

Stewardship Permit

Pursuant to Chapters 439 and 446k of the Connecticut General Statutes, a permit is issued to:

Permittee:

Pfizer Inc
445 Eastern Point Road
Groton, CT 06340

Facility Identification:

EPA ID No. CTD001147495
Permit Number: DEEP/REM/SP/2024-9574

To perform site-wide environmental investigation and cleanup (corrective action measures) and long-term stewardship at the hazardous waste disposal facility in accordance with Connecticut General Statutes (CGS) Sections 22a-6, 22a-449(c), and Section 22a-449(c)-110 of the Regulations of Connecticut State Agencies (RCSA) as specified in the conditions set forth in this permit.

This permit regulates and authorizes the Permittee to perform groundwater monitoring, maintenance of an engineered control and corrective action measures at the facility. The permit does not authorize operation of a hazardous and solid waste management facility in the sense of treating, storing, or disposing of hazardous and solid wastes generated off-site.

All terms in this permit are defined in the permit or if not defined in the permit are as defined in Section 22a-449(c)-100 of the RCSA incorporating, with changes, in Title 40 of the Code of Federal Regulations (CFR) Parts 260, 261, 262, 264, 268, 270, 273 or 279.

This permit is based on the information described in the Stewardship Permit application (Application No. 202212562) filed on 12/28/2022 and revised on 06/28/2024. The Permittee must keep records of all data used to complete the permit application and any supplemental information submitted for the effective term of this permit. The permit application is incorporated by reference as part of the permit. Any false statements or inaccuracies contained in the information submitted by the Permittee may result in the suspension, revocation or modification of this permit and civil or criminal enforcement action.

The Permittee shall comply with all terms and conditions contained in the Permit. Any violation of any provision of this permit may subject the Permittee to enforcement action pursuant to the CGS including but not limited to Sections 22a-6a and 22a-131.

This permit is transferrable upon the Commissioner's written authorization, provided the Permittee and potential transferee have complied with the requirements set forth in CGS Section 22a-6o.

This permit may be revoked, suspended, modified, transferred, or reissued, in order to comply with applicable law. The Commissioner may also modify this permit when it is deemed necessary to do so.

The Permittee shall submit a revised permit application to the Commissioner at least one hundred and eighty (180) calendar days before making any changes to any of the permitted areas or

activities. Any application shall be approved in writing by the Commissioner prior to the Permittee implementing such change. The Permittee shall submit an application for a renewal of this permit to the Commissioner at least one hundred eighty (180) calendar days prior to its expiration date.

In the event of a conflict between any previously issued solid waste permit and the terms and conditions of this permit, the terms and conditions of this permit shall supersede.

This permit is hereby in effect and shall expire ten (10) years from this date.

Date

Katie S. Dykes
Commissioner

STEWARDSHIP PERMIT

Pfizer Inc

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Groton, CT

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SECTION I
STANDARD FACILITY CONDITIONS

Pfizer Inc

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Permit No. DEEP/REM/SP/2024-9574

SECTION I
STANDARD FACILITY CONDITIONS

A. EFFECT OF PERMIT

Except as is provided in the Regulations of Connecticut State Agencies (RCSA) Section 22a-449(c)-110(a)(2) and except for any federally enforceable requirement(s), compliance with this permit (Permit) during its term constitutes compliance, for purposes of enforcement, with Connecticut General Statutes (CGS) Section 22a-449(c). This Permit may be modified, revoked and reissued, or terminated during its term as set forth in RCSA Section 22a-449(c)-110(a)(1), which incorporates by reference, with changes, Title 40 of the Code of Federal Regulations (40 CFR) Parts 270.41, 270.42 and 270.43.

The Permittee shall perform the activities required in Section II of this Permit in accordance with the application (Application No. 202212562) filed on 12/28/2022, revised on 06/28/2024, and received by the Department of Energy and Environmental Protection (Department) on June 28, 2024 and the requirements of this Permit. In the event of a conflict between the Permittee's application and the requirements of this Permit, the requirements of this Permit shall take precedence and apply.

The issuance of this Permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

Term (Duration) - The effective date of this Permit is the date on which the Permit is signed by the Commissioner or by the Commissioner's Designee. This Permit is in effect for a term of ten (10) years and may be renewed at the end of the term, in accordance with the requirements described in the "Duty to Reapply" Section of this Permit.

In accordance with 40 CFR 270.73(a), upon issuance of this Permit the Permittee's Interim Status granted under the Resource Conservation and Recovery Act (RCRA) is hereby terminated. In addition, upon the Commissioner's determination that the Permittee has satisfied the requirements of this Permit, a Certificate of Completion shall be issued to the Permittee.

B. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

C. CONFIDENTIAL INFORMATION

The Permittee may claim that any information required to be submitted by this Permit contains or constitutes confidential information in accordance with CGS Section 1-210(b).

D. IMMINENT HAZARD ACTIONS

Notwithstanding any provision of this Permit, enforcement actions may be brought pursuant to Section 7003 of the RCRA, CGS Section 22a-6, or any other applicable law.

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

The Permittee shall comply with all conditions of this Permit except that the Permittee need not comply with the conditions of this Permit to the extent and for the duration such noncompliance is authorized in an Emergency Permit that explicitly authorizes any such noncompliance. Noncompliance by the Permittee with the terms of this Permit, except under the terms of an Emergency Permit, shall constitute a violation of this Permit and any applicable laws or regulations and is grounds for enforcement action, for Permit termination, revocation and reissuance or for denial of a Permit renewal. Emergency Permit as used herein shall mean Emergency Permit as identified in RCRA Section 22a-449(c)-110(a)(1) incorporating 40 CFR 270.61.

Unless superseded by a more stringent provision in this Permit, the Permittee shall comply with all of the applicable requirements of RCRA Sections 22a-133k-1 et. seq. (Remediation Standard Regulations or RSRs), as amended, and 22a-449(c)-100 et. seq., including any portion of 40 CFR 260 through 279 incorporated by reference therein.

A violation of this Permit for purposes of state and federal law constitutes a violation of a RCRA Permit.

2. Duty to Reapply

This Permit shall expire ten (10) years after the effective date of this Permit. The Permittee shall renew this Permit if any activity required under this Permit is not completed prior to the expiration date of this Permit. The Permittee need not reapply if all remedial activities required by state and federal regulations have been completed and no engineering or applicable institutional controls are needed to ensure the remediation's effectiveness. The Permittee shall apply for renewal of this Permit one hundred and eighty (180) calendar days prior to the date of expiration of this Permit, in accordance with RCRA Sections 22a-449(c)-104(a) and 22a-449(c)-110 incorporating 40 CFR 264.101 and 270.10(h) and any other applicable law.

3. Obligation for Continuing Corrective Action, Post-Closure Care, Long-Term Stewardship Controls

The Permittee is required to renew and continue this Permit for any period necessary to comply with the requirements of this Permit.

4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce any activity authorized by this Permit in order to maintain compliance with the conditions of this Permit, unless otherwise required to do so by another state or federal authority.

5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such

measures as are reasonable to prevent its noncompliance from having significant adverse impacts on human health or the environment. No action taken by the Permittee pursuant to this section of this Permit shall affect or limit the Commissioner's authority under any other statute or regulation.

6. Permit Actions

This Permit may be modified, revoked and reissued, or terminated as provided for in 40 CFR 270.41, 270.42 or 270.43, and in accordance with all applicable law, including but not limited to, CGS Sections 22a-6g and 6h and RCSA Sections 22a-3a-5 and 22a-449(c)-110. The filing of a request by the Permittee for a Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any condition of this Permit.

7. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privilege to the Permittee.

8. Duty to Provide Information

The Permittee shall furnish to the Commissioner, within a reasonable time, any information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit or to determine compliance with this Permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this Permit.

9. Operation and Maintenance of Remedial Systems

The Permittee shall at all times properly operate and maintain all facilities and remedial systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit and any Long-Term Stewardship Plans applicable to this Facility. Proper operation and maintenance, at a minimum, includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate laboratory quality assurance procedures. This provision requires the operation of backup, auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

10. Inspection and Entry

The Permittee shall allow the Commissioner, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- (a) Enter at reasonable times upon the Site where a regulated activity is located or conducted, or where records must be kept under the conditions of this Permit;
- (b) Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Permit;

- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, operations regulated or required under this Permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substance or parameters at any location.

11. Security

Pursuant to RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.14, the Permittee shall prevent the unknowing entry, and minimize the possibility for unauthorized entry, of persons or livestock onto the active portion of the Facility. The Permittee shall secure the Facility to the extent necessary to protect human health.

12. Preparedness, Prevention, Contingency Plan and Emergency Procedures

- (a) The Permittee shall comply with the requirements of RCSA Section 22a-449(c)-104(a)(1) incorporating 40 CFR 264 Subpart C "Preparedness and Prevention" and 40 CFR 264 Subpart D "Contingency Plan and Emergency Procedures" until active remediation is complete.
- (b) The Permittee shall ensure that each entity under contract to provide emergency response services at the Facility has a Permit, issued by the Commissioner pursuant to CGS Section 22a-454, authorizing such entity to provide emergency response services. The Permittee shall maintain a copy of such Permit in the operating record for its Facility. The Permittee shall ensure that any action(s) taken by an entity (including such entity's officers, employees, agents and subcontractors) providing emergency response services at its Facility conforms to the requirements of this Permit.
- (c) The Permittee shall ensure that each entity under contract with the Permittee to provide emergency response services visits the Site annually so that such entity is familiar with the Permittee's Site and can respond to an emergency. The Permittee shall maintain in the operating record for its Facility a certification, in accordance with the requirements of RCSA Section 22a-449(c)-110 incorporating 40 CFR 270.11, attested to by each emergency response entity under contract with the Permittee to provide emergency response services, stating that such entity has complied with the requirements specified in this paragraph.

13. Monitoring and Records

The Permittee shall ensure that samples and measurements taken for the purpose of monitoring are representative of the monitored activity.

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit (e.g., records from groundwater monitoring including wells and surface elevations),

the certification required by RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit, for a period of at least three (3) years from the date of the sample, measurement, certification, report or application. This period may be extended by request of the Commissioner at any time. For disposal facilities these records shall be maintained for the post-closure period.

Records for monitoring information shall include:

- (i) The date, exact place and time of sampling or measurements;
- (ii) The individual(s) or company who performed the sampling or measurements;
- (iii) The date(s) analyses were performed;
- (iv) The individual(s) or company who performed the analyses;
- (v) The analytical techniques or methods used; and
- (vi) The results of such analyses.

14. Operating Record

The Permittee shall maintain, in writing, the following information in the Facility's operating record until termination of this Permit:

- (a) Summary reports and details of all incidents that require implementing the Contingency Plan pursuant to 40 CFR 264 Subpart D;
- (b) Records and results of inspections as required by this Permit, except this data need only be kept for three (3) years from the date of any such inspection;
- (c) Monitoring, testing or analytical data, and corrective action where required by 40 CFR 264 Subpart F or any regulatory section noted in 40 CFR 264.73(b)(6);
- (d) All closure and corrective action cost estimates under RCSA Section 22a-449(c) 104 and 40 CFR 264.142 and 40 CFR 264 Subpart H; and
- (e) Any other information required by this Permit or by any applicable law to be maintained in the Facility Operating Record.

15. Signatory Requirements

The Permittee's application and all reports or information submitted to the Commissioner by the Permittee pursuant to this Permit shall be signed by the Permittee or the delegated licensed environmental professional or professional engineer for the Site and contain the certification prescribed in RCSA Section 22a-449(c)-110 incorporating 40 CFR 270.11.

16. Transfers

This Permit is not transferable to any person without the advanced written authorization of the Commissioner, who may request whatever information the Commissioner deems necessary regarding the potential transferee. Before any such transfer, the Permittee and any proposed transferee shall fully comply with the requirements of CGS Section 22a-60. The Commissioner may require modification or revocation and reissuance of this Permit to change the name of the Permittee and as an incident to any such transfer, incorporate such other requirements, as the Commissioner deems necessary.

In advance of transferring ownership or operation of its Facility prior to the termination of this Permit, the Permittee shall notify the prospective new owner or operator in writing of the requirements of this Permit, 40 CFR 264 through 270, and of the RCSA Section 22a-449(c)100 et al. The Permittee shall provide such prospective new owner or operator with a copy of this Permit.

The Permittee's failure to notify the new Permittee of the requirements of this Permit in no way relieves the new Permittee of his obligations to comply with all applicable requirements.

If the transfer of the property takes place and the Permittee retains this Permit, an access agreement between the Permittee and the prospective new owners of the Facility shall be approved by the Commissioner prior to the sale of the Facility/Site. The agreement shall include the anticipated times, locations and frequency of access needed in order for the Permittee to complete closure, post-closure care and corrective action activities and conduct inspection, operation and management activities for all remedial systems. A copy of any Operations and Management Plan, referenced in the "Operation and Maintenance of Remedial Systems" Section of this Permit, and any Long-Term Stewardship Plans applicable to this Facility shall be provided to the prospective new owner prior to transfer of the property.

17. Reporting Requirements

- (a) Anticipated Non-Compliance. The Permittee shall give as much advance written notice as possible to the Commissioner of any planned changes in the Facility or activity, which may result in non-compliance with any requirement of this Permit.
- (b) Compliance Schedules. Except where otherwise provided for in this Permit, reports of compliance and non-compliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule (Section III) of this Permit, shall be submitted no later than fourteen (14) calendar days following each schedule date, to the extent such reports are required herein.
- (c) 24-Hour Reporting.
 - (i) The Permittee or designee shall verbally report to the Commissioner any remediation or waste related activity at its

Facility, irrespective of whether such activity is in compliance with the requirements of this Permit, which does or may pose an imminent and substantial endangerment to human health or the environment, immediately but not later than twenty-four (24) hours from the time the Permittee becomes aware or should be aware of the circumstances causing such endangerment.

The report to the Commissioner shall include:

- (A) Name, address, and telephone number of the Permittee;
 - (B) Name, address, and telephone number of the Facility;
 - (C) Date, time and type of incident;
 - (D) Description of the occurrence and its cause;
 - (E) Name and quantity of waste(s) or constituents thereof involved;
 - (F) The extent of injuries, if any;
 - (G) An assessment of actual or potential hazards to human health and the environment;
 - (H) Estimated quantity and disposition of recovered waste that resulted from the incident;
 - (I) All information concerning the release of any waste or constituents thereof that may cause an endangerment to public drinking water supplies; and
 - (J) All information concerning a release or discharge of waste or constituents thereof or of a fire or explosion from the Facility, which could threaten human health or the environment
- (ii) A written submission shall also be provided within five (5) calendar days of the time the Permittee becomes aware of the circumstances described in subdivision (i) above. The written submission shall contain a description of the endangerment and its cause; the period of endangerment including exact dates and times, if the endangerment has been abated, and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the endangerment. The Permittee shall maintain in the operating record of its Facility a copy of all such written reports. The Commissioner may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days of the incident requiring reporting.

