

A. INTRODUCTION

This chapter relies on the analysis from the *Fresh Kills Park Final Generic Environmental Impact Statement (FGEIS)* and summarizes the conclusions drawn from that analysis. No additional analysis was warranted for this SEIS as it pertains to Chapter 11, “Hazardous Materials.”

This FGEIS chapter assessed the potential for hazardous materials impacts due to the proposed project. It was prepared as an analysis of hazardous materials from the perspective of an environmental impact statement (EIS) and uses the methodologies and standards of the *City Environmental Quality Review (CEQR) Technical Manual* for the purposes of defining the hazardous materials issues and potential impacts from a proposed project.

The FGEIS chapter was prepared in accordance with the guidelines of the *CEQR Technical Manual* (December 2001), the *Fresh Kills Park Final Scope of Work to Prepare a Generic EIS (GEIS)* (August 2006), and the *Fresh Kills Park Draft GEIS Hazardous Materials Technical Memorandum* (January 23, 2007) which was prepared as a technical supplement to the final scope of work. As described in the *CEQR Technical Manual*, the goal of an EIS hazardous materials assessment is to determine whether a proposed project or action could result in potential increased releases or exposure to hazardous materials that could cause public health or environmental impacts. Hazardous materials, as defined in the *CEQR Technical Manual*, are substances that pose a threat to human health and the environment including, but not limited to: heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), methane, polychlorinated biphenyls (PCBs), pesticides, and other wastes, including hazardous wastes. Hazardous wastes are defined under the Federal and State regulations promulgated by the federal Resource Conservation and Recovery Act (RCRA) and the definitions provided by New York State regulations (6 NYCRR Part 371.4), which include specific “listed” wastes, as well as wastes that meet at least one of four characteristics: ignitability, corrosivity, reactivity, and/or toxicity.

The *CEQR Technical Manual* acknowledges that many sites in urban areas have soils and/or groundwater that are contaminated with hazardous materials. Many activities, industrial and otherwise, that were once common in New York City and other urbanized locations impacted the environment and left contaminants in the soil or groundwater. As a result, hazardous materials are present in the site soils, groundwater, or buildings. In addition to historical uses, hazardous materials could result from soils brought to the site as fill material; could migrate to the site via groundwater; or could be a component of the site structure (e.g., asbestos or lead paint used in buildings).

The *CEQR Technical Manual* provides a list of facilities, activities, and conditions that typically require a hazardous materials impact assessment as part of an EIS. Among them are development on or adjacent to a solid waste landfill site or a site where the storage or reduction of solid waste has occurred, as well as manufacturing operations, gasoline storage or service (i.e., underground

storage tanks), and import of fill material of an unknown origin. These are uses and activities that have occurred on the Fresh Kills Park project site or in the surrounding area. Thus, an analysis of impacts due to hazardous materials for the proposed project is appropriate.

This chapter provided a background history for the project site and surrounding area, and also discusses the current project site conditions relative to the uses and activities that are typically associated with hazardous materials. The background data provide the basis for the conclusions about the potential impacts from the proposed park project. An analysis of surface water and sediment quality is provided in Chapter 21, “Public Health,” with respect to public access issues. Much of this analysis focused on the approximately 1,000 acres of project area where the history of uses is not as well documented as it is within the landfill sections. The analysis therefore seeks to establish how these areas may also have been impacted either directly or indirectly by hazardous materials.

The chapter also provided a summary of the environmental controls and the monitoring and maintenance programs that are part of the landfill closure program now being implemented by the New York City Department of Sanitation (DSNY).

B. METHODOLOGY

According to the *CEQR Technical Manual*, the methodology for a hazardous materials assessment for an EIS is two-fold. As the first step, an area-wide inventory is prepared of historical, topographical, geological and hydrogeological conditions. In accordance with the guidelines of the *CEQR Technical Manual*, this analysis of baseline conditions included the project site and the area within 400 feet. As the second step, in order to determine the potential impacts, individual “areas of disturbance” under the proposed project are examined to determine whether current or historic hazardous materials conditions may have affected these areas. Factors that are considered when making these determinations include the severity and probability of the potential hazardous materials condition within the area of disturbance, as well as geological or hydrogeological conditions that may have affected the migration of hazardous materials. The specific steps in this analysis were as follows:

