park structures will be replaced or re-located with similar items. The main walk will be redesigned as a wider, shared bike path to accommodate the East Coast Greenway initiative.

3.6 DISRUPTION OF PARK FEATURES

During construction activities, park features such as signs, sidewalks, lighting, paths, etc. will be taken down or re-located. This will present an inconvenience to residents who typically use the portions of the City Park that will be disturbed. Access to these areas may need to be restricted. Appropriate site controls will be needed to prevent the potential movement of contamination from the active work areas in the City Park to current clean areas in the City Park (Recreation Center, ball courts, etc.) and beyond. Further, lack of lighting may present an opportunity for vandalism, trespassing, etc. during night time hours

3.6.1 Planning for Disruption of Park Features

Disruption of the City Park will require similar steps as those taken under Section 3.6.1 such as fencing, spotters and proper placement of other safety equipment (for example, air monitors, safety cones and signs). Given the proximity to the Recreation Center, which includes both indoor and outdoor activities, additional coordination will be necessary with the Recreation Center director. USEPA and the RA contractor will need to be aware of the Recreation Center's operating hours, planned activities, any sensitive populations, etc. to plan accordingly. Further, USEPA and the RA contractor should provide regular updates to the work schedule and coordinate with the Recreation Center director and other City of Philadelphia Parks and Recreation staff.

3.7 DISRUPTION OF THREATENED AND ENDANGERED SPECIES

Some community members have expressed concerned that there might be potential endangered or threatened animals or plants in the area that could be impacted by the cleanup at the landfill. The cleanup has to comply with various federal and state laws that protect these types of species, such as the Endangered Species Act and Migratory Bird Treaty Act. USEPA has consulted with the appropriate federal and state agencies to determine if there are any federal or state listed threatened or endangered species. None were identified.

3.7.1 Planning for and Addressing Disruption of Threatened and Endangered Species

No federal or state listed threatened or endangered species were identified during the Remedial Design. However, USEPA will not be able to do any clearing of trees during bird nesting season (approximately March 1 through October 31) in order to comply with the Migratory Bird Treaty Act. Potential impacts to the stream during construction are also being evaluated.

4.0 PROJECT SECURITY AND SAFETY MANAGEMENT

4.1 SITE SECURITY

During construction activities in the City Park or on the Landfill during the cleanup, a 6-foot high temporary chain-link construction fence, high visibility construction safety fencing or equivalent will be put up around construction areas, open excavation areas, material staging areas and access road to prevent unauthorized access to the site. Temporary high-visibility fencing will be established around open excavations on residential properties. There will be a vehicle gate with a guard/gate manager at the main entry of the landfill off the South 84th St. access road. Vehicle gates will also be installed at other entry/access points that are established.

A permanent living fence will be established by the completion of the cleanup that is comprised of a thick stand of thorny and woody vegetation that will deter trespassers. The fence will start at the eastern edge of Darby Creek, follow the open area in the City Park between the landfill and the Eastwick Neighborhood, and continue through the City Park out to Cobbs Creek. A vehicle gate and other limited access points will be established at intervals along the fence line that will be determined in the final Remedial Design. This will prevent ATVs and similar off-road vehicles from accessing the flood bank maintenance road via the City Park. This fencing provides physical separation of the Eastwick Neighborhood from the landfill, the storm water basins, and wetlands areas. The location of the fence is shown on a map which is included in in Appendix B. In addition, swing-arm gates will be used to control vehicle access to the Site.

4.2 PROJECT SAFETY MANAGEMENT

The focus of this CHASP is on those potential concerns that may affect the public's health during cleanup activities. A separate construction Health and Safety Plan (HASP) will address worker safety and will be developed by the RA contractor before work will begin.

Before the RA contractor and any sub-contractors are hired, that contractor's health and safety programs are reviewed to make sure they are in compliance with USEPA's safety regulations. In addition, written procedures and proper training requirements are confirmed for all personnel who will be working on the project. Also contractor briefings will be held to discuss potential site hazards and proper safety procedures on the Site. In addition, a USEPA representative (currently identified as the USEPA RPM, Josh Barber) will be assigned to oversee contractor work and verify that safety procedures are followed.

Before beginning work, the RA contractor is also required to develop an emergency evacuation and incident response plan for a variety of potential emergencies (such as fires, spills, etc.) that might happen during

the cleanup work. These plans are communicated to everyone that enters the site. These plans are also provided to off-site emergency response agencies (police, fire, etc.) who may respond to on-site incidents.