- (iii) Nothing in this section shall affect or relieve the Permittee of its obligations under CGS Sections 22a-6u or 22a-450.
- (d) Other Noncompliance. The Permittee shall report all instances of noncompliance with this Permit not otherwise required to be reported by this Permit to the Commissioner as part of any other required monitoring report, no later than thirty (30) days of the date the Permittee is aware, or reasonably should have been aware of any such noncompliance. Any such report shall contain, at a minimum, the information listed in the 24-Hour Reporting requirements section of this Permit.
- (e) Other Information. When the Permittee becomes aware that it failed to submit any relevant facts or information in a Permit application, or submitted incorrect information in a Permit application, report or other document provided to the Commissioner regarding this Permit, it shall submit such relevant facts or correct information to the Commissioner within thirty (30) calendar days of becoming aware of such facts or information.

18. Computation of Time

- (a) Except as is expressly provided for in this Permit, the computation of time periods set forth in this Permit shall be as follows:
 - (i) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.
 - (ii) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.
 - (iii) If the final day of any time period falls on a Saturday, Sunday or a federally or state recognized legal holiday, the time period shall be extended to the next working day.
- (b) Submission of Reports. Where this Permit requires the submission of a written report, a notification or other information or documentation to the Commissioner, the report or notification shall be deemed submitted on the date such report, notification or other information is received by the Department.

19. Availability, Retention and Disposition of Records

The Permittee shall ensure that all records required under RCSA Sections 22a-449(c) 100 to 119, the Remediation Standard Regulations or this Permit, including all plans, are furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the Department or the United States Environmental Protection Agency (EPA).

The retention period for all records required under RCSA Sections 22a-449(c)-100 to 119 and this Permit is extended automatically during the course of any unresolved enforcement action regarding the Facility or as requested by the Commissioner or the Regional Administrator of EPA.

20. Additional Requirements

Requirements not included in this Permit, which become effective by statute or regulation, and not made specifically inapplicable to facilities with a Permit, shall apply to the Permittee's Facility. In the event of any conflict between this Permit and any such requirement, the Permittee shall comply with the more stringent requirement. If the Permittee does not fully comply with the more stringent requirement, the Department may enforce either requirement.

21. Federal, State and Local Laws

Nothing in this Permit shall be construed to prohibit any federal, state or political subdivision thereof from imposing any requirements to the extent authorized by law which are more stringent than those imposed by this Permit.

In addition, nothing in the Permit shall relieve the Permittee of its obligation to comply with any other applicable federal, state, or local statute, regulation or ordinance.

22. Modification of the Compliance Schedule

The Permittee may request to modify the submittal due dates of the Compliance Schedule (Section III) of this Permit at any time. Such requests shall be submitted for the Commissioner's review and written approval and shall include sufficient justification for such request(s).

The Commissioner may grant extensions of submittal due dates based on the Permittee's demonstration that sufficient justification for the extension exists. Extensions to due dates, which this Permit explicitly defines as being due by a certain time or during a certain time interval, may be granted by the Commissioner if sufficient justification for the extension is demonstrated by the Permittee.

23. Delegation of a Licensed Environmental Professional

(a) The Commissioner may delegate direction and oversight of the long-term stewardship obligations required to be completed for this facility to a licensed environmental professional (LEP), licensed pursuant to RCSA Section 22a-133v. In that case, the LEP's roles and responsibilities may include:

- (i) Submittal of deliverables as defined by Section 3 of this Permit for the Commissioner's review and approval.
- (ii) Conducting long-term stewardship activities at the Facility until such a time that remediation activities have addressed any and all requirements of the Commissioner and have achieved compliance

with Connecticut's Remediation Standard Regulations without engineered or institutional controls in place.

- (iii) Submittal of a verification once site-wide environmental investigation at the Facility has been performed in accordance with prevailing standards and guidelines, and remediation activities have addressed any and all requirements of the Commissioner and have achieved compliance with Connecticut's Remediation Standard Regulations.
- (b) All required documents pursuant to this Permit shall be submitted to the Commissioner to maintain the public record.
- (c) In the event the Commissioner revokes the LEP delegation, the Permittee shall ensure all reports and documents required by this Permit are submitted for the Commissioner's review and written approval within the timeframes specified.
- (d) Within ten (10) days after assigning or retaining any LEP other than the one originally identified, to address the actions required by this Permit, the Permittee shall notify the Commissioner in writing of the identity of such other LEP. The Permittee shall submit to the Commissioner a description of the assigned LEP's education, experience and training which is relevant to the work required by this Permit within ten (10) days after a request for such a description has been made. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable LEP unacceptable.

F. DEFINITIONS

Any term not otherwise defined herein shall be defined as that term is defined in RCSA 22a-449(c)-100 thru 119 incorporated 40 CFR 264 through 279. Notwithstanding Sections I.E.20 and I.E.21 of this Permit, in the event of any conflict between any of the following definitions and any definition provided in any other applicable legal requirement, the following definitions shall control:

1. "Active Remediation" or "Active Remedial Activities" shall mean the period prior to completion of activity conducted pursuant to Section II of this Permit, with the exception of that period when the only remaining activity are activities such as post-remedial monitoring or monitored natural attenuation.
2. "Annual" with respect to monitoring shall mean that any associated required inspections, sampling, and analysis shall occur no later than December 31st of the calendar year. The results of such sampling and analysis shall be submitted to the Commissioner no later than March 1st of the subsequent year.
3. "Area of Concern" or "AOC" shall mean any area has had a probable release of a hazardous waste or hazardous constituents and that is determined by the Department to pose a current or potential threat to human health or the environment. For the purposes of this permit, historical releases (RELs) are included in this definition.
4. "Certificate of Completion" shall mean a document recognizing the Commissioner's determination that all environmental investigation and remediation has been completed and no long-term stewardship obligations remain. This non-regulatory certificate is issued based on the Commissioner's regulatory determination that a Permit is not needed for the Facility or portion of Facility.
5. "Certificate of Stewardship" shall mean a document recognizing the Commissioner's issuance of a Long-Term Stewardship Permit for the Facility. This non-regulatory certificate is issued to communicate that the Permit's purpose is not to authorize commercial waste management operations, and is limited to environmental investigations, remediation, and long-term stewardship obligations.
6. "Constituent of Concern" shall mean a component, breakdown product, or derivative of a substance that may be found in the environment as a result of a release at or from the Facility, or a reaction caused by such a release, and that is determined by the Department to pose a current or potential threat to human health or the environment.
7. "CFR" shall mean the Code of Federal Regulations.
8. "Commissioner" shall mean the Commissioner of Energy and Environmental Protection as defined in the CGS Section 22a-2 or the Commissioner's duly authorized designee.
9. "Corrective Action" shall mean the process of identifying, investigating, and remediating releases of hazardous constituents to the environment. "Corrective action" and "remediation" may be used interchangeably in this Permit.

10. "Department" or "DEEP" shall mean the Connecticut Department of Energy and Environmental Protection.
11. "Discover," "Discovery," or "Discovered" refer to the date on which the Permittee either: (i) visually observes evidence of a new Solid Waste Management Unit (SWMU) or Area of Concern (AOC), (ii) visually observes evidence of a previously unidentified release of hazardous constituents to the environment, (iii) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment, or (iv) receives information which indicates the presence of a previously undocumented release of hazardous waste or hazardous waste constituents to the environment.)
12. "Environmental Land Use Restriction" (ELUR) shall mean the easement granted to the Commissioner by the property owner that is recorded on the municipal land records in order to reduce the risk of human exposure to pollutants and hazards to the environment by preventing specific uses or activities at a property or a portion of a property, pursuant to Section 22a-133q-1 of the Regulations of Connecticut State Agencies, as revised on June 27, 2013, and as may be amended from time to time.
13. "Facility" shall mean, pursuant to 40 CFR 260.10 all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing or disposing of hazardous waste and all contiguous property under control of the owner or operator.
A specific, legally definable land parcel that is one of multiple parcels comprising the Facility may separately receive a Certificate of Completion from the Commissioner for only that parcel and portion of the facility. This Certificate of Completion indicates the Commissioner's approval that all remediation is complete and no long-term stewardship obligations remain for that parcel (as indicated by the issuance of a letter determining that "remediation is complete without controls" and a "certificate of completion"). If such a finding is made then the terms "Site" and "Facility" shall subsequently refer only to the land that no longer includes such parcel.
For the purposes of the Permit, Facility shall mean the parcels of land shown on the A-2 survey, East Campus Parcel and West Campus Parcel, with a total of 164.5 acres located at 445 Eastern Point Road in Groton, CT as delineated on Figures H-2 and H-3 and subject to the requirements of this Permit. The Map, Block, Lot/Parcel for the East Campus Parcel is Map 168815, Block 52, Lot 6760 with 109.4 acres of land and contains fifteen (15) buildings with a total of approximately 2,146,726 square feet building areas that are used as offices, research, and development facilities. The Map, Block, Lot/Parcel for the West Campus Parcel is Map 168818, Block 42, Lot 7055 with 55.1 acres of land and contains eleven (11) buildings with a total of approximately 401,598 square feet building areas that are used for research and development operations. Number of buildings and acreage of each parcel are subject to change pending potential use modifications and/or divestiture.
14. "Final Closure" shall mean the completion of the closure of all Hazardous Waste Management Units at the Permittee's Facility in accordance with the requirements of this Permit.

15. "Hazardous Waste" or "Hazardous Wastes" shall mean hazardous waste as identified or listed as hazardous waste pursuant to 42 U.S.C. Section 6901 et. seq. and RSCA Section 22a-449(c)-101.
16. "Hazardous Waste Management Unit" or "HWMU" shall mean a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is a significant likelihood of mixing hazardous waste constituents in the same area and are subject to the closure and post-closure requirements of 40 CFR 264 Subpart G. Examples include: surface impoundment, waste pile, land treatment area, landfill cell, incinerator, a tank, and a greater than 90 day storage area. The Facility had the following HWMUs and the locations of these HWMUs are shown on Figure H-3 in Appendix B of this Permit:

Unit	SWMU#	Legal Operating Status	Closure Date
Storage Container	SWMU-13	Interim Status - Clean Closed	12/12/2001
Storage Tanks	SWMU-7, 8, 9, 10, 38, and 42	Interim Status - Clean Closed	06/02/1999
Incinerator/Pyrolyzer	SWMU-12	Proposed – Clean Closed	06/02/1999
Tank CT101	SWMU-6	Interim Status – Clean Closed	12/12/2001
WP Treatment	SWMU-40	Temporary Authorization – Clean Closed	12/20/2012

17. "Land Disposal Unit, Land Disposal Facility" shall mean a Hazardous Waste Management Unit where Hazardous Waste or contamination remains in the Regulated Unit. The Facility does not have any land disposal units.
18. "Long-Term Stewardship Plan" shall mean a single plan, or a collection of plans consisting of one or more plans, as applicable, involving remedial action plans, post-remediation maintenance and monitoring, post-closure care of land disposal facilities, and any other plans necessary to ensure environmental remedies are implemented and maintained.
19. "Permittee" shall mean the person responsible for the overall operation of the facility who has been issued a license by the Commissioner. As used herein "person" is defined in Section 22a-423, Chapter 446k, of the CGS and "license" is defined in Section 4-166, Chapter 54 of the CGS.
20. "Post-Closure Period" shall mean a minimum of ten (10) years from the date of this Permit's issuance. This period shall be extended or shortened by the Commissioner only in accordance with RSCA 22a-449(c)-104(a) incorporating 40 CFR 264.117(a)(2). The Commissioner shall extend the Post-Closure Period as long as waste or contamination remains in place. In the event all wastes and contaminated environmental media are removed, an alternate Post-Closure Period may be approved by the Commissioner.
21. "Quarterly" with respect to inspections, sampling and analysis shall mean that the inspections, sampling and analysis shall occur approximately once every three (3) consecutive months in a calendar year (e.g., January, April, July and October). The results

of such inspections, sampling and analysis shall be submitted to the Commissioner according to the schedules established in the Long-Term Stewardship Plan(s).

22. "Regulated Unit" shall mean a surface impoundment, waste pile and land treatment unit or landfill that received hazardous waste after July 26, 1982 and is subject to the requirements of 40 CFR 264.91 through 264.100 for detecting, characterizing and responding to releases in the uppermost aquifer.
23. "Remediation" shall mean the process of identifying, investigating, and remediating releases of hazardous constituents to the environment. "Corrective action" and "remediation" may be used interchangeably in this Permit.
24. "Remediation Standard Regulations" (RSRs) means the Connecticut Remediation Standard Regulations as defined in the Regulations of Connecticut State Agencies (RCSA), Sections 22a-133k-1 through 22a-133k-3, adopted January 1, 1996 and amended June 27, 2013 and as otherwise amended.
25. "Semi-annual" with respect to inspections, sampling and analysis shall mean that sampling and analysis shall occur approximately once every six (6) consecutive months in a calendar year (e.g. during January and July, or April and October). The results of such inspections, sampling and analysis shall be submitted to the Commissioner according to the schedules established in the Long-Term Stewardship Plan(s).
26. "Solid Waste Management Area" or "SWMU" shall mean any unit which has been used for the treatment, storage or disposal of solid or hazardous wastes at any time, or any area that has been contaminated by routine or systematic releases of hazardous waste or hazardous constituents and are subject to the corrective action requirements of 40 CFR 264 Subpart F.
27. "Site" shall mean the same or geographically contiguous property which may be divided by public and private right-of-way, provided the entrance and exit between the properties is at a cross-road intersection, and access is by crossing opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way that such person controls and to which the public does not have access, is also considered part of the site property. The terms "Facility" and "Site" may be used interchangeably in this Permit.
For the purposes of this Permit, there are two separate parcels: the "East Campus Parcel" and the "West Campus Parcel" which together comprise approximately 164.5 acres that are subject to this Permit. Herein after the term "site" shall refer to all parcels. If a certificate of completion is issued for the East Campus Parcel, the terms "Site" and Facility" shall subsequently refer to only the West Campus Parcel.
28. "Verification" shall mean the rendering of a written opinion by a licensed environmental professional on a form prescribed by the commissioner that an investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the Facility has been remediated in accordance with the remediation standards.

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

SECTION II
AUTHORIZED ACTIVITIES

Pfizer Inc

EPA ID No. CTD001147495
Permit No. DEEP/REM/SP/2024-9574

SECTION II AUTHORIZED ACTIVITIES

A. RCRA CORRECTIVE ACTION REQUIREMENTS

1. Performance of Corrective Action

The Permittee shall perform corrective action in accordance with the requirements of this Permit, the Remedial Action Plan(s) submitted and approved pursuant to this Permit, and all other plan(s) submitted pursuant to this Permit.

The Permittee shall ensure that any investigations for each Solid Waste Management Unit (SWMU) and Area of Concern (AOC) are completed within two (2) years from the date of initiation of such investigation; and that remediation is initiated within three (3) years from the date of initiation of investigation of any SWMU or AOC and completed within ten (10) years of issuance of this Permit or in accordance with an alternative schedule approved in writing by the Commissioner.

The conditions of this section apply to:

- (a) The SWMUs and AOCs as identified in the Summary Table located in the Appendix C of this Permit. All SWMUs and AOCs have been investigated and required remedies have been completed, except one SWMU and three AOCs that were noted with "Operating Facility" status in the table due to safety and/or physical limitations when the Facility is in operation. These AOCs and SWMU have been deferred to a time such that investigation and remediation activities will not impact the operation of the Facility, as determined by the Permittee; herein referred to as "Deferred Areas".

