FIRST FIVE-YEAR REVIEW REPORT FOR ROUTE 561 DUMP SITE GIBBSBORO, CAMDEN COUNTY, NEW JERSEY



Prepared by

U.S. Environmental Protection Agency Region 2 New York, New York



Pat Evangelista, Director Superfund & Emergency Management Division March 25, 2024

Date

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LIST OF ABBREVIATIONS & ACRONYMS

AOC	Administrative Order on Consent
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
EPA	United States Environmental Protection Agency
FMP	Former Manufacturing Plant
FYR	Five-Year Review
HHRA	Human Health Risk Assessment
ICs	Institutional Controls
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NJDEP	New Jersey Department of Environmental Protection
NJSWQS	New Jersey Surface Water Quality Standards
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SWMP	Site Wide Monitoring Plan
UU/UE	Unlimited use and unrestricted exposure
WSB	White Sand Branch

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the first FYR for the Route 561 Dump Site (Dump Site or Site). The triggering action for this statutory review is March 28, 2019, the on-site construction start date of the Operable Unit (OU) 2 response action. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of three OUs and only OU2 will be addressed in this FYR. OU2 consists of the soil, sediment, and surface water at the Site. OU1 consists of soil on residential properties at the Sherwin-Williams Hilliards Creek Superfund Site, and the Route 561 Dump Site. OU1 is not addressed in this FYR because the remediated soil on a portion of residential property within the Dump Site no longer contains hazardous substances, pollutants, or contaminants above levels that allow for UU/UE. OU3 consists of groundwater beneath the Route 561 Dump Site. OU3 is not addressed in this FYR because the OU3 Remedial Investigation/Feasibility Study (RI/FS) for groundwater has not been completed and a final Decision Document has not been issued. Separate FYRs are planned for other OUs of the Sherwin-Williams Hilliards Creek Site and those OUs are not discussed here.

The Route 561 Dump Site FYR was led by Brennan Woodall, Remedial Project Manager (RPM) and Richard Puvogel (Supervisor) for the EPA. Participants included Kathryn Flynn – EPA Hydrologist, Abigail DeBofsky – EPA Ecological Risk Assessor, Ula Kinahan – EPA Human Health Risk Assessor, Pat Seppi – EPA Community Involvement Coordinator, and Dylan Zaliwski – New Jersey Department of Environmental Protection (NJDEP) Case Manager. The Potentially Responsible Party (PRP) and Borough of Gibbsboro were notified of the initiation of the FYR. The review began on 9/7/2023.

Site Background

The Dump Site is one of three sites which collectively make up what is commonly referred to as the "Sherwin-Williams sites." Located in areas of Gibbsboro and Voorhees, New Jersey, the sites are the Sherwin-Williams/Hilliards Creek Superfund Site located in both Gibbsboro and Voorhees in addition to the Route 561 Dump Site and the United States Avenue Burn Superfund Site (Burn Site), both located in Gibbsboro (Figure 1).

The Dump Site is approximately 19 acres in an area zoned as "Commercial Zone, Highway Business" and is located on Route 561 approximately 700 feet to the southeast of the former Sherwin-Williams Paint Manufacturing Plant. Industrial waste from the plant was discarded in the Dump Site prior to its partial development. The Dump Site includes retail and commercial businesses, a portion of a residential property, a park, wooded vacant lots, and wetlands. The Dump Site also includes a portion of White

Sand Branch (WSB), a small creek which originates at the base of the former Clement Lake dam and flows in a southwest direction for approximately 1,650 feet where it enters the Burn Site (Figure 2).