- Evaluate the study area land use history based on historic Sanborn fire insurance maps, historical topographic maps and historical aerial photographs. The Sanborn map coverage included the years 1910, 1917, 1937-38, 1951, 1962, 1983, and 1990 (recognizing that there are gaps in coverage for certain years). The topographic map coverage included United States Geological Survey (USGS) maps from 1891, 1898, 1947, 1966 and 1981, and a Borough of Richmond Topographical Survey from 1911-1913. The historical map review consisted of identifying changes in topography, development and land use patterns, and other mapped features. Aerial photograph coverage included 1955, 1960, 1966, 1978, 1984, 1988, 1992 and 1996. The aerial photographs were used to identify off-mound areas with larger-scale soil disturbance, which may be indicative of past filling activities.
- Develop a database of activities and regulated activities for the study area based on U.S. Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (DEC) information that identifies the use, generation, storage, treatment and/or disposal of hazardous material and chemicals, or releases of such materials that may have impacted the project site. This review included, but was not limited to, the following:
 - The federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) which is a compilation of known or suspected,

- uncontrolled or abandoned hazardous waste sites which the EPA has investigated, or plans to investigate, for a release or threatened release of hazardous substances pursuant to the Superfund Act of 1980 (CERCLA).
- CERCLIS No Further Remedial Action Planned (NFRAP) sites which is a listing of properties that have been removed from CERCLIS. These include sites where, following an investigation, no contamination was discovered, or contamination was removed quickly or was not serious enough to require Federal action.
 - The federal Permit Compliance System of Toxic Wastewater Discharges (WWD) which contains a listing of sites which discharge wastewater containing potentially hazardous chemicals.
 - The New York SPILLS database which includes a list of releases reported to DEC, including those attributed to tank test failures and tank failures. This database also lists spills that occur during the transportation of chemicals.
 - RCRA Notifiers Listing which includes facilities that have filed notification forms regarding hazardous waste activity. These sites include treatment, storage and disposal facilities; small-quantity and large-quantity generators; and transporters of hazardous waste regulated under RCRA.
 - The Chemical Bulk Storage (CBS) Database which is a list of facilities that store regulated non-petroleum substances in aboveground storage tanks with capacities greater than 185 gallons and/or in underground tanks of any size.
 - The Petroleum Bulk Storage (PBS) Database which lists commercial facilities with registered petroleum tanks located either above or below ground in excess of 1,100 gallons and less than 400,000 gallons.
 - The State Inactive Hazardous Waste Disposal Site Registry (SHWS) which is a registry of information that aids decision-making regarding the investigation and clean-up of hazardous waste disposal sites.
 - The State Hazardous Substance Waste Disposal Site Study (SHSWDS) which tracks waste disposal sites that may pose threats to public health or the environment, but that cannot be remediated using monies from the Hazardous Waste Remediation Fund.
 - The Air Discharge Facilities Index (ADF) which is a listing of permitted air emissions sites tracked by the State.
 - The State Brownfield Cleanup Program (BCP) database which includes sites where redevelopment is being contemplated in conjunction with liability releases and tax credits for sites remediated through the program. Some sites in this program have known extensive contamination, whereas others have more limited contamination or have not had sufficient investigation to determine whether or not contamination is present.
- Review previously prepared reports for the project site that contain data relative to surface and subsurface conditions, including the Final Facilities Condition Survey reports for Fresh Kills Landfill Plant 1 (January 2007) and for Fresh Kills Landfill Plant 2 (February 2007), both prepared by Weston Solutions of New York, Inc. (Weston); the “Preliminary Fresh Kills Landfill Conceptual Design Report, Subtask 3.2 Mapping and Assessment of Natural Areas (SCS Engineers, April 1990); and “Site Investigation for Owl Hollow Soccer Fields Site,” (LiRo Engineers, July 7, 2007). In addition, the Fresh Kills Landfill 2006 Annual Groundwater Monitoring Report, Environmental Monitoring Program (Shaw Environmental, September 6, 2007) and the Fresh Kills Landfill 2005 Annual Groundwater

Monitoring Report (Shaw Environmental 2005) were reviewed with respect to groundwater. (A bibliography of references used in this analysis is provided at the end of this chapter.)

- Perform field reconnaissance at designated areas of disturbance for individual short-term projects (e.g., North Park, Phase A). This visual inspection identified current uses and existing conditions at the project site.
- Review existing plans and reports for closure of the Fresh Kills Landfill (these plans are described in Chapter 1 “Project Description”). This includes a review of documentation related to completed and future landfill construction, operation and post-closure environmental monitoring and maintenance plans, and the nature and location of past and current uses. The available specifications, maps and analyses regarding capping materials, leachate collection system and gas collection and venting system were also reviewed.
- Determine conclusions based on the above data review and field reconnaissance and recommend further investigation and mitigation (e.g., impact avoidance, soil testing, remediation, construction health and safety protection), as necessary.