The details of these Deferred Areas are summarized below, and the locations of these Deferred Areas are identified on Figure H-3:

- SWMU-30, located at Building 185, is a former truck loading station used to transfer RCRA hazardous waste spent solvents. SWMU-30 is approximately 770 square feet in size.
- AOC-12, located on the west side of Building 90, was a filter cake loading area on the east side of now-demolished Building 102. AOC-12 is approximately 90 square feet in size.
- AOC-33, located along the west side of Buildings 185 and 185N, is a former tank truck loading location used to load non-hazardous or RCRA hazardous waste for transport to a former on-site pyrolyzer. AOC-33 is approximately 1,270 square feet in size.

- AOC-47, located at Former Craneway F between existing Buildings 83 and 90, consists of two active 25,000 oil tanks that are used as product (oil) storage day tanks within the former Craneway. It is approximately 3,800 square feet in size.
- (a) Any additional SWMUs and AOCs discovered during the course of corrective action, characterization, groundwater monitoring, field investigations, environmental audits, or other means; and
- (b) Contamination that has migrated or may migrate beyond the Facility boundary, whereas necessary to protect human health and the environment.

The Permittee shall implement corrective actions beyond the Facility boundary where necessary to protect human health and the environment consistent with RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.101(c), unless the Permittee demonstrates, to the satisfaction of the Commissioner, that despite the Permittee's best efforts, as determined by the Commissioner, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for completion of such off-site corrective action will be required.

2. Schedule/Scope of Work

The Permittee shall submit schedule(s)/scope(s) of work for further investigation and remediation of releases of hazardous waste and hazardous substances at or from the Facility such that the remediation will achieve compliance with the Remediation Standard Regulations. Such schedule(s) and scope(s) of work shall include, at a minimum, a schedule for development and implementation of all outstanding investigation and remediation activities, and any specific activities identified by the Commissioner, including at least the following plans and/or reports and activities:

(a) Remedial Action Plan (RAP)

The Permittee shall submit for the Commissioner's review and written approval one or more RAP(s) and associated cost estimates, developed in accordance with Financial Assurance Responsibility Obligations of this Permit and RCSA Sections 22a-449(c)-104(a)(1), incorporating 40 CFR 264, and RCSA Sections 22a-133k-1 et. seq. which details the steps to be taken to perform corrective action.

If the Commissioner has delegated the Facility to a LEP, the Permittee shall ensure public participation regarding the RAP is provided through issuing

notice of the availability of the RAP and the opportunity for public comment in accordance with the Facility's approved Public Participation Plan and Federal and State regulations.

The RAP(s) shall address one or more environmental media at the entire Site or area affected by or any portion thereof and shall include:

- (i) Description of the areas at which the remediation will take place identifying the SWMUs and AOCs addressed and the environmental media being remediated;
- (ii) List and description of the remedial alternatives considered for performing the specified remediation;
- (iii) Proposed remedial method(s) with supporting justification, therefore;
- (iv) Proposed detailed implementation plan and schedule to perform the preferred remedial actions, including the generation and collection of any supplemental site information needed to support completion of remedial design. Such schedule shall include a schedule for applying for and obtaining all Permits and approvals required for such remedial actions and describe the establishment of financial assurance for the remedial activity; and
- (v) Identify the data gaps and describe the rationale used for determining whether (1) no further investigation is required, or (2) additional investigation is necessary to fill any significant data gaps. If additional investigation is needed, the Permittee shall include a plan for the implementation of such investigations and a report summarizing the findings;
- (vi) Identify areas exceeding remedial criteria and a proposal for the additional characterization data needed to complete the remedial design in order to achieve compliance with the RSRs for polluted soil, surface water and groundwater; and a proposed implementation plan and schedule addressing such areas of contamination.
- (vii) Ecologically based and human health-based criteria for sediment, if identified as an exposure pathway, an identification of all areas exceeding such criteria and a proposed implementation plan and schedule addressing such areas.

The RAP and associated schedule may propose activities be conducted in phases associated with a focus on a particular environmental medium, reasonably deferring filling the data gap to the remedial design stage where appropriate.

Any RAP containing monitored natural attenuation as the selected remedy for groundwater migrating off the Site shall include: 1) an evaluation of the need for source mitigation to achieve remedial criteria; 2) a monitoring and data evaluation plan designed to evaluate the remedy performance; and 3) a contingency remedy conceptual approach in the event that monitored natural attenuation does not perform as anticipated and a schedule for implementation.

The Permittee submitted to the Department a RAP in 2020 to address the site-wide cleanup and a RAP Addendum in 2021 to address the ecological risks. The RAP was public noticed in July 2020 and the proposed remedial actions have been implemented. Subsequently, a Remedial Action Report (RAR) was submitted in 2022 to summarize remedial activities completed at the Site in accordance with the RAPs and approvals.

For the remaining Deferred Areas, the Permittee submitted to the Department a report, titled "Characterization Plan and Cost Estimate for Inaccessible Deferred Units" on June 28, 2024, for the purpose of providing cost estimates for the investigation and remediation of these areas. The associated cost estimates include the costs for conducting a Phase II and Phase III environmental investigation and the cost estimate for remediation at these deferred areas if it is required. After the completion of investigation at these areas and if remediation is required, a RAP shall be submitted in accordance with this section described above. This report will be submitted for the Commissioner's review and written approval.

(b) Quality Assurance Project Plan

The Permittee shall prepare and submit to the Commissioner a Quality Assurance Project plan (QAPP), prepared in accordance with the document titled: Quality Assurance Guidance for Conducting Brownfields Site Assessments, US Environmental Protection Agency OSWER Directive No. 9230.0-83P, and incorporating Connecticut's Reasonable Confidence Protocols, or subsequent federal or state guidance on QAPPs.

The Permittee shall ensure that the data is of sufficient quality to make decisions regarding investigation, potential remediation, and monitoring of the Site.

3. Ecological Risk Assessment

Pursuant to RCSA Section 22a-133k-2(i), the Permittee has prepared and submitted for the Commissioner's review and comment a Screening Level Ecological Risk Assessment dated July 2012, revised October 2017 evaluating the potential for ecological receptors to be exposed to contaminants. Subsequently, the Permittee submitted a RAP addendum in 2022 to address the ecological risk and the proposed remedial actions were implemented in 2022 in accordance with the Department's approval letter dated July 18, 2022.

4. Notification and Assessment Requirements for Newly Identified SWMUs and AOCs

The Permittee shall notify the Commissioner in writing, within fifteen (15) calendar days of discovery, of any new suspected or confirmed AOCs or SMWUs as discovered under conditions of this Permit. Such notification shall include, at a minimum, the following information:

- (a) Location of the unit(s) on a topographic map of appropriate scale (such as required under 40 CFR 270.14(b)(19));
- (b) Designation of the type and function of unit(s);
- (c) General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings);
- (d) The date that the unit(s) was operated;
- (e) Specifications of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on hazardous constituents in the wastes; and
- (f) All available information (groundwater data, soil, soil gas, sediment, air, and/or surface water data) pertaining to any release of hazardous waste or hazardous constituents from such unit(s).

5. Notification Requirements for Newly Discovered Releases From SWMUs and AOCs

- (a) The Permittee shall notify the Commissioner in writing of any newly discovered release(s) of hazardous waste or hazardous constituents discovered during the course of characterization, groundwater monitoring, field investigations, environmental audits, or other means, within fifteen (15) calendar days of discovery.

Such newly discovered release(s) may be from SWMUs or AOCs identified in this Permit or SWMUs or AOCs previously identified for which it had been determined that further investigation was not required.

- (b) If the Commissioner determines that further investigation of the SWMUs or AOCs is needed, the Permittee shall be required to prepare a plan for such investigations within sixty (60) calendar days of notification by the Commissioner.

6. Interim Measures (IM)

(a) Work Plan

- (i) Interim Measures Identified by Commissioner: Upon notification by the Commissioner, the Permittee shall prepare and submit an Interim Measures (IM) Work Plan for any SWMU or AOC that the Commissioner determines is necessary in order to minimize or prevent the further migration of contaminants, thereby limiting

current and future potential for human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented to meet the requirements of the RSRs.

The IM Work Plan shall be submitted within sixty (60) calendar days of such notification and shall include the elements listed in this Permit. Such interim measures may be conducted concurrently with investigations required by this Permit.

- (ii) Interim Measures identified by Permittee: The Permittee may initiate IM at a SWMU or AOC by submitting the appropriate notification pursuant to this Permit. Permittee initiated IM shall be considered conditionally approved unless the Commissioner specifically imposes an IM Work Plan within thirty (30) calendar days of receipt of notification of the Permittee initiated IM. The scope and success of Permittee initiated IM conditionally approved shall be subject to subsequent in-depth review; the Commissioner will either comment on or approve the Permittee initiated IM. Permittee initiated IM must follow the progress and final reporting requirements per the conditions of this Permit.
 - (iii) The IM Work Plan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the Facility. The IM Work Plan shall include: the interim measure's objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation.
- (b) IM Implementation
- (i) The Permittee shall implement the IM under in accordance with the approved IM Work Plan.
 - (ii) The Permittee shall give notice to the Commissioner within seven (7) calendar days of any planned changes, reductions or additions to the IM Work Plan
- (c) Interim Measures Reports
- (i) Progress Reports: If the time required for completion of interim measures is greater than one year, the Permittee shall provide the Commissioner with progress reports at intervals specified in the approved Work Plan or annually for Permittee initiated interim measures. The Progress Reports shall contain the following information at a minimum:
 - (A) A description of the portion of the interim measures completed;

- (B) Summaries of the findings;
 - (C) Summaries of any deviations from the IM Work Plan during the reporting period;
 - (D) Summaries of any problems or potential problems encountered during the reporting period; and
 - (E) Projected work for the next reporting period.
- (ii) Completion Report: The Permittee shall prepare and submit to the Commissioner, within ninety (90) calendar days of completion of interim measures and receipt of validated analytical data. Such report shall contain, at a minimum, the following information:
- (A) A description of the interim measures implemented;
 - (B) Summaries of results;
 - (C) Summaries of all problems encountered;
 - (D) Summaries of accomplishments and/or effectiveness of interim measures; and
 - (E) Copies of all relevant laboratory/monitoring data etc. in accordance with this Permit.

7. Remedy Selection and Notification of Remedial Implementation

- (a) The Permittee shall propose a remedy or evaluate one or more remedial alternatives, if necessary, to meet the criteria in the Remediation Standard Regulations. The Commissioner may require that specific remedial alternatives be evaluated. All remedial alternatives must meet the threshold and balancing criteria specified below.

Threshold Criteria:

- (i) Protect human health and the environment;
- (ii) Achieve media cleanup objectives using criteria in the Remediation Standard Regulations; and
- (iii) Control sources of releases to reduce or eliminate further releases.

Balancing Criteria:

- (i) Long-term effectiveness;
- (ii) Toxicity, mobility and volume reduction;

- (iii) Short-term effectiveness;
- (iv) Implementability;
- (v) Cost;
- (vi) Community acceptance; and
- (vii) State acceptance.

The proposed remedy may include any IM implemented to date.

- (b) The Commissioner is not confined to these alternatives evaluated by the Permittee when approving a remedy for the Site or area affected by the Site or any portion thereof.

8. Public Participation

The Permittee has prepared and submitted a Public Participation Plan (PPP) dated June 2024. The PPP is hereby approved with this Permit.

The Permittee shall submit a revised plan sixty (60) calendar days after the installment of any future remedial system of treatment and control, or any significant change in site conditions.

The Commissioner shall review the summary of the comments and the Permittee's responses and shall either: adopt the responses, adopt the responses with modifications, or reject the responses and prepare a response to each comment.

In the event of substantial changes in the remedial or post-closure care approach, the Commissioner may require an additional opportunity for public comment with respect to such changes.

9. Public Notice Requirements

The Permittee has published notice and provided an opportunity for public comment on the Remedial Action Plan for the Facility. Additionally, the Permittee shall provide public notice of any additional proposed remediation and the Commissioner's tentative determination that remediation and/or post-closure or surface and groundwater monitoring is complete at the site or information not already included the Remediation Action Plan. Each public notice must provide a forty-five (45) calendar day comment period and a public information meeting or hearing no earlier than thirty (30) calendar days from the date of the public notice and no later than forty-five (45) calendar days after the public notice.

- (a) Prior to the commencement of any proposed remedial action, the public notice shall summarize the investigations undertaken, the results of the investigations, clearly identify the proposed remedial activities, and include

an address and telephone number for a contact person. The Permittee shall:

- (i) Publish the notice in a newspaper having substantial circulation in the municipality in which the Site or the affected area is located;
 - (ii) Broadcast the notice on a radio station during the high volume listening times on the same day the notice is published;
 - (iii) Provide a copy of the notice to the Chief Elected Official and the Director of Health of the municipality where the Site or affected area is located;
 - (iv) Provide a copy of the notice to the owner or operator of the Site (if the Permittee is not the Site owner or operator) and to all persons on the Facility mailing list maintained pursuant to 40 CFR 124.10(c)(1)(ix); and
 - (v) Erect and maintain a sign at least six (6) feet by four (4) feet for at least thirty (30) calendar days in a legible condition at the Site, clearly visible from the public highway and including the words "ENVIRONMENTAL CLEAN-UP IN PROGRESS AT THIS SITE. FOR FURTHER INFORMATION CONTACT:", and a telephone number at which any interested person may obtain additional information about the remediation.
- (b) Prior to the Commissioner's final determination that remediation and/or post-closure care or surface and groundwater monitoring is complete, the Permittee shall:
- (i) Publish the notice in a newspaper having substantial circulation in the municipality in which the Site or the affected area is located;
 - (ii) Broadcast the notice on a radio station during the high-volume listening times on the same day the notice is published;
 - (iii) Provide a copy of the notice to the owner or operator of the Site (if the Permittee is not the Site owner or operator) and to all persons on the Facility mailing list maintained pursuant to 40 CFR 124.10(c)(1)(ix); and
 - (iv) Include a summary of the basis for the Commissioner's determination.
- (c) Upon the completion of the public comment period the Commissioner shall make a final determination. If the final determination is that closure, post-closure care and/or remediation is complete then the Stewardship Permit will be terminated and a Certificate of Completion will be issued.

10. Implementation of Remedial Activities

The Permittee shall perform all remediation activities for soil, sediment, groundwater and surface water pollution in accordance with the approved RAP(s), any schedules contained therein, and in accordance with the Remediation Standard Regulations. Remediation activities at the site have been completed with exceptions of the Deferred Areas summarized above. The potential for remediation at those Deferred Areas will be determined once investigation at those areas is complete.

11. Completion of Active Remediation

- (a) The Permittee shall notify the Commissioner in writing at least ninety (90) calendar days prior to the date it expects to complete the active remedial activity(ies) at the Site or area affected by the Site or any portion thereof.
- (b) Within sixty (60) calendar days after the completion of the active remediation, the Permittee shall submit to the Commissioner via registered mail, a certification signed by the Permittee and by an independent, registered professional engineer stating that the active remediation phase(s) at the Site or areas affected by the Site or any portion thereof has been completed in accordance with the specifications of the approved RAP(s). Documentation supporting the certification shall be furnished upon the Commissioner's request.