4.2.1 Emergency Situations and Response

In the event of an emergency situation, site personnel will notify 9-1-1 and their immediate supervisor and/or the SSO or their designee. The RA contractor will develop an Emergency Action Plan prior to beginning work.

4.2.2 Evacuation Routes/Procedures

If a site evacuation order is given, workers will stop work immediately and leave site. In the event of an evacuation or other on-site emergency that can involve potential impacts to residents, local emergency assistance (911) will also be contacted and USEPA or RA Contractor staff will attempt to contact residents to recommend evacuation. The City of Philadelphia Office of Emergency Management (OEM) monitors 911 calls and has the ability to dispatch warning and/or evacuation notices via various multimedia outlets, e.g., text messages, phone calls, emails, etc. for people who sign up at www.phila.gov/ready. USEPA will encourage residents as part of its Remedial Action planning to sign-up for this notification service. With their respective buddies, personnel will gather at the primary assembly location, the command post on Buist Avenue on the southwest property line.

4.3 PROJECT SAFETY PERSONNEL

This section pertains to the site safety and health for workers doing the work at the landfill and lists the roles and contact information (if currently available) for the project Health and Safety team. The purpose of this section is to define the roles and contact information for the key project health and safety personnel. Specific responsibilities and qualification for each team member will be detailed in the HASP that is developed for the Site by the RA contractor and this CHASP will be updated accordingly. The following persons are currently the planned primary point of contacts and have the primary responsibility for overall on-site health and safety.

- Site Contact
- Project Manager
- Site Supervisor
- Site Safety Officer
- Health and Safety Manager
- Community Involvement Coordinator
- Community Health and Safety Officer

The Community Health and Safety Officer (CHSO) is responsible for identifying potential risks to the community during the project. Also, with the help of the Community Involvement Coordinator (CIC), the CHSO will communicate these risks to the public in addition to discussing the safety measures that USEPA and the RA contractor will take to make sure the local residents are safe during the project activities. Joshua Barber is the CHSO for this project. Larry Brown is the CIC for this project. Their contact information is listed in Table 5-1 below, and again in Section 5.10.

TABLE 5-1
PROJECT SAFETY PERSONNEL
CONTACT INFORMATION

INDIVIDUAL	CONTACT INFORMATION
Site Contact/ Site Safety Office/Project Manager/ Community Health and Safety Officer: Joshua Barber, Remedial Project Manger Eastern PA Branch USEPA	Phone: (215) 814-3393 barber.joshua@epa.gov 1650 Arch Street Philadelphia, PA 19103-2029
Site Supervisor: Joe Galioto, ER, LLC	Office 919-855-9082
Health and Safety Managers: ERRS (ER): START (Weston): Dan Locurcio	 TBD 610-701-3465 (O)
Community Involvement Coordinators: Larry Brown USEPA Gina Soscia USEPA	 (215) 814-5527 brown.larry@epa.org 1650 Arch Street Philadelphia, PA 19103-2029 (215) 814-5538 soscia.gina@epa.org 1650 Arch Street Philadelphia, PA 19103-2029

5.0 COMMUNITY EDUCATION AND INVOLVEMENT

Communication with the community and individual residents regarding the pending cleanup and CHASP is critical to the success of this project. The goals of the USEPA are to establish open lines of communication with potentially impacted and interested community members, seek and incorporate input from the community, provide understandable project information, make project information easily accessible, and quickly provide information about project emergencies to the public, all in a timely manner.

USEPA has learned from its work in the community and with the ELDCA CAG that multiple approaches are needed to reach as many residents as possible in a timely manner. The information below presents the current planned communication tools and how USEPA plans to use these tools during various phases of the Clearview Landfill project lifecycle. Information will be updated as frequently as is required using a number of communication methods to provide project information to the public. The following reports, information, and contact information will be provided by the USEPA and/or the RA contractor.

5.1 COMMUNITY PRESENCE AND EDUCATION

- USEPA and its RA Contractor will establish a Command Post within the Eastwick Neighborhood that is open to the public to visit and talk about their questions and concerns during the Clearview cleanup. The Command Post is currently planned to be located at the intersection of South 83rd Street and Buist Ave. This Command Post will be staffed during work hours as well as at least one evening each week.