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION					
Site Name: Route 56	te Name: Route 561 Dump Site				
EPA ID: NJ0000453514					
Region: 2	State: NJ	City/County: Gibbsboro/Camden County			
	S	SITE STATUS			
NPL Status: Proposed					
Multiple OUs? Yes	Multiple OUs? YesHas the site achieved construction completion? No				
REVIEW STATUS					
Lead agency: EPA					
Author name (Federal or State Project Manager): Brennan Woodall					
Author affiliation: EPA Remedial Project Manager					
Review period: 9/7/2023 – 12/23/2023					
Date of site inspection: 11/22/2023					
Type of review: Statutory					
Review number: 1					
Triggering action date: 3/28/2019					
Due date (five years after triggering action date): 3/28/2024					

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

Soil contained arsenic at concentrations that posed both an unacceptable cancer and non-cancer risk through incidental ingestion, inhalation, and dermal contact. Soil on the Site also contained lead at concentrations contributing to lead risk that exceeded EPA's target risk range due to predicted blood lead levels from incidental ingestion of soils. The ecological risk assessment indicated that soils contaminated with arsenic, chromium, and lead at terrestrial areas of the Site posed a potential risk to invertivorous wildlife (i.e., American Robin and Short-Tailed Shrew).

Sediment contained arsenic at concentrations that posed both an unacceptable cancer and non-cancer risk through incidental ingestion and dermal contact. Sediment on the Site also contained lead at

concentrations contributing to lead risk that exceeded EPA's target risk range due to predicted blood lead levels from incidental ingestion of sediment. The ecological risk assessment indicated that sediments contaminated with arsenic, chromium, and lead at aquatic areas of the Site posed a potential risk to avian species such as the Spotted Sandpiper.

Surface water contained elevated levels of arsenic that posed both an unacceptable cancer and noncancer risk through dermal contact. The ecological risk assessment indicated that surface water contaminated with several contaminants of concern (COCs) posed a potential risk to aquatic receptors such as benthic invertebrates.

Response Actions

The investigations at the Dump Site were conducted in phases. The first sampling of soil, sediment, surface water and groundwater was conducted by NJDEP in 1994. In 1995, EPA collected samples and erected a chain link fence around the central portion of the Dump Site. Subsequent sampling by EPA took place in 1997. In November 1997, EPA entered into an Administrative Order on Consent (AOC) with Sherwin-Williams to conduct a Removal Action. Under the Removal Action, areas of highly contaminated soil were consolidated into three areas which were covered with impermeable material and revegetated. Sherwin-Williams also posted warning signs and monitored the property.

In 1998, EPA proposed the Dump Site to the National Priorities List (NPL), but the site has not been placed on the NPL.

An OU2 Decision Document was signed on September 26, 2016, to address the soil, sediment, and surface water contamination at the Dump Site. The response action called for excavation of contaminated soil and sediment, combined with capping and institutional controls. In the OU2 Decision Document, EPA identified the following RAOs:

- 1. Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of soil contaminants by plants, ingestion of contaminated soils and food items by humans and ecological receptors, and direct contact with contaminated soils;
- 2. Minimize migration of site-related contaminants in the soil to sediment, surface water and groundwater;
- 3. Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of sediment contaminants by plants, ingestion of contaminated sediment by humans and ecological receptors and direct contact with contaminated sediment; and
- 4. Minimize migration of site-related contaminants from the sediment to surface water.

The major components of the selected response measure for OU2 include:

- Removal of the majority of the contaminated soil throughout the Site;
- Off-site disposal of the contaminated soil at facilities licensed to handle the waste;
- Backfilling areas where soil is removed with clean soil and revegetating these areas;
- In limited areas where soil remains contaminated below the excavation depth, capping with an asphalt or soil cap to isolate and eliminate the spread of contamination;

- Institutional Controls (ICs), such as deed notices, as necessary on the commercial properties where some contaminated soil will be capped;
- Removal of the contaminated sediment throughout the Site; and
- Off-site disposal of the contaminated sediment at facilities licensed to handle the waste.