B. RCRA CLOSURE REQUIREMENTS

All the RCRA regulated units, known as "Hazardous Waste Management Unit" or "HWMU" were clean closed. Refer to F16 of Section I for the certification dates. Closure is not required by this Permit.

C. LONG-TERM STEWARDSHIP RESPONSIBILITIES

1. Long-Term Stewardship Plans

The Long-Term Stewardship Plan for this Facility consists of those plans, as applicable, involving remedial action plans, post-remediation maintenance and monitoring, post-closure care of land disposal facilities, monitored natural attenuation, and any other plans necessary to ensure environmental remedies are implemented and maintained.

Some elements of the Long-Term Stewardship Plans for the Facility are included in the RAP submitted to the Department and public noticed on July 16, 2022. Others were submitted for the Commissioner's review and approval a Long-Term Stewardship Plan identifying how to maintain the effectiveness of the Facility's remediation into the future, including, but not limited to, inspection, maintenance, and monitoring of engineered controls and eco-risk soil caps, institutional controls, groundwater and surface water monitoring, and LNAPL removal and monitoring.

The Permittee included the Long-Term Stewardship Plans in Attachment L and M of the application on June 28, 2024, which include the following:

- Maintenance and Monitoring Plan for PCB Engineered Control and ecological-risk cap areas. The Maintenance and Monitoring Plan for PCB Engineered Control was approved by the EPA and DEEP in 2020, and the engineered control application and the Maintenance and Monitoring Plan for ecological-risk caps was approved in 2021 along with the eco-risk work plan.
- Groundwater Monitoring Plan. A report titled “2022 Post Remediation Groundwater & Surface Water Compliance Summary” dated October 2023 summarized the groundwater and surface water monitoring data between the third quarter of 2021 and the fourth quarter of 2022 after the completion of remedial activities. The Permittee proposed to continue the groundwater monitoring of PCB engineered control area, the deferred areas, and the LNAPL area. The monitoring plans are subject to revision and any revision of the monitoring plans shall be submitted for the Commissioner’s review and approval.

In addition, in February 2022, the Permittee assessed 1,4-dioxane in the 15 monitoring wells that have been identified for VOC sampling. 1,4-dioxane was not detected in any of the monitoring wells sampled with the exception of trace levels detected at two monitoring wells at less than 1.3 micrograms per liter (ug/L). The Permittee discontinued sampling of 1,4-dioxane at the site.

In addition to those already submitted, Pfizer is preparing a Soil Management Plan (SMP) to summarize activities allowed and/or not allowed within the four ELUR Subject Areas. The Permittee will submit the document within ninety (90) days of the ELURs being finalized.

2. Revisions to Approved Plans

If at any time the Commissioner or the Permittee determines that a revision to an approved Plan is needed or required, the Permittee shall determine the Class of the revision in accordance with 40 CFR 270, Appendix I.

- (a) For Class 1 revisions, as described in 40 CFR 270, the Permittee shall submit a written notification or request for the Permit modification to authorize a change in the approved Post-Closure Plan in accordance with the applicable requirements of 40 CFR 124 and 40 CFR 270. The written notification or request must include a copy of the amended Long-Term Stewardship Plan for the Commissioner’s records.
- (b) For Class 2 or 3 modifications of the Permit, the Permittee shall submit a new application for a modification to the Stewardship Permit and complete subsequent actions pursuant to 40 CFR 270.42. The Commissioner may require the Permittee to prepare and submit for the Commissioner’s review and written approval a revised Long-Term Stewardship Plan or a Corrective Action Plan.

3. Copy of Approved Plans

The Permittee shall ensure that a copy of any approved Plan is kept at the Facility or at an alternate location acceptable to the Commissioner; while Long-Term Stewardship is required to maintain the remediation.

4. Implementation of Long-Term Stewardship Plan, including:

Upon written approval of a Long-Term Stewardship Plan from the Commissioner, the Permittee shall perform long-term stewardship obligations for remediation systems, engineered controls, institutional controls, surface and groundwater monitoring in accordance with previously approved plans. Any previously approved plans are included herein as Appendix D of this Permit.

(a) Ensure Maintenance of Institutional Controls. The Permittee shall, every five (5) years, certify to the Commissioner on a form or in a format acceptable to the commissioner that the institutional control remains in place and no changes in land use or other use has occurred in violation of the institutional control approved by the Commissioner.

(b) Operate and Maintain Remediation Systems, Monitoring Systems and Engineered Controls. The Permittee shall operate and maintain applicable remediation systems and engineered controls as warranted in accordance with any previously approved Operations and Maintenance Plan for any existing approved engineered control(s) in use at the Facility.

In the absence of an existing approved plan, the Permittee shall develop an Operations and Maintenance Plan for any remediation systems or Engineered Controls used to implement the Remedial Action Plan or final remedy for this Facility, which includes, at a minimum, the following requirements.

(c) Inspection Obligations. The Permittee shall inspect any remediation systems or engineered controls, such as engineered control for PCB area, Eco-cap for ecological risk areas, groundwater monitoring systems and contaminated soil remaining in place at the site.

Inspections shall look for malfunctions, deterioration, and discharges, which may lead to any release of a substance.

For caps, such inspections shall include, but not be limited to:

- (i) Erosion, settling, subsidence or other events that may affect the grading or integrity of an engineered control providing a cap on contaminated soil or waste in place;
- (ii) Integrity of the final cover materials, soils and vegetation;
- (iii) Drainage control; and

- (iv) Evidence of a release from the capped area, including leachate seeps.

The Permittee shall ensure a registered professional engineer or licensed environmental professional conducts the inspections of remediation systems and engineered controls on a quarterly basis or another schedule acceptable to the Commissioner.

The Permittee shall record all inspections in an inspection log. The inspection logs shall include: the date and time of the inspection, the name of the inspector and company or affiliation, a notation of the observations made, and the date and nature of any repairs.

Such records shall be kept for at least three (3) years from the date of inspection or for longer if a more stringent condition applies, and maintained in either an electronic format with a copy available to the Commissioner upon request, or a written copy in the Facility's Operating Record.

- (d) Monitoring Obligations. The Permittee shall at all times properly operate and maintain all monitoring wells which are installed or used by the Permittee to achieve compliance with this Permit as described in the approved Long-Term Stewardship Plan. Proper maintenance, at a minimum, includes inspections to detect existing and potential problems and adequate funding to maintain proper conditions and repair any problems.

The Permittee shall perform surface and groundwater monitoring on a frequency specified in the approved Long-Term Stewardship Plan, and consistent with the constituents of concern. The monitoring frequency must be specified in the Long-Term Stewardship Plan and must be consistent with RCSA 22a-449(c)-104, incorporating 40 CFR 264. A summary of monitoring requirements must be included in the Long-Term Stewardship Plan.

5. Notification Requirements for Newly Discovered Releases

- (a) The Permittee shall notify the Commissioner in writing of any newly discovered release(s) of solid or hazardous waste or hazardous waste constituents discovered during the course of post-closure care, groundwater monitoring, environmental audits, or other means, within fifteen (15) calendar days of the date of discovery.
- (b) If the Commissioner determines that further investigation of the Site is needed, the Permittee shall be required to prepare a plan for further investigation within sixty (60) calendar days of notification by the Commissioner.

6. Future Corrective Action

If the Commissioner determines that environmental data indicates the remediation was not effective, the Permittee shall within one hundred eighty (180) days of the Commissioner's notice, submit for the Commissioner's review and written approval, a plan for the additional characterization and establishment of a corrective action program.

7. Completion of Post-Closure Period for a Closed Hazardous Waste Management Unit

All Hazardous Waste Management Units have been clean closed. No post-closure activities are required.

8. Modification of Post-Closure Period

All Hazardous Waste Management Units have been clean closed. No post-closure activities are required.

9. Miscellaneous

- (a) For any substances reported at or emanating from the Site, for which no remediation criteria has been adopted under the Remediation Standard Regulations, the Permittee shall, in accordance with the Remediation Standard Regulations, submit for the Commissioner's review and written approval a proposal for additional remediation and establishment of criteria for additional polluting substances.
- (b) The Permittee shall not operate the Facility in any manner that stores, treats, or disposes of hazardous wastes or manages hazardous wastes for greater than 90 days other than hazardous wastes that may be generated during Facility maintenance, authorized closure and/or corrective action activities. Such waste shall be managed in accordance with all applicable regulations. The Permittee shall comply with all applicable requirements of RCSA Section 22a-449(c)-102 incorporating 40 CFR Part 262 "Standards Applicable to Generators of Hazardous Waste".

D. FINANCIAL RESPONSIBILITY

1. Cost Estimates

The Permittee has submitted for the Commissioner's review of written estimate(s) for the cost of performing operation, maintenance, and monitoring of engineered control and eco-cap. These cost estimates were approved with the engineered control application and eco-risk work plan and financial assurance has been established. The Permittee shall submit for the Commissioner's review of written estimate(s) for the current cost of performing post-closure care inclusive of surface and groundwater monitoring, LNAPL removal and monitoring, and investigation and remediation of the Deferred Areas or areas affected by the Site in accordance with the requirements of this Permit. The Permittee shall ensure that such written estimates are prepared in accordance with the methodology specified in RCSA 22a-449(c)-104 incorporating 40 CFR 264.142(a) and 40 CFR 264.144(a), as applicable.

Note a fifteen percent (15%) contingency shall be applied to the estimates for unforeseeable elements or events which may increase the cost of performing closure, post-closure care and corrective action.

2. Establishment of Financial Assurance

In accordance with the time frame specified in the Compliance Schedule of this Permit, the Permittee shall establish and continually maintain financial assurance for the Facility in accordance with one of the methods specified in 40 CFR 264.143(a)-(g), as modified by 22a-449(c)-104(a) (2). The Permittee shall ensure that the wording of the financial assurance mechanism(s) secured for the purpose of compliance with this section of the Permit is identical to the wording specified in 40 CFR 264.151, as modified by 22a-449(c)-104(a)(2). The Permittee shall maintain such financial assurance in effect until the Commissioner notifies the Permittee in writing that it is no longer required to maintain such financial assurance for closure of the Facility in accordance with 40 CFR 264.143(i).

The Permittee has established the financial assurance in an amount of \$92,647 in a form of Certificate of Insurance for the engineered control area to address the PCBs risk to human health and the remediated/capped areas to address ecological risks.

The Permittee shall establish a financial assurance for the investigation and remediation, if necessary, of the Deferred Areas; specifically, SWMU 30, and AOCs -12, 33, and 47.

The Permittee shall establish a financial assurance for performing surface and groundwater monitoring and LNAPL removal and monitoring.

3. Inflationary Adjustments

The Permittee shall adjust amounts of financial assurance to reflect inflationary costs as required by RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.142, and any factors that bear on the cost of performing the work that remains to be completed under this Permit. Adjustments shall be made each year, on the anniversary of the establishment of the mechanism(s) for financial assurance until the Commissioner releases the Permittee from the financial assurance requirements of this Permit.

The latest adjusted cost estimate(s) shall be kept at the Facility and a signed original shall be submitted to the Commissioner within fourteen (14) calendar days of preparation.

4. Periodic Reductions

Upon request by the Permittee, the Commissioner may approve periodic reductions in the amount of financial assurance commensurate with the completion of corrective action activities. Such request shall include a revised cost estimate and demonstration of completed work activities which equates to at least a fifteen percent (15%) reduction in the estimate costs.

5. Maintenance of Financial Assurance

The Permittee shall maintain such financial assurances in effect until the Commissioner notifies the Permittee in writing that it is no longer required to maintain such a mechanism for financial assurances as provided for in this Permit.

6. Release of Financial Assurance

(a) Within sixty (60) calendar days after receiving certification, submitted pursuant to this Permit that Active Remediation has been completed in accordance with the approved RAP, the Commissioner will notify the Permittee in writing that it is no longer required to maintain financial assurance for remediation, unless the Commissioner has reason to believe that the remediation activities have not been performed and/or completed in accordance with the approved RAP. The Commissioner shall provide the Permittee with a detailed written statement of any such reason(s) to believe that remediation activities have not been performed and/or completed in accordance with the approved RAP.

(b) Within sixty (60) calendar days after receiving certification, submitted pursuant to this Permit that post-remediation groundwater monitoring has been completed in accordance with the approved Groundwater Monitoring Plan, the Commissioner will notify the Permittee in writing that it is no longer required to maintain financial assurance for post-remediation groundwater monitoring, unless the Commissioner has reason to believe that the groundwater monitoring has not been performed and/or completed in accordance with the approved Groundwater Monitoring Plan. The Commissioner shall provide the Permittee with a detailed written statement of any such reason(s) to believe that post-remediation groundwater monitoring has not been performed and/or completed in accordance with the approved plan.

7. Failure to Perform

If the Permittee fails to perform any of the terms or conditions of this Permit, the financial assurance shall be available to the Commissioner to perform such terms or conditions of this Permit provided that, prior to drawing upon any mechanism(s) for financial assurance, the Commissioner shall notify Permittee, in writing, of the alleged failure to perform and provide Permittee with a reasonable period of not less than fifteen (15) calendar days in which to remedy the alleged non-performance.

SECTION III
COMPLIANCE SCHEDULE

Pfizer Inc

EPA ID No. CTD001147495

Permit No. DEEP/REM/SP/2024-9574

SECTION III COMPLIANCE SCHEDULE

A. SCHEDULE OF WORK

The Permittee shall conduct the following actions in compliance with this Permit:

Item	Topic	Description	Submittal Due Date
1	Retention of Environmental Professional	The Permittee shall retain one or more qualified consultant(s), licensed professional engineer(s) (PE), or LEP(s) acceptable to the Commissioner to oversee the activities and prepare the documents required by this Permit. The Permittee shall no later than thirty (30) days after the effective date of this Permit, notify the Commissioner in writing of the identity of such environmental compliance expert and/or LEP(s), PE or consultants. The Permittee shall assign and/or retain such qualified LEP, PE, or consultant, acceptable to the Commissioner, until the Permittee has fully complied with this Permit.	Due: Within thirty (30) calendar days of the effective date of this Permit
2	PFAS Baseline Monitoring Plan, if applicable.	Submit rationale for the applicability of PFAS sampling plan. If it is applicable, submit for review and approval of a groundwater monitoring plan that provides sampling details for per- and polyfluorinated alkyl substances (PFAS) for an initial assessment of baseline concentrations in on-site monitoring wells pursuant to Connecticut RCSA 22a-449(c)-104 which incorporates 40 CFR 264 Subpart F. Subsequent rounds of testing may be required dependent upon reported concentrations.	Due: On or before 180 calendar days of the effective date of this Permit.
3	Long-Term Stewardship Plan	Submit a Long-Term Stewardship Plan that details the activities to continuing protecting human health and the environment around the Site. The Plan shall consist of details specified in Section II(A) of this Permit including an updated Post-Closure Care Plan, and updated Water Quality Monitoring Plan, and Maintenance of Financial Assurance.	One calendar year from the effective date of this permit.
4	Public Participation Plan (PPP)	A PPP was included in the application and will be approved with the permit.	Due: It will be approved with this permit.