- USEPA will develop informational materials in coordination with the ELDCA CAG, Darby Creek Valley Association (DCVA) and others that explain the plans for the cleanup, contact information, schedules, etc.

- USEPA will develop animated videos that show the process for the cleanup and how it will look. Short informational videos (referred to as “In the Moment”) videos on various Clearview Landfill topics will also be created and posted on the USEPA LDCA website at https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0305521

- USEPA has and will continue to host semi-annual meetings to provide general updates on progress with the Clearview Landfill and the larger LDCA Site. These meetings are typically held at the Eastwick Regional City Park Recreation Center (City Park Recreation Center), located near the intersection of S. 80th St. and Mars Place in Philadelphia, PA 19153. Unless noted otherwise in public notices and meeting advertisements (see Section 5.2) below, all regular and special public meetings will continue

to be held at this Recreation Center. These meetings will take place before, during and after the completion of the Clearview Landfill cleanup.

- USEPA will host a meeting after the completion of the Remedial Design in order to go over it in detail with interested community members. This meeting and other public and private meetings like it are intended to facilitate education of the community regarding the short- and long-term cleanup plans for the Clearview Landfill.

- Special issue public meetings will also be arranged as needed by USEPA for any unique or unexpected issues that arise. For example, in August 2016, USEPA hosted a public meeting at the City Park Recreation Center to discuss a Removal Action for residential yards to address contamination that was discovered earlier in the year. These meetings can take place at any time in the cleanup process, as necessary.

- USEPA will conduct block or "multi-block" meetings to focus on specific sections of the Eastwick neighborhood that may impacted in specific and unique ways when compared to the larger community. For example, in lead up to the residential yard cleanup conducted as part of the Removal Action in 2016, USEPA representatives met with the residents of these specific properties in order to discuss specific details of the upcoming removal and allow residents to ask questions that directly affected them and their neighbors. Other potential areas that may warrant these special block or "multi-block" meetings include residents who live adjacent to the streets that will be used as the main access points to the landfill, residents who are adjacent to the City Park and will be in close proximity to heavy construction work, and additional homes that will be subject to the cleanup of their yards due to contamination. These meetings will be planned as necessary depending on the specifics of the upcoming work and will likely occur before or during the Remedial Action.

- USEPA will continue to attend and present at the ELDCA CAG quarterly monthly meetings (3rd Wednesday of every month, currently at the Mercy Eastwick Wellness Center, 2821 Island Ave., Philadelphia, PA 19153, from 6:30 – 8 PM) and the monthly meetings of the CAG Technical Working Group and Health, Safety and Communications Working Group (meeting dates vary). These meetings are open the public and should be public advertised. During these meetings, USEPA will provide updates on specific facets of the Clearview Landfill cleanup. These meetings will take place before, during and after the completion of the Clearview Landfill cleanup.

- USEPA will attend meetings of other local community organizations to discuss any aspect of the LDCA Site whenever invited to do so.

- Although not open to the public, USEPA representatives and their contractors will meet several times with each resident and/or tenant of any yards that are being addressed because of contamination. These meetings are private and are used to discuss the details of the upcoming work, why it is necessary, plan out logistics, document existing property conditions, discuss restoration plans, damage, etc. These meetings will be scheduled as needed by USEPA with each property owner or tenant that is impacted by soil contamination related to the Landfill.

5.2 PUBLIC NOTICES

- For any announcement of public meetings or major cleanup activities, it is USEPA's goal to distribute appropriate announcements at least seven (7) calendar days prior to the meeting/activity through all the avenues discussed below. Cleanup activity announcements could include fact sheets summarizing work/plan, finalization/update of this CHASP, completion of a cleanup phase or the entire cleanup, etc.

- USEPA will issue notices of any public meetings in the local newspaper (Southwest Globe Times), by posting meeting announcements in the Eastwick City Park Recreation Center, Cibotti Park Recreation Center, the Penrose School, Eastwick United Methodist Church, St. Paul A.M.E church, the Eastwick Branch of the Philadelphia Free Library, Shoprite and Mercy Eastwick Wellness Center. Other locations will be posted as well as recommended by the ELDCA CAG and other community members.

- USEPA will also distribute meeting announcements to all of the homes between the Eastwick Regional City Park and Lindbergh Blvd. and between South 84th St. to South 78th St.