Operable Unit 2 Remediation Goals

Soil

Arsenic:

- Non-residential cleanup goal: 19 mg/kg
- Residential cleanup goal: 19 mg/kg
- Ecological cleanup goal: 19 mg/kg

Lead:

- Non-residential cleanup goal: 800 mg/kg
- Residential cleanup goal: 400 mg/kg
- Ecological cleanup goal: 213 mg/kg

<u>Sediment</u>

Arsenic:	19 mg/kg
Lead:	235 mg/kg

Status of Implementation

The OU2 response action to address contaminated soil, sediment, and surface water at the Dump Site started in March 2019 and was completed in October 2021. A total of approximately 35,584 cubic yards of soil and sediment were excavated from the Dump Site and disposed of off-site at a licensed facility. Capping was implemented as an engineering control on areas of the Site where cleanup goals were not achieved through excavation. Additionally, all ICs called for in the OU2 response action have been implemented. Figure 2 indicates the portions of the site that were capped, where ICs are in place. A response action to address groundwater was not selected at the time of the 2016 OU2 Decision Document. It was determined that additional actions may be necessary to investigate the extent of groundwater contamination and potential remediation of groundwater contamination at the Dump Site will be addressed in OU3.

IC Summary Table

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soil (OU2)	Yes	Yes	Northeast Commercial Lot	Prevent disruption of the soil cap	Deed Notice, May 2022
Soil (OU2)	Yes	Yes	Northwest Commercial Lot	Prevent disruption of the soil cap	Deed Notice, November 2021
Soil (OU2)	Yes	Yes	Former Dump Site Fenced Area	Prevent disruption of the soil cap	Deed Notice, November 2021
Soil (OU2)	Yes	Yes	Route 561	Prevent disruption of the soil cap	In Lieu of Deed Notice, October 2022

Table 1: Summary of Planned and/or Implemented ICs

Systems Operations/Operation & Maintenance

Ongoing operation and maintenance (O&M) activities are limited to the maintenance of the engineering and institutional controls for the capped areas of the Dump Site and the portion of Route 561 that runs through the Dump Site. Since the engineering controls generally consist of several feet of clean soil or the existing building structure, the O&M activities are primarily limited to annual inspections. The deed notices identify specific inspection requirements as well as requirements for notifications and actions required should any engineering control be disturbed. As of this FYR, no issues have been encountered with the implementation of O&M activities.

Climate Change Assessment

Potential impacts from climate change have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of climate change in the region and near the Site (Appendix C).

III. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for the Site.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

On August 7, 2023, EPA Region 2 posted a notice on its website indicating that it would be reviewing site cleanups and remedies at Superfund sites in New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands, including the Route 561 Dump Site. The announcement can be found at the following web address: <u>https://www.epa.gov/superfund/R2-fiveyearreviews</u>.

In addition to this notification, the EPA Community Involvement Coordinator for the Site, Pat Seppi, posted a public notice on the EPA site webpage (https://www.epa.gov/superfund/route-561-dump) and provided the notice to the Borough of Gibbsboro, New Jersey, by email on March 19, 2024 with a request that the notice be posted in municipal offices and on the borough webpages. This notice indicated that a FYR would be conducted at the Route 561 Dump Site to ensure that the cleanup at the Site continues to be protective of people's health and the environment. Once the FYR is completed, the results will be made available at the following repositories: Gibbsboro Borough Hall/Library, 49 Kirkwood Road, Gibbsboro, New Jersey, M. Allen Vogelson Regional Branch Library – Voorhees, 203 Laurel Road, Voorhees, New Jersey, and the EPA Region 2 office, 290 Broadway, New York, New York 10007. In addition, the final report will be posted on the following website: https://www.epa.gov/superfund/route-561-dump. Efforts will be made to reach out to local public officials to inform them of the results.

Data Review

Under the Site Wide Monitoring Plan (SWMP), surface water and groundwater data has been collected at the Dump Site since the completion of the OU2 response action in October 2021. The SWMP aims to obtain information through short- and long-term monitoring about changes in groundwater and surface water contamination levels in response to the soil and sediment response actions. Additionally, the groundwater data being gathered under the SWMP will be used in the OU3 RI/FS to determine if groundwater response actions may be necessary.