Item	Topic	Description	Submittal Due Date
5	List of Areas of Concern (AOCs)	It is included in the Attachment J of the application and Attachment C of this permit.	Due: It is subject for review and revision.
7	NDDDB Determination Letter	Determination of presence of any species of concern. Obtained from Wildlife Division within 2 years of any active onsite work (e.g., construction of remedial systems).	Due: Complete
8	Screening Level Ecological Risk Assessment (SLERA)		Complete
9	Baseline Ecological Risk Assessment (BERA)	No need.	None
10	Remedial Action Plan for Deferred Areas	A detailed RAP for the deferred areas should be prepared after the completion of investigation.	Date to be determined.
11	Remedial Action Report for Deferred Areas	The Remedial action report shall be submitted if any of the deferred areas require remediation.	Date to be determined.
11a	Updated cost estimate for deferred areas	Use average of two scenarios (minimum and maximum remediation)	Date to be determined.
12	Environmental Use Restriction	Documents to be submitted and documentation of presence in land records	It is in process
12a	Soil Management Plan	Soil management plan to summarize restrictions/management needs for EUR.	90 days after EUR being finalized
13	Update list of Contaminants of Concern to include emerging contaminants	Submit a summary letter to include rationale for assessing applicability of per- and polyfluorinated alkyl substances (PFAS) in on-site monitoring wells.	Due: Within one hundred and eighty (180) days of the effective date of this Permit.
14	Updated Cost Estimates	The Permittee shall submit for the Commissioner's review and written approval the cost estimate for completing corrective action and for completing	Within one hundred eighty (180) days after the

Item	Topic	Description	Submittal Due Date
		long-term stewardship obligations in accordance with the requirements of Section II of this Permit.	effective date of the Permit.
15	Coastal Resiliency Review	Coastal Consistency Review was included in Attachment D of the application.	Complete
16	Quality Assurance Project Plan	Permittee shall prepare and submit for the Commissioner's review and written approval a Quality Assurance Project plan (QAPP).	Within one hundred eighty (180) days after the effective date of the Permit.

B. MAINTAIN FINANCIAL ASSURANCE

Within one hundred fifty (150) calendar days of the Commissioner's approval of the cost estimate submitted in accordance with this Permit, the Permittee shall continually maintain financial assurance using one or more financial assurance mechanisms prescribed by the Commissioner for post-closure care inclusive of groundwater monitoring of the Site or areas affected by the Site.

C. ANNUAL PROGRESS REPORTS

Until all actions required by this Permit have been completed to the Commissioner's satisfaction, the Permittee shall submit a progress report for the Commissioner's review. The report will be prepared on a calendar-year basis. Each such report shall be submitted to the Department no later than March 1st of each year and annually thereafter.

Such reports shall, at a minimum:

- Describe the actions which the Permittee has taken in the prior calendar year to comply with the terms and conditions of this Permit;
- Summarize with charts and graphs any exceedances of Remediation Standard Regulations criteria and/or drinking water criteria detected during monitoring;
- Identify the measures taken to correct the cause of any such exceedances of Remediation Standard regulations and/or drinking water criteria;
- Summarize the results of any inspections of the landfill cap, engineered controls, remediation systems, and institutional controls;
- Summarize corrections taken to address deficiencies identified in inspections of the landfill cap, engineered controls, remediation systems, and institutional controls;

- Recommend, as appropriate, modifications of groundwater monitoring plans and remedial systems; and
- Identify any planned work for the upcoming year.

The Commissioner may issue a notice of deficiency to require the modification and revision of the Annual Progress Report. The Commissioner may respond to requests for changes in any plans being implemented at the Facility that are included in the Annual Progress Report. The Annual Progress Report shall contain the certification prescribed in RCSA Section 22a-449(c)-110 incorporating 40 CFR 270.11, and signed by the Permittee or PE, LEP, or consultant.

APPENDIX A

Compliance Schedule status summary

Pfizer Inc

EPA ID No. CTD001147495

Permit No. DEEP/REM/SP/2024-9574

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

Item	Topic	Date Submitted	Approved
1	Retention of Environmental Professional		
2	Baseline Ecological Risk Assessment (BERA)	NA	
3	Cost Estimates – Deferred Areas	6/28/2024	
4	Coastal Resiliency Review	6/28/2024	
5	Engineered Control (EC) Variance	7/15/2020	10/28/2020
6	Institutional Controls (Deed Notice)	Pending	
7	Investigation Plan or Report - Deferred Areas	6/28/2024	
8	List Identifying Areas of Concern (AOCs)	6/28/2024	
9	Long-Term Stewardship Plan - Groundwater Monitoring Plan	Pending	
10	NDDDB Determination Letter		03/23/2022
11	Per- and Polyfluorinated Alkyl Substances Sampling Plan -rationale letter or plan	Pending	
12	Public Participation Plan	6/28/2024	Date of SP
13	Quality Assurance Project Plan	Pending	
14	Remedial Action Plan (RAP)	2020	NA
15	Remedial Action Report (RAR)	2022	NA
16	Schedule/Scope of Work	NA	NA
17	Screening Level Ecological Risk Assessment (SLERA) Plans and Reports	June 2021	7/18/2021
18	Update list of Contaminants of Concern to include emerging contaminants, if applicable	Pending	
19	Soil Management Plan for EUR	Pending	

APPENDIX B

Site Map

Pfizer Inc

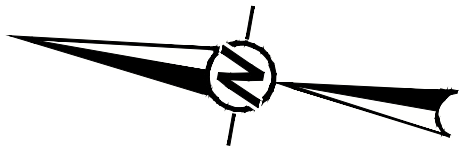
EPA ID No. CTD001147495

Permit No. DEEP/REM/SP/2024-9574

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

Figure H-2, East Campus Site Plan
Figure H-3, West Campus Site Plan



RESIDENTIAL USE

RESIDENTIAL USE

GOLF COURSE

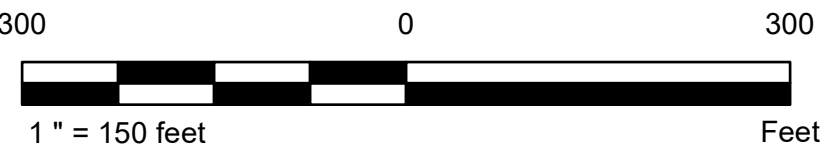
RESIDENTIAL USE

RESIDENTIAL USE

COMMERCIAL USE

LEGEND

- Residential Activity Soil EUR, Subject Area A
- General Surface Water Flow Direction
- Historical Site Building
- Approximate Property Line
- Approximate Property Boundary of Former Pfizer Parcel
- Surface Water Feature
- Closed due to Investigation Data or Historical Knowledge
- Closed due to Remediation Completion and Investigation data or Historical Knowledge
- RCRA Clean Closed
- Approximate Wetland Location
- Existing Site Building with Number
- Former Pfizer Building with Number



NOTE(S)

1. OWNERSHIP OF BUILDING 286 WAS TRANSFERRED FROM PRIZER IN 2015.

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CONNECTICUT FIPS 0600 FEET
2. BASE MAP FROM DIGITAL CAD FILE 2011169 SB AND BW DATED 11/30/2011 PREPARED BY CME ASSOCIATES INC. SOIL BORING AND MONITORING WELL SURVEY LOCATIONS PROVIDED BY CME ASSOCIATES INC.

DURING THE PHASE II AND PHASE III INVESTIGATIONS. HISTORICAL SITE BUILDING DIGITIZED USING 1993 WOODARD & CURRAN FIGURE ENTITLED "LOCATION OF SOIL EXCEEDING RESIDENTIAL DIRECT EXPOSURE CRITERIA FOR TOTAL PETROLEUM HYDROCARBONS."

CLIENT

PFIZER INC
EASTERN POINT RD.,
GROTON, CT

PROJECT

STEWARDSHIP PERMIT APPLICATION,
APPENDIX H – FACILITY PLANS

TITLE

EAST CAMPUS- AREAS OF CONCERN/SOLID WASTE
MANAGEMENT UNITS/RELEASE AREAS

CONSULTANT



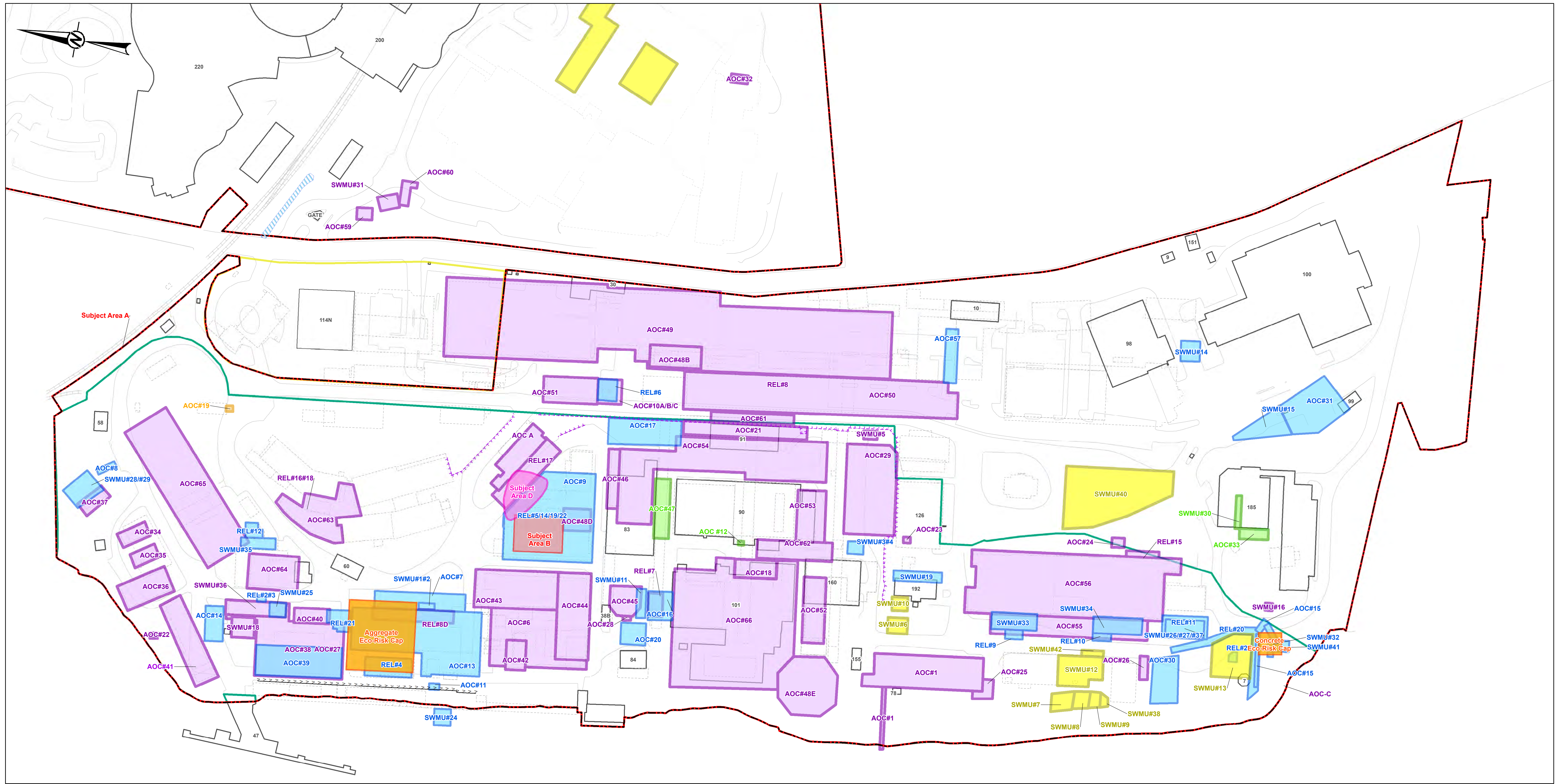
YYYY-MM-DD	2024-06-26
DESIGNED	DPJ
PREPARED	EMM
REVIEWED	JR
APPROVED	JLF

PROJECT NO.
31405041.080

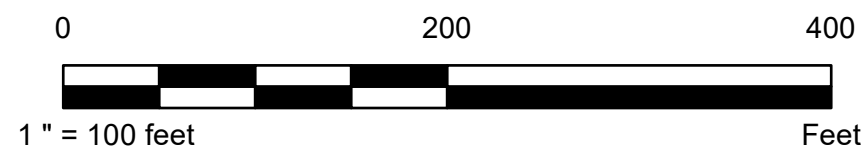
CONTROL
-

REV.
-

FIGURE
H-2



- LEGEND**
- Approximate Property Boundary of Former Pfizer Parcel
 - Approximate Property Line
 - Residential Activity Soil EUR, Subject Area A
 - Historical Site Building
 - Existing Site Building with Number
 - Former Pfizer Building with Number (114N)
 - Engineered Control
 - Deferred
 - Closed due to Remediation Completion and Investigation data or Historical Knowledge
 - Closed due to Investigation Data or Historical Knowledge
 - Closed due to Remediation Completion
 - RCRA Clean Closed
 - Inaccessible Soils, Subject Area C, AOC-C
 - NAPL Variance, Subject Area D
 - Approximate Wetland Location
 - Ecological Risk (Eco-Risk) Cap



CLIENT
PFIZER INC
EASTERN POINT ROAD
GROTON, CT

CONSULTANT



YYYY-MM-DD	2022-03-03
DESIGNED	DPJ
PREPARED	EMM
REVIEWED	J R
APPROVED	JLF

NOTE(S)
1. OWNERSHIP OF BUILDING 114N WAS TRANSFERRED FROM PFIZER IN 2015.