- It is USEPA's intention to place large information signs regarding the Clearview Landfill cleanup at all of the major entrances into the neighborhood off of Lindbergh Blvd. (South 78th St. to South 83rd St.) as well as at each major driving or walking entrance into the Eastwick Regional Park. These signs will include basic information about the project, a map of the area, contact information for USEPA, the Pennsylvania Department of Environmental Protection, ELDCA CAG and other pertinent organizations, as well as clear directions to the USEPA Command Post.

- USEPA will request that the ELDCA CAG, DCVA and other local community organizations announce USEPA meetings and/or distribute information on major construction activities at each respective organization's own meeting as well as posting on each organization's respective website.

- USEPA will post all public meeting and cleanup activity announcements on the USEPA LDCA website at www.epa.gov/superfund/ldca and through the USEPA LDCA listserv (aka mailing list). The USEPA must work to increase membership of the mailing list to maximize its benefits. Community members

can sign up for the Lower Darby Creek Superfund Site Mailing list by sending a blank email to join-ldca@lists.epa.gov In previous experiences, USEPA has found limited success with communicating with most residents in the neighborhood. Most prefer face-to-face or phone communication. Additional information on using other electronic communication avenues below.

- For any block or "multi-block" meetings, USEPA will hand distribute informational flyers/meeting announcements to each of the affected properties.

- USEPA will work with the Southwest Community Development Corporation (SW CDC), ELDCA CAG or other community organizations that maintain a "block captain" list to provide informational materials and meeting announcements to those captains for distribution.

- Fact sheets, other informational materials and interviews (when requested) will be provided to the Southwest Globe times to help further distribute information.

- USEPA and/or its RA contractor intend to utilize a text message service that will allow messages to be sent out about the Clearview cleanup and other LDCA activities. This would include notification in the case of an air quality issue, emergency situation, status up of new materials on-line, advertising upcoming USEPA meetings, etc. Once established a dedicated effort will be conducted to encourage people to sign up for this service. It is likely that this service will not be established until the RA contractor is selected. The earliest this will be is in mid-2018. The USEPA RPM, USEPA CIC, and/or designated SSO would be responsible for sending out messages via this method.

- USEPA plans to establish a website that will consolidate data that is collected during the Remedial Action (for example, daily and weekly air quality monitoring data reports). This may be the current LDCA website, a subsection of it, or a new website completely. This will be determined in consultation with the RA contractors. The USEPA RPM will be ultimately responsible for the website content, but USEPA or contractor support staff will likely provide assistance in loading new content. When new content is added, notifications can be sent out to residents and other stakeholders whom have signed up for the listserv, text message service and/or other automated communication tools that may be selected.

- USEPA is currently evaluating the potential for the establishing a "1-800" information line that provides recorded regular updates on the site progress, upcoming events and activities, etc. This is being discussed within USEPA and with the ELDCA CAG and other stakeholders. Pending a decision and availability of funds, this concept may be selected and the CHASP will be updated, as necessary.

5.3 PROGRESS REPORTS

Progress reports will be generated by USEPA and the RA contractors on a regular basis. As with the air quality monitoring data, these reports can also be posted on the website, once all sensitive content (names, addresses of residents/workers, etc.) has been redacted. The progress reports may include:

- Updates on current work activities and schedule;
- Future work activities and schedules;
- A summary of any results of the monitoring results;
- A summary of any emergencies or on-site incidents and how they were handled, if applicable; and,
- Any upcoming work that will affect the local community (changes in traffic patterns, construction noise, etc.)

Hard copies of the progress reports will be available at the USEPA Command Post. As some community members cannot or may not choose to have access to the internet, copies of the progress reports will be provided to the Community Advisory Group (CAG) and/or the public can request copies of the reports using any of the methods listed below in Section 5.5. Other forms of reporting will include:

- Air quality monitoring data and other information will be posted daily and/or weekly on an USEPA-related website that has yet to be selected;

- Regular updates on cleanup progress will be provided at all CAG and CAG Working Group Meetings; and

5.4 EMERGENCY NOTIFICATIONS

In the event of an evacuation or other on-site emergency that can involve potential impacts to residents, local emergency assistance (911) will also be contacted. The City of Philadelphia Office of Emergency Management (OEM) monitors 911 calls and has the ability to dispatch warning and/or evacuation notices via various multimedia outlets, e.g., text messages, phone calls, emails, etc. for people who sign up at www.phila.gov/ready. USEPA will encourage residents to sign-up for this notification service. USEPA also has a direct private phone number to reach OEM in the event of an emergency. In addition, the text message service described in Section 5.1 would also be used in these situations to keep the community informed. Information will also be posted on the project website as quickly as possible, to keep the public informed.