The SWMP called for four rounds of surface water sampling, and they were completed in November 2021, April 2022, June 2022, and August 2022. Samples were taken from eight locations in WSB that were previously sampled during the RI/FS (Figure 2). One location included in the SWMP (WSDW0011) was not sampled because no surface water was found there during the sampling events. WSDW0011 had elevated concentrations during the remedial investigation, but this location was excavated under the OU2 response action. Samples were analyzed for Target Analyte List metals plus cyanide, as well as Total Suspended Solids. During the remedial investigation, analyses of surface water sampling showed exceedances of the New Jersey Surface Water Quality Standards for Fresh Water (NJSWQS) for aluminum, iron, cyanide, arsenic, lead, cadmium, mercury, and nickel, with arsenic and lead being the main contaminants of concern (COCs). Since the OU2 response action, analyses of surface water samples have shown decreasing concentrations of arsenic and lead over time. The April 2019 pre response action lead concentrations ranged from 1.7 to 39J micrograms per liter (ug/l) which all declined to 1 ug/l or lower in August 2022. Arsenic concentrations declined at most locations, but all locations were below the NJSWQS before the OU2 action. The only metal that regularly exceeded the NJSWQS over the course of the four surface water sampling rounds was iron, however, the concentration of iron observed is considered to be naturally occuring in WSB.

The SWMP also called for eight rounds of groundwater sampling, conducted semi-annually over four years. Four rounds have been completed as of this FYR. The groundwater data being collected under the SWMP will be discussed in the OU3 RI/FS to evaluate whether continued monitoring is necessary or whether adjustments to the monitoring program are warranted and to determine whether groundwater response actions may be necessary.

Site Inspection

The inspection of the Site was conducted on 11/22/2023. In attendance were Brennan Woodall, EPA, and Rich Puvogel, EPA. The purpose of the inspection was to assess the protectiveness of the remedy. No issues impacting the performance or protectiveness of the remedy were identified during the inspection. The implementation of the OU2 response action was completed as of September 2021. The areas of wetland/riparian restoration at the Dump Site are monitored biannually and any necessary maintenance (e.g., invasive species control, deer fence repair, replantings) is conducted regularly.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Response Action Performance

The OU2 response action removed contaminated surface soil that posed a threat to human health and the environment and removed subsurface soil that acted as a source of groundwater contamination. The response action also removed contaminated sediment that posed a threat to human health and the environment and acted as a source of groundwater contamination. In areas where soil contamination remains at depth, caps have been put in place and ICs have been established to prevent exposure to those soils. The removal of contaminated soil and sediment, in combination with capping, has resulted in a decrease of surface water contamination to below the NJSWQS for the COCs. From a human health and ecological exposure perspective, the OU2 response action has eliminated the exposure pathways and is functioning as intended.

Implementation of Institutional Controls and Other Measures

The OU2 Decision Document called for the placement of ICs to prevent exposure to residual soils that exceed levels that allow for unrestricted use. All ICs required in the Decision Document have been implemented and are proving to be effective in preventing exposure as of this FYR.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

<u>Human Health Risk</u>

There have been no physical changes to the Site that would adversely affect the protectiveness of the remedy. Land use assumptions, exposure assumptions and pathways, and cleanup levels considered in the decision document followed the Risk Assessment Guidance for Superfund used by the Agency and remain valid. Although specific parameters may have changed since the time the Human Health Risk Assessment (HHRA) was completed, the process that was used remains valid.

Results of the HHRA for the Dump Site indicated that exposure to contaminated groundwater, soil, sediment, and surface water at the Site would result in unacceptable risk and/or hazard to potential onsite human receptors. Based on the conclusions of the HHRA and Baseline Ecological Risk Assessment, RAOs identified in the Response Action section of this document remain valid and protective of human health.

RAOs were not identified for groundwater at the Dump Site. The Decision Document stated that EPA expects removal of contaminated sediments, combined with soil removal and/or capping, would result in a decrease of surface water contaminants. Quarterly surface water monitoring was included as part of the response action to assess any changes in contaminant conditions over time. As previously discussed in the Data Review section of this document, post remedial surface water samples have been collected from WSB and indicate that arsenic and lead, the main COCs for the Site, show decreasing trends after the completion of the Dump Site response action in October 2021. Furthermore, the final quarterly monitoring event for surface water collected in August 2022 indicated arsenic and lead concentrations were below NJSWQS.