REFERENCE(S)
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CONNECTICUT FIPS 0600 FEET
2. BASEMAP FROM DIGITAL CAD FILE "2011169 SB AND BW" DATED 11/30/2011 PREPARED BY CME ASSOCIATES DURING THE PHASE II AND PHASE III INVESTIGATIONS.
3. IMAGERY SOURCE:

PROJECT
STEWARDSHIP PERMIT APPLICATION,
APPENDIX H – FACILITY PLANS

TITLE
**WEST CAMPUS - AREAS OF CONCERN/SOLID WASTE
MANAGEMENT UNITS/RELEASE AREAS**

PROJECT NO. 31405041.080 CONTROL - REV. -

FIGURE
H-3

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

APPENDIX C

Table - List of SWMU and AOCs

Pfizer Inc

EPA ID No. CTD001147495

Permit No. DEEP/REM/SP/2024-9574

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

AOC/SWMU/Others Summary Table

Pfizer Inc, Groton, CT Facility, CA-550-OF Remedy
Construction Status, August 9, 2022

				Historical Activities			Phase II - Phase III Activities					
Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards	Unit Investigation Activities	Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
SWMU	1	Region D: East of Building 4 (Adjacent to C-2)	Former storage tank 1012 stored RCRA D001 and F005 listed hazardous waste for less than 90 days. Tank 1012 was a vertical AST with a capacity of 8,000 gals. The tank was in service from 1959 to 1997.	VOCs	Tank/associated piping removed during building decommissioning/demolition. Site investigation/soil sampling by W&C . 93 tons of soil removed June/July 1997.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings (2021); downgradient GW monitoring (MW-9904)	None - SPLP results below threshold	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	-
SWMU	2	Region D: East of Building 4 (Adjacent to C-1)	Former storage tank 690 stored RCRA D001 and F005 listed hazardous waste for less than 90 days. Tank 690 was a vertical AST with a capacity of 7,000 gals. The tank was in service from 1959 to 1997.	VOCs	Tank/associated piping removed during building decommissioning/demolition. Site investigation/soil sampling by W&C . 93 tons of soil removed June/July 1997.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings (2021); downgradient GW monitoring (MW-9904)	None - SPLP results below threshold	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	-
SWMU	3/4	Region E: North of Building 126 in western section of the solvent recovery tank farm.	Storage tank C-757 and C-758 stored RCRA D001 and F003 listed hazardous waste from Buildings. 150, 167 and 103 for less than 90 days. They were horizontal ASTs with capacities of 11,000 gallons each.	VOCs, SVOCs, ETPH	During decommissioning field investigation consisting of sampling of concrete was performed by W&C in September 1997. 1 sample was taken per 100 square feet. All COCs below CTDEEP RSRs, no concrete remediaton necessary. Tank removed during building decommissioning/demolition circa 2003.	Remedial Action Plan, Woodard & Curran, December 1999; Internal Pfizer Legal Reserve dated November 25, 2003; Internal Pfizer correspondence dated November 26, 2003.	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	5	Region E: West of Building 103 in eastern section of the solvent recovery tank farm	Storage tank C-770 stored RCRA D001 and F003 listed hazardous waste from Buildings. 150, 167 and 103 for less than 90 days. C-758 was a horizontal AST with a capacity of 11,000 gallons.	VOCs, SVOCs, ETPH	Concrete sampling conducted, no remediation required. No soil sampling conducted due to concrete containment directly on bedrock.Tank removed during building decommissioning/demolition 1998	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	6	Region F: East of equalization basin	Former Tank CT-101 stored RCRA D001, D002, and F003 hazardous waste that was fed to the pyrolyzer. Tank CT-101 was a vertical AST with a capacity of 200,000 gallons. Area was associated with a former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. During decommissioning tank was RCRA closed and converted to CWA service. Closure was approved by CTDEEP in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	7	Region F: Along Building 171	Former Tank CT-102 stored RCRA D001 and F003 hazardous waste that was fed to the pyrolyzer. Tank CT-102 was a vertical AST with a capacity of 150,000 gallons. Area was associated with a former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Site investigation and remediation completed in 1996. Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Tank was RCRA closed in 1996. Closure of tank approved by CTDEEP in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	8	Region F: Along Building 171	Former Tank CT-103 stored RCRA D001 and F003 hazardous waste that was fed to the pyrolyzer. Tank CT-103 was a vertical AST with a capacity of 60,000 gallons. Area was associated with a former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Tank was RCRA closed in 1996. Closure was approved by CTDEEP in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
SWMU	9	Region F: Along Building 171	Former Tank CT-104 stored RCRA D001 and F003 hazardous waste that was fed to the pyrolyzer. Tank CT-104 was a vertical AST with a capacity of 60,000 gallons. Area was associated with a former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Tank was RCRA closed in 1996. Closure was approved by CTDEEP in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil Boring	N/A	Supplemental Phase II/Phase III	RC	-
SWMU	10	Region F: West of equalization basin	Former Tank CT-109 stored RCRA D001 and F003 hazardous waste that was fed to the pyrolyzer. Tank CT-109 was a vertical AST with a capacity of 4,500 gallons. Area was associated with a former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Tank was RCRA closed in 1996. Closure was approved by CTDEEP in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	None	N/A	Supplemental Phase II/Phase III	RC	-
SWMU	11	Region E: Building 101	Former truck loading station. Spent solvents (RCRA D001 and F003) were stored in a 5,000 gallon tank truck outdoors of the cogen facility and were used to fuel the four boilers. Waste solvent was fed from this tank at 3 gpm.	VOCs, SVOCs, ETPH	During decommissioning sampling of the concrete pad and the subsoil detected no contamination. The former truck loading station was demolished. RCRA Closure completed 1993	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil Borings, downgradient groundwater monitoring (BW-E21)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	12	Region F: Building 171B	Selected nonhazardous and RCRA D001, D003, and F003 waste streams were thermally destroyed at the former rotary hearth pyrolysis unit at a maximum rate of 4.25 tons per hour. Area was associated with a former pyrolyzer unit.	VOCs, SVOCs, ETPH, metals, PCBs	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Building 171B and the associated pyrolyzer equipment were RCRA closed and demolished in 1996. Closure of the Pyrolyzer Unit was CTDEEP approved in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings, downgradient groundwater monitoring (BW-F22)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	13	Region F: South of Building 172	RCRA hazardous wastes (D001, D002, D003, F003, and F15 were stored in 55 gallons drums in this unit prior to off-Site disposal. The storage area was 6,750 square feet and had a maximum capacity of 1,350 drums.	VOCs, SVOCs, ETPH, metals	Closure plan approved by CTDEEP in 1993; Site investigation and closure sampling conducted in 1994 by RECRA Environmental, Inc; No remediation required, closure approved by CTDEEP	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings, downgradient groundwater monitoring (MW-9901)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	MW-9901
SWMU	14	Region C: Southeast of Building 113	RCRA hazardous waste and waste oil were stored in 55 gallons drums in this unit prior to off-Site disposal. The storage area was 50 feet by 30 feet and had a maximum capacity of 100 drums.	VOCs, SVOCs, ETPH, metals	Use of area discontinued in 1992. During decommissioning six soil borings completed by Woodard & Curran in March 1999. Approximately 20 cubic yards of soil was removed from the Site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings, downgradient groundwater monitoring (OW-C17)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	15	Region C: East of Building 185	Waste oils were stored in 55 gallons drums in this unit prior to off-Site recycling/recovery. The storage area was 75 feet by 50 feet and had a maximum capacity of 200 drums.	SVOCs, ETPH, metals	Soil sampling from test pits. During decommissioning 400 pounds of visibly contaminated soil was excavated and disposed off-site. RSRs were not exceeded.	Remedial Action Plan, Woodard & Curran, December 1999; 1998 B70 <90 Day Area" Closure Report.	None	Soil borings, downgradient groundwater monitoring (BW-C06)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	RC	-
SWMU	16	Region F: South end of property; west of Building 192 159.	Former lead acid storage area . The area was used to store 20 spent lead batteries prior to their disposal. Use of area discontinued in 1997.	metals	Soil sampling in 1994. No contamination found. Compounds detected during soil sampling were below background levels.	Remedial Action Plan, Woodard & Curran, December 1999	None	Downgradient groundwater monitoring (MW-9901)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	-

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								Unit Investigation Activities				
SWMU	17	Region H: Research Northeast of Building 260 (former Building 160)	Former <90 day storage truck loading area that had the capacity to store 600 20-gallon fiber drums of waste solids.	VOCs, SVOCs, ETPH, metals	Field investigation performed by OHM Remediation Services Corp during decommissioning. No contamination found. Compounds detected during soil sampling were below background levels. RCRA closed in 1992.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings, groundwater monitoring (BW-H05)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	18	Region D: West of Tank Farm 117	Former <90 day 7,000-gallon tank truck storage area for waste solvents;	VOCs, SVOCs, ETPH, metals	During decommissioning the previous less than 90 day truck loading area was replaced with a new less than 90 day truck loading area. Included in closure of B117 Tank Farm.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	-
SWMU	19	Region F: East of Building 192 West of Building 192	Former <90 day storage area with a single 7,000 gallon tanker truck of waste solvents. Pyrolyzer Slot No. 1 use discontinued in 1995. Building 167 demolished in 1997. Had a 3 bay sump which was removed.	VOCs, SVOCs	Investigation completed by Woodard & Curran in June 2000. No further investigation/remediation work recommended.	Remedial Action Plan, Woodard & Curran, December 1999; SWMU No. 19 Closure Report, Woodard & Curran, June 2000	N/A	None	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	20	Region H: Research Building 118	Former <90 day storage area. The storage area was 22 feet by 10 feet and had a maximum capacity of 200 20-gallon drums of waste solvents and 8 55-gallon drums of waste solvents.	VOCs, SVOCs, ETPH	Investigation conducted by OHM Corporation. Subsurface soil was analyzed for COCs. 8 cubic yards of contaminated soil (volatiles) was excavated from the site during decommissioning. Clean closure certified during July, 1993.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring, groundwater monitoring (BW-H03)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	21	Region H: Research Building 156	Primary location of water-tight former <90 day hazardous waste storage container. The storage container had a capacity of 8 55-gallon drums of waste solvents and provided secondary containment and a permanent roof.	VOCs, SVOCs, ETPH	Unit decommissioned January 19, 2006 per Pfizer standard protocol. During decommissioning, visual inspection did not reveal any evidence of any releases of hazardous wastes. A review of inspection records indicated no release of wastes from the storage container.	Remedial Action Plan, Woodard & Curran, December 1999; Closure of the Less Than 90 Day Storage area - B156N Bulk Solvent Unit, Pfizer, January 2006.	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	22	Region H: Research Building 175	Former <90 day storage area. The storage area was 20 feet by 30 feet and had a capacity of 50 55-gallon drums. This area stored radioactive wastes.	VOCs, SVOCs, ETPH	Pfizer decommissioned unit on August 11, 1995. Pfizer excavated and disposed of impacted materials as part of decommissioning.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	23	Region H: Research Building 196	Former <90 day storage area (ended in 1995). The storage area was 10 feet by 10 feet and had a maximum capacity of 16 55-gallon drums of waste solvents.	VOCs, SVOCs, ETPH	During decommissioning visual inspection did not reveal any evidence of any releases of hazardous wastes. A review of inspection records indicated no release of wastes to or beyond sump.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	24	Region D: Along inner pier; south of Building 143	Former 11,700 gallon solvent decant tank. The tank was located on a concrete pad , supported by a wood dock structure. The tank operated between 1971 and 1995. The area beneath this former SWMU is beneath the water level in the Thames River. It is not probable to expect solvents to be present from the former tank.	VOCs	Wood platform and concrete deck sampled September 1995. Residue removed from tank and disposed as hazardous waste (F005). During decommissioning tank cleaned and disposed of as scrap metal. Wood platform was removed and concrete containment was scarified and dispose of as F005 waste 10/95 and 2/96. Balance disposed of in 1996. Dock removed and sea wall built in place.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	None	N/A	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
SWMU	25	Region D: South end of Tank Farm 117	Former Haz Waste storage tanks w/ 10,000 gallon capacity (replaced in 1989)	VOCs, SVOCs, ETPH, metals	During decommissioning gravel around tank and set on bedrock was removed and sampled. Tank removed and replaced in August 1989. Gravel was excavated and disposed of off site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	26	Region F: Center of Organic II South Tank Farm located in the southwest corner of the facility. (Building 149A)	Former Haz Waste storage tank with three compartments (S-31, S-32, and S-33) of 10,000 gallon capacity each. Compartments S-31 and S-33 stored haz waste. Compartment S-32 stored raw material. Tank removed and replaced in 1991.	VOCs, SVOCs, ETPH	Post-excavation soil samples were collected and analyzed for COCs. During decommissioning tank removed and replaced in August 1991. Soil sampling and excavation was performed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	27	Region F: North end of Organic II South Tank Farm located in the southwest corner of the facility. (Building 149)	One hazardous waste storage compartment (S-25) of a former three-compartment storage tank with a capacity of 10,000 gallons. Tanks removed and replaced in 1989.	VOCs, SVOCs, ETPH	Post-excavation soil samples were collected and analyzed for COCs. During decommissioning tank removed and replaced in June 1989. Soil sampling and excavation was performed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	28	Region D: West of Building 58	Former solvent incinerator used until 1967. Area combined with SWMU 29 for investigation purposes.	SVOCs, PCBs, cyanide, lead	An investigation of the area was performed by Woodard & Curran in January 1999. Test pits were completed in soil beneath Building 57, and test borings were completed in the area north of Buiding 57. Soil excavated and removed from under the hydrogen storage area (57) in January 1999. Additional soil was removed in October 1999 and disposed of off site.	Remedial Action Plan, Woodard & Curran, December 1999	Methylene chloride (soil)	Soil borings, groundwater monitoring (MW-D104)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-D104
SWMU	29	Region D: West of Building 58	Former solid waste incinerator used to burn primarily paper until 1965. Area overlaps with SWMU 28; combined for investigation purposes.	SVOCs, PCBs, cyanide, lead	An investigation of the area was performed by Woodard & Curran in January 1999. Test pits were completed in soil beneath Building 57, and test borings were completed in the area north of Building 57. Soil excavated and removed from under the hydrogen storage area (57) in January 1999. Additional soil was removed in October 1999 and disposed of off site.	Remedial Action Plan, Woodard & Curran, December 1999	Methylene chloride (soil)	Soil borings, groundwater monitoring (MW-D104)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-D104
SWMU	30	Region F: Building 185	Former truck loading station used to transfer RCRA haz waste solvents. Loading station demolished in 1989. No reported releases.	VOCs, SVOCs, ETPH, metals	No investigation has been performed. Area inaccessible.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	Area inaccessible	EUR Type 3	Supplemental Phase II/Phase III	Operating Facility	-
SWMU	31	Region H: East of Eastern Point Road (Research)	Former waste oil storage tank - 1,000-gallon (between 1945 and 1955)	VOCs, SVOCs, ETPH	Area inaccessible previously.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	32	Region F: Southwest corner of Site	Former solvent incinerator used to burn waste solvents (1969). Pfizer excavated 291 tons of SVOC-impacted soil in 1997. Post excavation samples indicate no exceedances.	VOCs, SVOCs, metals	Investigation of area was performed at the time of the Drum Crusher Area (SWMU #41). Subsurface soil samples were collected. Test pits were dug. 291 tons of soil were removed.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	-
SWMU	33	Region F: Erythorbic Tank Farm located in the southern side of the western portion of the facility. (Building 136, adjacent to former Building 123)	Former Erythorbic Tank Farm; Removed in 1988 and replaced 1990. Gravel underlying tanks were treated on-site (see SWMU 40).	VOCs, SVOCs	Tanks replaced to meet 1988 UST regulations. No sampling performed, all soils removed during decommissioning. All gravel within the tank vault was excavated down to bedrock. Gravel removed was treated on site (SWMU #40)	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings, downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
SWMU	34	Region F: Building 149 (adjacent to former Building 123)	Former Organic II N. Tank Farm (Building 149) that operated between 1965 and 1991. 7 USTs used to store miscellaneous new solvents. Removed in 2008.	VOCs, SVOCs	Tanks replaced to meet 1988 UST regulations. No sampling performed, all soil removed. All soils within the tank vault were excavated down to bedrock. Soils removed were treated on site (SWMU #40)	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	35	Region D: Adjacent to Building 5	Former Organic III Tank Farm. Tanks were removed and replaced in 1989	VOCs	Tanks removed and replaced in 1989. Soil sampling and excavation was performed. All soils within the tank vault were excavated down to bedrock. Soils removed were treated on site via SWMU#40.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	36	Region D: Building 117	Former Tank Farm at Building 117 consisting of seven USTs used to store miscellaneous solvents associated with the manufacturing operations conducted in Organic Synthesis Building 80. In 2008, Pfizer removed the tanks.	VOCs	During decommissioning gravel around tank and set on bedrock was removed and sampled. Tank removed and replaced in August 1989. Gravel was excavated and disposed off site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	37	Region F: Adjacent to Building 149A	Former Organic II S Tank Farm. Tanks were removed and replaced in 1991 and removed in 2008.	VOCs, SVOCs	Post-excavation soil samples were collected and analyzed for COCs. Tank removed and replaced in August 1991. Soil sampling and excavation was performed duing decommissioning.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	38	Region F: Adjacent to Building 171B	Former Tank C-110 vas an AST with a capacity of 2,000 gallons used to store haz and non-haz wastes slurries which were fed to the pyrolyzer between 1990 and 1995. Demolished in 1996. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, ETPH, metals	Site investigation and remediation completed in 1996. Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. Closure of the Pyrolyzer unit was CTDEEP approved in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Groundwater monitoring (MW-9902)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
SWMU	39	Region H: Within research Building 294. (Former Building 194)	Pathological Incinerator of Type II (rubbish and garbage) and IV (animal remains) waste and used as an energy recovery systems incinerator between 1989 and 2004.	Metals	No investigation completed	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
SWMU	40	Region F: Large parking area east of Building 123.	Former soil pile treated by an aboveground on-site soil vapor extraction system. The soil pile was staged in this location between 1989 and 1995. The treated soils were disposed of in May 1995 and SWMU closed under EPA approval.	VOCs, SVOCs	Treated soil approved for disposal by EPA in May 1995, and rinsate from powerwashing was collected and treated in the on-site WWTF.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	None - Closed by EPA May 1995	N/A	Supplemental Phase II/Phase III	RC	-
SWMU	41	Region F: South of hazardous waste drum storage area. (SMWU 13)	Former drum crusher area. Crushed previously washed empty 55 gallon drums from all areas of the facility. Drum crusher operated between 1989 and 1995. In 1997, Pfizer excavated 291 tons of SVOC-impacted soil from this location. Post excavation samples were taken in sidewalls and bottom of the excavation indicated with no exceedances.	VOCs, SVOCs	An investigation of area was performed at the time of the former solvent incinerator (SWMU #32). Subsurface soil samples were collected. Test pits were dug. Approximately 291 tons of soil were excavated and disposed off-site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Downgradient GW monitoring (MW-9901)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	-