The person that will contact 911 and the City's Emergency Preparedness Office in the event of an emergency is likely to be the SSO of the project or their designee. The person that will notify residents

during an emergency is likely to be the RPM, SSO, or their designee. However, these will be finalized in the HASP developed by the RA contractor and this CHASP will be revised, as necessary.

5.5 IMPORTANT CONTACT INFORMATION AND REGISTERING INQUIRIES

The USEPA are to (1) enable the public to register project-related complaints during work activities, and (2) provide complainants with timely and accurate notification of efforts to address their complaints.

The public is encouraged to use the project telephone line for a number of reasons, including to request information and/or ask questions, and voice complaints. They can also visit the USEPA Command Post that is located in the community. When inquiries are received by phone, email or in person, the communication will be documented in a log noting the time received, subject of the inquiry, the name of the individual submitting the inquiry, and any follow up required (e.g., if any agencies need to be involved). It is expected that most phone inquiries will be fully addressed during the initial communication (i.e., question will be answered or requested information will be sent to individual making request). Email inquiries will initially be responded to within 72 hours of initial receipt.

5.5.1 Telephone Hotline

A telephone line will likely be established to provide the public with project information and enable the public to ask questions or register complaints whenever project activities are being conducted. The availability of the phone number will be reiterated in all project announcements, progress reports, and emails and will be clearly presented on the project website.

Telephone Number: 215-814-3393

5.5.2 Email Address

Email provides an opportunity for quick and direct communication. The public is able to communicate with the USEPA project team by email. The public will be able to register inquiries via email. A link to this email address is provided below and on the USEPA LDCA website at www.epa.gov/superfund/ldca.

Email Address: barber.joshua@epa.gov

5.6 DESIGNATED COMMUNITY LIAISONS

USEPA has designated a Community Involvement Coordinator (CIC) and a Community Health and Safety Officer (CHSO) who will assist the public in receiving project information and communicating relevant information to the public.

5.6.1 Community Involvement Coordinator

The CIC will be available to answer questions or address concerns. This project representative will coordinate public outreach between USEPA, the CAG, and the community, and will also attend project-related meetings, to inform the public of project activities.

The CICs are:

Larry Brown
brown.larry@epa.org
(215) 814-5527

Gina Soscia
soscia.gina@epa.gov
(215) 814-5538

5.6.2 Community Health and Safety Officer

The CHSO is responsible for identifying potential risks to the community during the project and communicating these risks to the public, in addition to discussing the safety measures that USEPA and the RA contractor will take to make sure the local residents are safe during the project activities. Joshua Barber is the CHSO for this project. His contact information is listed in Table 5.1 and below:

Josh Barber
barber.joshua@epa.gov
(215) 814-3393

5.6.3 Community Advisory Group

The Eastwick Lower Darby Creek Area has established a Community Advisory Group (CAG) to inform residents about the progress of the cleanup of the Clearview Landfill and provide residents with the opportunity to voice concerns and provide input to the process. The CAG includes a broad representation of people who live throughout the Clearview site's impact area, USEPA staff working on the cleanup, and other partner agencies and technical advisors.

Leadership Team

Ted Pickett: thpickett@comcast.net; (215) 908-6713

Technical Working Group Co-chairs

Derron LaBrake: 2ndvp@dcva.org
Eileen San Pedro: eas175@hotmail.com

Health and Safety Working Group Co-chairs

Chere Driver: cherejordan@gmail.com

Dr. Marilyn Howarth: howarthmv@gmail.com; (215) 808-2165

6.0 DEFINITIONS

>	Greater than
CAG	Community Advisory Group
CHASP	Community Health and Safety Plan
CHSO	Community Health and Safety Officer
CIC	Community Involvement Coordinator
dBA	A-weighted decibels
DCVA	Darby Creek Valley Association
DustTRAK	DustTRAK DRX Desktop Aerosol Monitor 8533
E&SCP	Erosion and Sediment Control Plan
ELDCA	Eastwick Lower Darby Creek Area
ET	Evapotranspiration
HASP	Health and Safety Plan
LDCA	Lower Darby Creek Area
mg/m^3	milligrams per cubic meter
OEM	Office of Emergency Management (City of Philadelphia)
OU	Operable Unit
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
RA	Remedial Action
RPM	Remedial Project Manager
SIA	Southern Industrial Area
SSO	Site Safety Officer
TWA	Time Weighted Average
USEPA	United States Environmental Protection Agency