Cleanup goals were selected for arsenic and lead, the main COCs at the Dump Site. Although other contaminants were found in soil and sediments above Applicable or Relevant and Appropriate Requirements, these constituents were found less frequently and were co-located with the main COCs. Cleanup goals for arsenic and lead in soil were based on NJDEP land-based, direct contact standards and ecological risk-based goals. For arsenic, the non-residential, residential, and ecological based cleanup goals were based on natural state background and were set at 19 mg/kg. The cleanup goals remain unchanged and protective of human health. For lead, the non-residential, residential, and ecological based cleanup goals, were 800 mg/kg, 400 mg/kg, and 213 mg/kg, respectively. Since the signing of the ROD in 2016, EPA has updated its residential soil lead policy to be more stringent; however, Region 2's analysis of the post-remediation data show that the remedy, as implemented, is protective and no changes to the remedy are needed as discussed in further detail below.

In January 2024, EPA released new guidance for lead in residential soils, "Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities," which establishes a remedial screening level of 200 mg/kg for sites where there are no other known sources of lead, which is the case in Gibbsboro. The WSB area (see Figure 2) is zoned residential; however, it is currently undeveloped and is unlikely to become so in the future given its location in a floodplain. Although the human health cleanup goal in the ROD was 400 mg/kg, the ecological cleanup goal of 213 mg/kg was used for remediation of the surface soil (top foot) across this area. Below one foot, the human health cleanup goal of 400 mg/kg was used. Post-excavation data collected from the residentially-zoned portions of the Dump Site indicate that the average concentration in this area is well below 200 mg/kg. In areas where the cleanup goals for arsenic and lead were not met, a cap was placed to interrupt potential exposures. The commercial/industrial lead goal remains protective. Because post-remediation concentrations are below the new screening level and all other areas of the site are capped or remediated to protective levels, the change in the residential screening level does not affect the protectiveness of the remedy.

Ecological Risk

The Baseline Ecological Risk Assessment provided evidence that COCs, primarily arsenic, lead, and chromium, in both aquatic and terrestrial environments within several portions of the Site potentially posed unacceptable ecological risk to wildlife receptors. Overall, wildlife risks at the Site were driven by elevated concentrations detected in localized portions of the three exposure areas, primarily in soil and sediment. Insectivorous wildlife (the American Robin and Short-Tailed Shrew) were identified as the wildlife receptors with the highest predicted exposures and hazard quotients in the terrestrial area of the Site. Similarly, the Spotted Sandpiper, an aquatic insectivore, was identified as the receptor with the highest exposure and hazard quotient associated with the aquatic community in WSB.

While the ecological risk screening values used to support the OU2 Decision Document might not necessarily reflect the current values for terrestrial or aquatic receptors, the exposure assumptions remain appropriate. As a result of excavation of contaminated surface soil and sediment and the placement of clean fill in these areas, exposures via these pathways are now incomplete. Furthermore, removal of source material reduced surface water concentrations of COCs below screening water criteria. Therefore, there are no complete exposure pathways to ecological receptors.

QUESTION C: Has any **other** information come to light that could call into question the protectiveness of the remedy?

No other information has come to light which calls into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
OU2

OTHER FINDINGS

The residential human health cleanup goal for lead in the 2016 ROD was 400 mg/kg, although remediation of the surface soil (top foot) was driven by the ecological cleanup goal of 213 mg/kg. Nevertheless, since the ROD was signed EPA has updated its residential soil lead policy to be more stringent. EPA's analysis of the post-remediation data shows that the remedy, as implemented, is protective and no changes to the remedy are needed; however, an evaluation as to whether additional administrative documentation would be needed for supporting site completion is suggested.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)				
Operable Unit: 2	Protectiveness Determination: Protective			
Protectiveness Statement: environment.	The remedy at OU2 is protective of human health and the			

VIII. NEXT REVIEW

The next five-year review report for the Route 561 Dump Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