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								Unit Investigation Activities				
SWMU	42	Region F: Eastern wall of former Building 171B	Formerly used for collection of ash residues from the pyrolyzer. Area is associated with the operation of the former pyrolyzer unit. CTDEP approved closure of this SWMU in 1999.	VOCs, SVOCs, cadmium, zinc	Concrete containment samples collected and analyzed as part of pre-demolition facility characterization. Following demolition, subsurface soil samples were collected from the facility footprint and analyzed for COCs. The east side of Building 171B was RCRA closed and demolished in 1996. Site investigation and remediation completed in 1996. Closure of the Pyrolyzer Unit was CTDEEP approved in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Downgradient GW monitoring (MW-9902)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	1	Region H: No. 2 Fuel oil storage tank, west of Building. 274 (formerly 174).	680 gallons of No. 2 fuel oil released into the soil and groundwater from a supply line leak.	VOCs, SVOCs, ETPH	Visibly contaminated soil and leaking pipeline was removed. The tank was replaced with ASTs. Downgradient gw monitored.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	2	Region D: Tank S-112, Building 117 Tank Farm	In 1987, 2850 gallons of toluene released to the gravel vault area around the tank and some was released into the plant effluent system.	Toluene	All of the tank farm gravel bed above bedrock was removed and disposed off-site. The tank was replaced and all soil in the vault area, down to gw, was removed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	3	Region D: Tank S-107, Building 117 Tank Farm	In 1987, 550 gallons of ethyl acetate released to the gravel vault area around the tank and some was released into the plant effluent system.	Ethyl acetate	The tank was removed and all soil in the vault area, down to the groundwater level, was removed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	4.1	Region D: Building 108	Release 1. 260 lbs. of Raney Nickel, along with water, dextrose and Sorbitol was released onto the roof of Building 108, plus the adjoining roadway and Building.	Nickel	A subsurface investigation was conducted on the underlying soils. Building 108, along with buildings 108A, 145, 152 and 43 were demolished in August, 1999. After removal of the concrete building pad, a subsurface investigation was conducted on the underlying soils. Remediation efforts included removal of soil.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	4.2	Region D: Building 108	Release 2. 7.5 lbs. of Raney Nickel, along with aqueous sugar solution was released onto the roof of Building 108, and onto the roadway next to the Building.	Nickel	A subsurface investigation was conducted on the underlying soils. Building 108, along with buildings 108A, 145, 152 and 43 were demolished in August, 1999. After removal of the concrete building pad, a subsurface investigation was conducted on the underlying soils. Remediation efforts included removal of soil.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	4.3	Region D: Building 108	Release 3. 90 lbs. of Raney Nickel, along with aqueous sugar solution was released onto the roof of Building 108, and onto the roadway next to the Building.	Nickel	A subsurface investigation was conducted on the underlying soils. Building 108, along with buildings 108A, 145, 152 and 43 were demolished in August, 1999. After removal of the concrete building pad, a subsurface investigation was conducted on the underlying soils. Remediation efforts included removal of soil.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	5	Region D: Building 73N	Two gallons of 70% monochloroacetic acid was released from the seal on transfer pump AP-17, to Outfall DSN-003. Pump AP-17 was located adjacent to Building 73N.	VOCs, SVOCs, PCBs, ETPH, cyanide	A subsurface investigation was conducted on the underlying soils. A containment dike was constructed around pump AP-17, with a capacity of 25 gallons. Operations in building 73 were shutdown in 1996 and the building, along with buildings 48, 51 and 69 were demolished. Remediation was conducted and 1200 tons of soils were excavated.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
REL	6	Region B: Tank T-949 south of Building 49	10 to 30 gallons of No. 2 fuel oil was released from a vent line fitting during precision testing of the tank.	SVOCs, ETPH	Approximately 35 cubic feet of soil was excavated. The fitting was replaced.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	7	Region E: Former Craneway F	Ten gallons of No. 6 Oil leaked from a pipe seal in a containment dike around No. 2 Fuel Oil Day Tank, following a release of 2,640 gallons of oil from the tank, into the containment dike.	VOCs, SVOCs, ETPH	The released oil leaked onto an asphalt paved surface. The oil was collected in a drum and free liquids were absorbed with Speedi-Dry.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	8	Region B: Tank T-552, Location per Woodard & Curran RAP	6,100 gallons of ethyl acetate was released to the roof of Building 103, from a tank overfill. The roof drained to the equalization basin.	ethyl acetate	A containment system is now in place for the vent line from this tank and others in the roof area of this building. Pfizer spill report submitted to CTDEEP.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-B11)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
REL	9.1	Region F: Tank C-313 at the Erythorbic Tank Farm (Building 136)	Release 1. 1,900 gallons of Methanol was released from a drain valve on Tank C-313 into a vault area around the tank in October 1988. The tank was removed in 1989 and replaced in 1990. Gravel underlaying the tank was removed and treated onsite (SWMU 40).	VOCs, SVOCs	Six borings were made by RECRA Environmental downstream from the release. Soil samples taken showed no contamination. 900 gallons of methanol from release 1 were recovered from the vault by the use of a recovery pump. Tank C-313 was taken out of service following the discovery of the leak in 1989. The tank was replaced in 1990 and all soil in the vault, down to bedrock was removed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	9.2	Region F: Tank C-313 at the Erythorbic Tank Farm (Building 136)	Release 2. In November 1989, Tank C-313 developed a leak at a rate of 465 gallons per day, into the vault area around the tank. Gravel underlaying the tank was removed and treated onsite (SWMU 40).	VOCs, SVOCs	Six borings were made by RECRA Environmental downstream from the release. Soil samples taken showed no contamination. 900 gallons of methanol from release 1 was recovered from the vault by the use of a recovery pump. Tank C-313 was taken out of service following the discovery of the leak in 1989. The tank was replaced in 1990 and all soil in the vault, down to bedrock was removed.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	10	Region F: Tank S-2 at the Organic II Tank Farm (Building 149 tank farm/Building 123 N tank farm)	1,500 gallons of toluene, and water mixture was released into the backfilled vault area, from Tank S-2, due to an overfill in November 1987. Gravel underlaying the tank was removed and treated onsite (SWMU 40).	VOCs	Two monitoring wells were installed downgradient from the release in December, 1987. The tank was removed and replaced in 1990. Soils inside of the vault were excavated and treated on site (SWMU #40). An investigation into physical nature of bedrock surface was completed by Atlantic Geoscience Corporation.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	11	Region F: Tank S-27 at the Organic II South Tank Farm (Building 149A tank farm/Building 123 S tank farm)	2.240 gallons of 4-Methyle-2-Pentanone was released into the soil surrounding Tank S-27, due to a leak in the tank. The tank was removed in 2008.	VOCs	RECRA Environmental conducted a site investigation (SWMU #27). The tank was removed from service on July 28, 1987. The tank and the contaminated soil was removed in March, 1988. The tank was replaced in June, 1989. Additional soil was excavated when the tank was replaced.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
REL	12	Region D: Tank IN-01 next to the 5T Tank Farm	511 gallons of No. 2 Fuel Oil was released into the containment dike around Tank IN-01. Approximately 22 gallons of the oil was released to the grass area near the tank, on the east side. An expansion joint failed on the supply pump, which is located at the tank.	VOCs, SVOCs, ETPH	Confirmation samples showed the remaining soil to be below the proposed standards for GB groundwater classification. Clean Harbors removed the oil from the containment dike and power washed the concrete. Soil, grass and pea stone was excavated from areas immediately around the tank containment dike. Affected soils were disposed as TPH regulated waste and removed from the site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	13	Region H: Asphalt parking lot in the vicinity of Building 260 (formerly 160)	Approximately 3,025 pounds of methanol was released from D. J. King Tank Truck #T-10 onto the asphalt parking lot in Jan 1994.	VOCs, SVOCs, ETPH	None necessary. Pfizer spill report was submitted to CT DEEP.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-H05)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
REL	14	Region D: Tank A-12, Caffeine Production area.	100-200 gallons of Monochloroacetic acid-60% solution was released from storage tank A-12, to a containment area under the tank and onto the nearby asphalt surface.	VOCs, SVOCs, PCBs, ETPH, cyanide	A site investigation was conducted by W & C and included collection of soil and groundwater samples. Released material was neutralized, then discharged to the effluent system. Remediation was conducted and 1200 tons of soils were excavated as required.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-D07, BW-D08, OW-D334, BW-D257, BW-D258, BW-D335S, BW-D335D)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	15	Region F: Tank Truck at the RR Car Station No. 1, Building. 123, east side.	1400 gallons of Alpha Acid (Hops) was released to the ground and the Stormwater conveyance system for Outfall "N" in February 1994.	VOCs, SVOCs	Released material discharged to Thames River via the stormwater drain("N").	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F24)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
REL	16	Region A: Building 48/RR tracks next to Building 18	Less than 50 gallons of 35% Sodium cyanide solution was released onto an asphalted surface and nearby equipment from a defective flange gasket.	Cyanide	Released material was discharged through the effluent system to the Thames River.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-D16)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
REL	17	Region A: Former Building 158	900 gallons of 60% Sorbitol solution was released from a flange gasket, onto an asphalt area, which drained to a cement trench. Based on the reported containment of the release, combined with the natural degradation characteristics of Sorbitol and the age of the release, no additional investigation required.	Sorbitol	Released material was cleaned up by Clean Harbors.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	None	N/A	N/A	RC	-
REL	18	Region A: Former Building 158	1,100 gal of 55% sorbitol/ 45% water solution released during a transfer between two trucks to the wastewater system. Based on the reported containment of the release, combined with the natural degradation characteristics of Sorbitol and the age of the release, no additional investigation required.	Sorbitol	Released material was discharged through the effluent system to the Thames River.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	None	N/A	N/A	NR	-
REL	19	Region D: Building 48	1,045 gallons of 50% sodium formate/water solution was released from Tank C-59, from a defective flange gasket. The material was released onto an asphalt surface, which drained into a sump, then to tank C-70.	VOCs, SVOCs, PCBs, ETPH, cyanide	A site investigation was conducted by W & C and included collection of soil and groundwater samples. All but 288 gallons of the released material was collected in several tanks. The balance was discharged to the Plant's Effluent System. Remediation was conducted and 1200 tons of soils were excavated as required.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-D07, BW-D08, OW-D334, BW-D257, BW-D258, BW-D335S, BW-D335D)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
REL	20	Region F: 149A Tank Farm	2603 gallons of Tetrahydrofuran was released from piping associated with storage tank S-22, from an open 1" valve in February 1992. The material was released onto the pea stone backfill around the tank, the asphalt roadway and trench leading to Stormwater Outfall "O".	VOCs, SVOCs, ETPH, metals	Surface liquid absorbed and collected as a hazardous waste. OHM: Corp. remediated the pea stone, asphalt and contaminated soil. A soil sample taken during the closure of the "Old" CSA revealed no THF.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F23, MW-9017)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	21	Region D: 117 Tank Farm	300 gallons of Toluene was released from a pipe line connected to Tank S-103. Released material reached an asphalt surface.	VOCs, SVOCs, ETPH	200 gallons of the released material recovered. None of the material appeared to have reached the river. Absorbent pads used in the effluent sumps. Absorbent pads, booms, speedi-dry used to collect material. · Collected release material and spill control supplies disposed of as hazardous waste. The affected area was investigated following the demolition of Bldg. 4.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (MW-9012)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	22	Region D: Tank D-14, Caffeine Site	1057 gallons of 62% Dimethyl Urea solution was released from tank D-14. The material was released onto a paved area, then drained into a sump which was connected to the effluent system.	VOCs, SVOCs, PCBs, ETPH, cyanide	A site investigation was conducted by W & C and included collection of soil and groundwater samples. Remediation was conducted and 1200 tons of soils were excavated as required.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-D07, BW-D08, OW-D334, BW-D257, BW-D258, BW-D335S, BW-D335D)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL	23	Region F: "Old" Container Storage Area	Two drums containing 40% IPE, 60% MeCl2 - 45% Ethyle Acetate, 10% chloroacetonitrile leaked while stored in Container Storage Area fro Haz. Wastes. Released material partly evaporated, some contacted asphalt surface of storage area. Quantity released: 168 lbs for drum No. 1 and 300 lbs for drum No. 2.	VOCs, SVOCs	Liquid residue absorbed. Upper layer of the asphalt containment area surface was removed and disposed of as hazardous waste. No material reached the ground under the asphalt surface.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F23, MW-9017)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
REL		Region H: Building 175	Historical fire at Building 175 pre-SWMU#22 closure.	VOCs, SVOCs, ETPH, metals	See information for SWMU#22		None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
Former Fisheries		Region A: Former Fisheries Buildings	Former Atlantic Fish Cannery located in the northeast portion of the West Campus prior to development by Pfizer. Became Building 4.	ETPH	See information for AOC-13.		None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	1	Region F: Equalization Basin and Outfall system DSN-008	Concrete Equalization Basin with a capacity of approximately 1 million gallons, at a normal operating level of 9.5 ft. Outfall and diffuser system extending approximately 750 ft. into the Thames River. Various chemicals have been discharged though the basin system from previously recorded spills.	VOCs, SVOCs, ETPH, metals	Solids from basin removed and landfilled in 1998-1999. Tank remains in service.	Remedial Action Plan, Woodard & Curran, December 1999	Vanadium (GB PMC)	Soil borings; downgradient GW monitoring	Vanadium soil excavation conducted nearby in 2021 associated with potential release associated with AOC #1.	Supplemental Phase II/Phase III; RAP; RAP Addendum; Remedial Action Completion Report	RC	-
AOC	6	Region D: Soil and groundwater contamination identified under Buildings 6, 54, and 62	Buildings 6, 54, and 62 were demolished in 1992 in order to build Building 80. Soil and groundwater beneath these buildings appeared to be adversely impacted during demolition and construction.	VOCs, SVOCs, ETPH	Subsurface excavation during construction of Building 80.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring	None - no detected impacts	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
AOC	7	Region D: Stained storage tanks North of Building 6.	Former storage tanks were on the east side of Building. 4. Tanks were used from 1960-1996 for various process applications, including material storage. Staining was visible on the exterior of the tanks.	VOCs, SVOCs, ETPH, lead	Tanks decommissioned and removed as part of the Building 4 facility demolition. 600+ tons lead, arsenic, TPH, and PAH impacted soils excavated.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (MW-9904), MW-9012)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-9904, MW-9012
AOC	8	Region D: Linde Tank Area (No. 57)	Concrete containment area around liquid hydrogen storage tank. Stains were visible on the concrete surface around the tank.	VOCs, SVOCs, ETPH, lead	Tank and concrete pad decommissioned and removed. Subsurface remediation conducted and concrete pad rebuilt.	Remedial Action Plan, Woodard & Curran, December 1999	None	soil borings; downgradient GW monitoring (MW-D104)	None - no detected impacts	Supplemental Phase II/Phase III	RC	-
AOC	9	Region D: Caffeine Mfg.- Buildings 48, 51, 73S and 73N	Subsurface contamination suspected as a result of years of Organic Chemical manufacturing operations (1948-1996). Chemical storage area and process tanks shown on the Sanborn map included in this area, and were used for caffeine operations.	VOCs, SVOCs, ETPH, PCBs, cyanide, metals,	1,200 tons of contaminated soil were excavated in 1996.	Remedial Action Plan, Woodard & Curran, December 1999	PCBs, cyanide (gw, SWPC); PCBs, lead (soil, DEC)	soil borings; downgradient GW monitoring (numerous)	Excavation of 1,370.56 tons of PCB-impacted soil over a 4,194 sq ft area. Excavation of 58.1 tons of lead-impacted soil over a 240 sq ft area. ECV, EUR Types 2 and 4, GW Monitoring	Supplemental Phase II/ Phase III; RAP; RAP Addendum; RBDAA; Remedial Action Completion Report; PCB Soil Cleanup Completion Report	RC	BW-D08, BW-D258, BW-D335S/D, OW-D301, BW-E21
AOC	10	Region B: Underground Storage Tanks, located south of Building 49 and west of Building 31B	Five former underground fuel oil storage tanks from circa 1930s. Replaced with three steel underground storage tanks. Tanks have been abandoned and filled with sand. TPH contamination found around the tanks. Removed in 1996.	VOCs, SVOCs, ETPH, lead	In 1996, five tanks and TPH and MBTE-contaminated soil removed and properly disposed of offsite. Clean Harbors submitted letter to CTDEP.	Remedial Action Plan, Woodard & Curran, December 1999	None	soil borings; downgradient GW monitoring (BW-B201)	None - no detected impacts	Supplemental Phase II/Phase III	RC	-
AOC	11	Region D: Wastewater strainer box area, River Road, west of Buildings 4 and 43. Drainage piping to Pump Station 1	Wastewater strainer box and associated piping were removed during construction of existing concrete sea wall and rebuilding of River Road (July, 1996). Odor of volatiles detected during excavation.	VOCs, SVOCs, ETPH, lead	Pfizer decommissioned the strainer box, the piping and removed an unspecified volume of soil impacted with TPH, VOCs, and cresol. Remediation completed to the maximum extent prudent during construction of sea wall.	Remedial Action Plan, Woodard & Curran, December 1999	None	Area of AOC located beneath riprap bank extension and sea wall	Remediated to maximum extent prudent, maintain seawall	Supplemental Phase II/Phase III	RC	-
AOC	12	Region E: Filter cake loading area, east side of Building 102 area (now west side of Building 90).	Excavation for pad under elevator. Prussian Blue detected in soil (November, 1996). Extensive outdoor galvanized metal structures histrocially present across entire site.	VOCs, SVOCs, ETPH, total cyanide, PACN, metals	Approximately 150 cubic yards stained soil removed and disposed in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	Zinc (gw, SWPC)	soil borings; downgradient GW monitoring (BW-E09D)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III	Operating Facility	BW-E09D
AOC	13	Region D: Organic I Site - Buildings 4 and 43	Buildings 4 and most of 43 demolished during 1996. Area under the footprint of Buildings, that was not already included in SWMUs 1 & 2, REL 4, was an Area of Concern due to historical use of the site for Organic Chemical Production.	VOCs, SVOCs, ETPH, metals	Woodard & Curran excavated and properly disposed of 670 tons of arsenic, lead, TPH, and PAH impacted soil during site remediation.	Remedial Action Plan, Woodard & Curran, December 1999	Lead (gw, SWPC)	soil borings; downgradient GW monitoring (MW-9904, MW-9012, BW-D18)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-9904, MW-9012
AOC	14	Region D: Area Northwest of Building 117 Tank Farm	Tank farm operated between 1952 and 1990. Excavation for utility lines revealed soil contaminated with VOCs (Toluene, Ethyl Benzene, Xylenes), December, 1996.	VOCs, SVOCs, ETPH	Soil removed for utility work was placed into roll-offs for proper disposal.	Remedial Action Plan, Woodard & Curran, December 1999	None	soil borings; downgradient GW monitoring (MW-D103)	None - no detected impacts	Supplemental Phase II/Phase III; RAP	RC	-
AOC	15	Region F: Equipment and scrap storage area at south end of facility	Equipment and scrap storage area (referred to as the "bone yard") that Pfizer closed in 1997. Excavation for fire main replacement revealed discolored soil.	VOCs, SVOCs, ETPH, metals	Three roll off containers of soil excavated and properly disposed off-site.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (MW-9901)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	16	North and south sides of former Craneway F, at containment vault area for No. 6 Fuel Oil Day Tank #2.	Excavation for room walls around steam condensate polisher skid mounted unit. Found soil with fuel oil contamination.	VOCs, SVOCs, ETPH, metals	Pfizer excavated and disposed off-site seven 55-gallon drums of TPH-impacted soil.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-E21)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