APPENDIX A

Residential Yard Removal Action HASP

Section 6.3.1

6.3.1 CHEMICAL HAZARDS

Nuisance dust may be present at any site where soil piles or areas of bare soil are present, or where excavation activities or numerous other activities are occurring. The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) for total dust (particulates) is 10 milligrams per cubic meter (mg/m^3) The OSHA PEL is 15 mg/m^3 for total dust and 5 mg/m^3 for respirable dust. The National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL) has not established a level for total dust. The Site accepts the most stringent action level of 5 mg/m^3 as the dust action level to ensure worker and visitor safety. Total dust is normally visible at approximately 2 mg/m^3. Any time visible dust is present at the Site, dust suppression will be implemented via a water truck or hose to wet soil and roadways to remove any airborne dust caused by site operations. Upwind and downwind air monitoring for particulates will occur for the duration of excavation activities and at the discretion of the SSO. Residents will be notified by EPA a minimum of 48 hours prior to commencing work that will generate dust. EPA will recommend to residents in the vicinity of earth disturbance or excavation work to keep doors and windows closed to avoid nuisance dust entering their homes. During residential yard excavation activities, it is recommended that a minimum of the 5 homes on either side of the excavation work follow recommendations for closed doors and windows. Air monitoring methodologies are discussed in Section 8.0.

Sampling conducted by the Environmental Protection Agency (EPA) as part of the Remedial Design Pre-design Investigation (PDI) indicated elevated concentrations of polycyclic aromatic hydrocarbon (PAHs) were detected in the shallow soils within numerous residential properties within the Eastwick neighborhood located in close proximity to the Clearview Landfill. Elevated lead concentrations were also detected in a limited portion of the same area exhibiting elevated PAH concentrations. The maximum concentration of PAHs in the top two feet (0 to 24 inches) of soil of the residential properties were identified after the Action Memorandum was finalized on July 21, 2016. The maximum concentrations in the Eastwick neighborhood yards surface soil (0 to 12 inches) are 201 mg/kg (ppm or parts per million). The maximum concentration of Benzo(a)Pyrene within the surface soils is 14 mg/kg, which is well above the $1x10^{-4}$ excess cancer risk level. Elevated PAH concentrations are also found in subsurface soils well above the $1x10^{-4}$ excess cancer risk level. Based upon on-scene observation, some of the contaminated soils are poorly vegetated or mixed into

garden or play areas allowing an increased chance of unacceptable exposure to elevated PAHs. Elevated lead is found in a limited area of the Eastwick neighborhood. The area of elevated lead contamination is believed to exist within the area of elevated PAHs contamination described above. Lead has been detected in the northern portion of the City Park in surface soil at 1,270 mg/kg in an area immediately adjacent to a residential property. Concentrations of lead as high as 5,840 md/kg are detected in deeper soils. These detections are over 0.5 miles away from the area being initially addressed by the removal action. Consistently lower levels of lead have been detected within the area being addressed initially by the removal action along Buist Avenue and Angelo Place. The maximum concentration of lead within this initial area is 919 mg/kg.

Table 6-1, provides the maximum concentration for each of the PCOCs identified in surface or subsurface soil samples within the area being addressed initially by the removal action during the PDI and associated PCOC-based dust exposure action limits. Table 6-1 also calculates the dust action levels based on maximum measured contaminant concentrations and permissible exposure limits for workers. The PCOC-based dust exposure limit listed is the most stringent limit for each chemical in accordance with the OSHA PEL, NIOSH REL, or ACGIH TLV and an additional safety factor of 2.

Based on the listed concentrations and action levels, the strictest dust action level for an individual PCOC would be approximately 27.2 mg/m^3 for lead. Using a sum of fractions approach for the maximum observed concentration for all listed PCOCs and a safety factor of 2, the PCOC-based dust action level for the Site would be 25.793 mg/m^3 as shown in Table 6-1. This concentration of particulates in the air is greater than the site nuisance dust action level listed above; therefore, PCOC-based dust exposure is not a potential threat to site workers during planned activities. The total particulates dust control action level for the site is 2.1 mg/m^3 (see Table 8-1), which is less than the PCOC-based dust action level and therefore protective of site workers. The total particulates dust control action level for the site of 2.1 mg/m^3 will be used for PCOC-based dust exposure worker protection at the site.