- Remedial Investigation Report Route 561 Dump Site, Gibbsboro, NJ, May 2015
- Human Health Risk Assessment Route 561 Dump Site, Gibbsboro, NJ, July 2015
- Baseline Ecological Risk Assessment Route 561 Dump Site, Gibbsboro, NJ, November 2015
- Addendum to the Baseline Ecological Risk Assessment Route 561 Dump Site, Gibbsboro, NJ, May 2016
- Feasibility Study Route 561 Dump Site, Gibbsboro, NJ, May 2016
- Decision Document, Operable Unit 2 Route 561 Dump Site, Gibbsboro, NJ, September 2016
- Site Wide Monitoring Plan Route 561 Dump Site, Gibbsboro, NJ, October 2017
- Response Action Summary for Southwest Commercial Lot Route 561 Dump Site, Gibbsboro, NJ, May 2020
- Response Action Summary for Northwest Commercial Lot Route 561 Dump Site, Gibbsboro, NJ, June 2020
- Response Action Summary for Northeast Commercial Lot Route 561 Dump Site, Gibbsboro, NJ, October 2021
- Response Action Summary for Dump Site Fenced Area Route 561 Dump Site, Gibbsboro, NJ, October 2021
- Response Action Summary for White Sand Branch East & West Route 561 Dump Site, Gibbsboro, NJ, October 2021
- Response Action Report Route 561 Dump Site, Gibbsboro, NJ, October 2021
- Memorandum: Amendments to the Site Wide Monitoring Plan Route 561 Dump Site, Gibbsboro, NJ, December 2021

APPENDIX B – FIGURES





APPENDIX C – CLIMATE CHANGE ASSESSMENT

In Accordance with the *Region 2 Guidance for Incorporating Climate Change Considerations in the Five Year Reviews*, three climate change tools were utilized to assess the Route 561 Dump Site. Screenshots from each of the tools assess are included here.

The first tool used to assess the Borough of Gibbsboro was *The Climate Explorer*. According to this tool, average daily temperatures are projected to increase in the future. Figure C-1 shows the projected increase in the average daily maximum temperature. Figure C-2 shows the projected increase in the number of days per year with a maximum temperature above 90 °F. A summary of the Top Climate Concerns from the tool can be seen in Figure C-3.

The second tool utilized was *Risk Factor*. According to this assessment tool, there are 21,088 properties in Camden County that have greater than a 26% chance of being severely affected by flooding over the next 30 years, which gives the county a rating of "Moderate" for its flood risk factor. However, the Route 561 Dump Site is located in an area with a "Minor" flood risk rating. Additionally, the *Risk Factor* assessment tool gives the area of the Dump Site a rating of "Major" for both its wind risk factor and its heat risk factor. This is due to expected increases of the 3-second max wind gust speed and of the total number of days above 104 °F over the next 30 years (Figure C-4).

The final tool utilized was the *NOAA Sea Level Rise Viewer*. According to this tool, the Borough of Gibbsboro is not vulnerable to sea level rise, due to its distance from the Atlantic Ocean and the Delaware River. Figure C-5 shows the projected impacts of a ten-foot sea level rise. As shown on the left side of the Figure, the closest impacts to Gibbsboro would be in areas near Big Timber Creek and the Delaware River. Therefore, the Dump Site is not vulnerable to sea level rise.

Potential impacts from climate change have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of climate change in the region and near the Site. The expected effects of climate change near the Site include increased average temperatures and increased wind gust speeds, however, these effects are not expected to impact the performance of the remedy.



Figure C-1



Figure C-2



Figure C-3



has a Minimal Flood Factor®.



View fire report





View wind report

HH.....

Based on the likelihood and speed of hurricane, tornado, or severe storm winds reaching this property, it has a Major Wind Factor™.



Based on the current and future temperature and humidity in the area and at this specific location, this property has a

View flood report



Max depth of flooding to building

0 ft	0 ft	
This year	In 30 years	

Explore flood maps

Figure C-4



Likelihood of being in a wildfire



3-second max wind gust speed

```
84 mph
                97 mph
               In 30 years
This year
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Explore wind maps



Total days above 104°F

7 14 In 30 years This year

Explore heat maps

Major Heat Factor®.

View heat report

19