C. CONCLUSIONS

It was the conclusion of the FGEIS that soil and groundwater conditions at the site can be impacted by hazardous materials as a result of historical or current uses and activities on a project site or in adjacent areas (generally defined as within 400 feet of the project site boundary). Subsurface soil and groundwater contamination may remain undetected for many years without posing a threat to local workers or residents. However, grading and excavation, dewatering, and other construction activities can release contaminants that create a human exposure pathway. If these contaminants are not properly identified and handled, development activities can create a health risk to construction workers and residents. In addition, demolition of older structures that have asbestos-containing materials is another example of a hazardous materials concern since this also has the potential to release contaminants into the environment if not properly managed.

For the proposed Fresh Kill Park project, based on an extensive review of published reports and literature as well as historical aerial photography and topographic maps, available site testing data and field walkovers, it is concluded that the project site soils and groundwater are likely to have been affected by hazardous materials or pollutants from a variety of on- and off-site sources. These sources include the four solid waste landfill sections that have been used for the landfilling of municipal solid waste, the Plant 1 and 2 areas where there are substantial structures and facilities that were used by DSNY when Fresh Kills was operating as a landfill (these facility areas include underground and above ground storage tanks as well as building and other accessory structures), and waste cells where solid waste has been identified at locations outside of the solid waste management unit area boundaries and not formally closed. There are also off-site industrial uses in the surrounding area that may have affected the project site.

Based on the research performed for this analysis, the types of contaminants that are typically found in urbanized areas (such as New York City) as well as in and around municipal solid waste landfills would be expected. Some of the potential contaminants of concern at the project site include: VOCs; SVOCs; PCBs; metals (including lead, arsenic, cadmium, chromium, and mercury); constituents associated with fill materials of unknown origin; and asbestos and lead-based paint in older buildings.

The proposed project would affect soils in two ways. Soils would be imported to the project site for the purposes of creating new park areas and enhanced ecological habitats. Engineering soils

would also be used as a base for the proposed roads, structures, and parking areas. As described in greater detail in Chapter 1 “Project Description,” it is the objective of the proposed project to ensure that the previously closed landfill sections and the off-landfill sections that would be publicly accessible have two feet of clean soil cover. It is the objective of the City to provide soil cover meeting criteria approved by DEC for the purposes of providing a healthy environment and to protect public health, safety, and the environment at open spaces proposed in the park (see also Chapter 1, “Project Description,” and Chapter 21, “Public Health”). Given the diversity of existing conditions on the site, varying hydrology of wetland habitat areas, and the wide range of uses proposed with the proposed park, project-by-project review of soil criteria is expected to include the selection of various soils, largely driven by proposed programming and the individual capital projects.

In addition to providing this soil cover, certain elements of the proposed project are expected to require excavation for the purposes of installing new utilities such as electricity, water and sewer connections as well as foundations for the proposed structures. These excavation areas, however, in the context of the overall project, are limited and the majority of the proposed project activities would occur at or above the existing grade (i.e., on the added cover soil).¹ The majority of site-specific projects would not be expected to require activities or new structures that would extend into shallow or deep groundwater at most locations. However, to the extent any dewatering activities are necessary during construction the appropriate approvals would be obtained from DEP and DEC.

It is the conclusion of this analysis that nearly the entire project site has the potential to have been impacted by hazardous materials as defined under CEQR. Therefore, for site-specific capital project areas where soil and/or groundwater disturbance is proposed (e.g., excavation), significant adverse impacts could occur due to hazardous materials. As stated above, the proposed project would be built in multiple phases over a number of decades. Therefore, recommendations for individual project-specific subsurface investigation and, if necessary, remediation, are proposed to avoid this impact. This conclusion is also presented in Chapter 20, “Construction Impacts,” and Chapter 23, “Impact Avoidance Measures and Mitigation” (Chapter 21, “Public Health,” also addresses hazardous materials issues). As discussed below, with this individual project site investigation and testing program, any impacts due to hazardous materials would therefore be avoided during project implementation. In addition, in accordance with local, state, and federal laws, the demolition or reuse of any buildings would need to comply with environmental regulations relative to the handling and disposal of asbestos and lead paint.

These conclusions also apply to this SEIS (see also Chapter 23, “Impact Avoidance Measures and Mitigation”). *

¹ Excavation as it relates to activities under the proposed Landfill Section 6/7 Final Cover Design Report, Addendum 1 and the potential for impacts on public health are addressed in Chapter 21, “Public Health.”