Table 6-1 Chemical Dust Exposure Calculation (Worker)

Chemical	Exposure Limit (mg/m^3)	Maximum Soil Concentration (mg/kg)	Exposure Limit Based on Single Compound (EL Mix, mg/m^3)	Dust Quotient for Each Compound (level/limit)
Lead	0.05	919	27.2	1.84E+04
PAHs	0.2	118	497.51	1.01E+03
			Sum	1.94E+04
		Dust Exposure Action Level =	25.793 mg/m^3	

Notes:
EL = Exposure Limit
mg/kg = milligrams per kilogram
mg/m^3 = milligrams per cubic meter
PAH = polynuclear aromatic hydrocarbon

Table 6-2 provides the maximum concentration for each of the PCOCs identified in surface or subsurface soil samples within the area being addressed initially by the removal action during the PDI and associated PCOC-based dust exposure action limits. Table 6-2 also calculates the dust action levels based on maximum measured contaminant concentrations and permissible exposure limits for residents.

The dust exposure limit for lead is based on the Integrated Exposure Uptake Biokinetic (IEUBK) Model which predicts the blood lead concentration for children based on the concentrations in media (soil, water, air). EPA's guidance states, a prediction of 5% above the blood lead level of 10 ug/dl should trigger action. Using the IEUBK Model and known site conditions, an exposure limit between 2.0 – 2.5 ug/m3 would be below or at EPA's screening level. EPA selected 2 ug/m3 as the exposure limit to establish a residential dust action level.

The PAHs being addressed by the removal action are considered to carcinogens. Thus, chronic exposure parameters (e.g., a lifetime of exposure) are typically used to evaluate potential risks. However, the duration of the initial removal action and subsequent potential exposure to dust will occur over a much shorter time frame (< 1 year) and as such, consideration of acute exposure to PAHs was considered when calculating dust exposure levels. The dust exposure limit for Benzo(a)pyrene (BaP), which is considered to be the most toxic of the PAHs being addressed by the removal action, is based on an Inhalation Unit Risk (IUR) of 1.1E-03 (California EPA - Office of

environmental health Hazard Assessment (OEHHA). The following formula was used to determine the BaP exposure limit to use in dust action limit calculations for residents.

$$\text{Concentration} = \frac{\text{Target Cancer Risk}}{\text{IUR}} = \frac{\text{1E-04}}{\text{1.1E-03}} = 0.09 \text{ ug/m3}$$

Based on the known site conditions and exposure limits, using a sum of fractions approach for the maximum observed concentration for all lead and BaP and a safety factor of 2, the PCOC-based residential dust action level for the Site would be 0.813 mg/m^3 as shown in Table 6-2. This concentration of particulates in the air is lower than total particulates dust control action level of 2.1 mg/m^3 for site workers listed above. Thus, the total particulates dust control action level for the Site is 0.813 mg/m^3 will be used for resident protection at the site.

Table 6-2 Chemical Dust Exposure Calculation (Resident)

Chemical	Exposure Limit (mg/m^3)	Maximum Soil Concentration (mg/kg)	Exposure Limit Based on Single Compound (EL Mix, mg/m^3)	Dust Quotient for Each Compound (level/limit)
Lead	0.002	919	1.09	4.6E+05
Benzo(a)pyrene	0.00009	14	3.21	1.56E+05
			Sum	6.15E+05
		Dust Exposure Action Level =	0.813 mg/m^3	

Notes:
EL = Exposure Limit
mg/kg = milligrams per kilogram
mg/m^3 = milligrams per cubic meter
PAH = polynuclear aromatic hydrocarbon

Previous evaluations at the Site have provided significant information on the potential hazards that may be expected at the Site. However, all of the specific chemicals of concern may not be known at this time. Exposure to unidentified chemicals by any route shall be maintained at the absolute practicable minimum level to prevent casual contact with chemicals. Control by proper use of PPE, engineering controls, and personal hygiene practices will prevent significant exposure. Monitoring will be conducted at the discretion of the SSO to assess the overall potential for chemical exposure

should any new conditions be encountered. Air monitoring methodologies are discussed in Section 8.0.

APPENDIX B

LDCA Map

LOWER DARBY CREEK OPERABLE UNIT 1 CLEARVIW LANDFILL