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								Unit Investigation Activities				
AOC	17	Region E: North side of former Craneway F, East of Building 83, in the area of the railroad track roadbed and west in the former location of the molasses horizontal tanks.	Excavation to locate depth of ledge. Found soils and groundwater with TPH contamination.	VOCs, SVOCs, ETPH, sulfide, lead	Pfizer excavated and disposed off-site TPH-impacted soil in 1998.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-E20)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	18.1	Region E: Area between Buildings 90 and 101, in about the same location as the Craneway (rem. During Building 101X construction) and slipway.	Excavation for fire main replacement, from Utilities tunnel to Building 101, east side. 2 inch thick black layer of material on top of concrete. MeCl (52ppm found in soil). This is believed to be concrete from the old shipyard slipway (September, 1998).	VOCs, SVOCs, ETPH, lead	Excavated disposed of TPH and MeCl impacted soil off-site.	Remedial Action Plan, Woodard & Curran, December 1999	Cyanide (gw, SWPC); benzene (soil, PMC)	Soil borings; downgradient GW monitoring (BW-E09/D)	EUR Type 3, HHRA, GW Monitoring	Supplemental Phase II/Phase III; RAP	RC	BW-E09D
AOC	18.2	Region E: Area between Buildings 90 and 101, in the approximate location of the former Craneway and slipway.	This former Craneway was removed during the construction of Building 101X. Groundwater which had collected in the grounding tube drill holes for Building 90B telephone room displayed TPH odor.	VOCs, SVOCs, ETPH, lead	Disposed of TPH-impacted water off-site.	Remedial Action Plan, Woodard & Curran, December 1999	Cyanide (gw, SWPC); benzene (soil, PMC)	Soil borings; downgradient GW monitoring (BW-E09/D)	EUR Type 3, HHRA, GW Monitoring	Supplemental Phase II/Phase III; RAP	RC	BW-E09D
AOC	19	Region A: Area between RR Tracks, north of former Building 158 site (roadway)	Excavation for Central Research wastewater line revealed soil with slight TPH odor.	VOCs, SVOCs, ETPH, lead	In January 1999, Pfizer excavated and disposed off-site the TPH-impacted soil.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-A14)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	20	Region E: Area between OSP Cooling Tower (Building 84) and OSP EOL (Building 83).	Excavation to install 8" fire main for new hydrant at the NW corner of Craneway F. Dark colored soil found directly between Buildings 83 & 84.	VOCs, SVOCs, ETPH, lead	Pfizer excavated 3 yards of TPH-impacted soil and disposed off-site in 1999.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-E21)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	21	Region E: RR Track area south of former Craneway F, under Building 9 164, to PS-9.	Test hole excavations for retaining wall footings. Black soil encountered about 2 feet below grade of track roadbed (August, 1999).	VOC, SVOCs, ETPH, sulfide, lead	None - analytical analyses indicated impacts below USEPA action levels.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	22	Region D: North side of former Building 52	Former location of less than 90 day hazardous waste storage area that operated between 1993 and 1995.	VOCs, SVOCs, ETPH	None - no observed or suspected releases.	Remedial Action Plan, Woodard & Curran, December 1999	N/A	Area of AOC located beneath riprap bank extension	EUR Type 3	Supplemental Phase II/Phase III	NR	-
AOC	23	Region E: West side of Building 126.	Former location of less than 90 day hazardous waste storage unit.	VOCs, SVOCs, ETPH	In 1997, Pfizer decommissioned and removed three portable containment sumps from service.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil boring	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	24	Region F: East side of Building 123.	Former location of less than 90 day hazardous waste storage area for a roll off container.	VOCs, SVOCs, ETPH, metals	Roll off decommissioned and removed by Pfizer in 1999. No observed or suspected releases.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings; downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	25	Region F: West side of structure 166, Equalization Basin.	Former location of less than 90 day hazardous waste storage area for a roll off containers. In operation from 1998 to 1999.	VOCs, SVOCs, ETPH, metals	Roll off decommissioned and removed by Pfizer in 1999. No observed or suspected releases.	Remedial Action Plan, Woodard & Curran, December 1999	Vanadium (soil, PMC)	Soil borings; downgradient GW monitoring (MW-9016)	Excavation of 55.0 tons of vanadium-impacted soil over 220 sq ft area. EUR Type 3, HHRA, GW Monitoring.	Supplemental Phase II/Phase III; RAP; RAP Addendum; Remedial Action Completion Report	RC	MW-9015, BW-F22
AOC	26	Region F: South side of former Building 172	Former location of less than 90 day hazardous waste storage area for roll off container.	VOCs, SVOCs, ETPH, metals	Roll off decommissioned and removed by Pfizer in 1998. No observed or suspected releases.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil Boring	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	27	Region D: OSP Tank Farm, between Buildings 82A and 82B.	Location of two former hazardous waste containment storage units that operated from 1995 to 2000.	VOCs, SVOCs, ETPH, ammonia, metals	None - no observed or suspected releases.	Remedial Action Plan, Woodard & Curran, December 1999	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	28	Region E: South of Building 38B. Organic Synthesis Plant End of Line Device (scrubber unit) associated with former Building 80, west side.	Location of 4 drum hazardous waste containment storage unit associated with End of Line Device for former Building 80.	VOCs, SVOCs, ETPH, metals	Closure and decommissioning of less than 90 day hazardous waste storage area occurred on January 12 2000. Sump removed, no visual indications of impact.	Re: Closure of Building 80, Less than 90 Day Container Storage Area, Pfizer internal memo, January 14 2000.	None	Soil borings; downgradient GW monitoring (BW-E21)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-

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								Unit Investigation Activities				
AOC	29	Region E: Former Building 103/150 solvent tank farm location.	Former location of less than 90 day hazardous waste storage area for roll off containers.	VOCs, SVOCs, ETPH	Closure and decommissioning of less than 90 day hazardous waste storage area occurred on March 27 2001. Inspection records indicated no release occurred.	Re: Closure of Building 103 Tank Farm, Less than 90 Day Container Storage Area, Pfizer internal memo, March 28 2001.	Chloroform in GW > VC	Soil borings; downgradient GW monitoring (BW-E10, BW-E103, BW-E104)	GW Monitoring	Supplemental Phase II/Phase III	NR	BW-E10, BW-E103, BW-E104, MW-9015
AOC	30	Region F: Former south tank truck area, south of Building 172.	Former location of less than 90 day hazardous waste storage area for a roll off container. Operated between 1996-1997.	VOCs, SVOCs, ETPH, metals	Pfizer decommissioned and removed roll-off in 1997. Woodard & Curran investigation prompted excavation and off-site disposal of 242 tons of antimony and B(a)P impacted soil.	Less than 90 Day Roll-off Storage Area Closure Report," June 1998	None	Soil borings; downgradient GW monitoring (BW-F205)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	31	Region C: Building 70 - less than 90 day hazardous waste storage area	Former location of less than 90 day hazardous waste storage area for roll off containers. Use of this area was discontinued on 1998.	VOCs, SVOCs, ETPH, metals	Woodard & Curran excavated and disposed off-site 4,520 lbs toluene impacted material.	"Building 70 Less Than 90 Day Hazardous Waste Storage Area", Woodard & Curran, June 1998.	None	Soil borings; downgradient GW monitoring (BW-C06)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	32	Region H: East of Building 118S, Central Research.	Location of a hazardous waste storage lockers, each of which has a capacity of 8 drums. Began operation in 1999.	VOCs, SVOCs, ETPH	Closure and decommissioning of less than 90 day hazardous waste storage area occurred on May 29, 2009. Inspection records indicated no release occurred.	"Closure of Building 118-Room 252A <90 Day Storage Area", Pfizer Internal Memo, May 2009.	None	Downgradient GW monitoring (OW-H102, BW-H02, OW-H113)	None - no detected exceedances	Supplemental Phase II/Phase III, Groundwater Monitoring 2014 -2016	NR	-
AOC	33	Region F: West side of Buildings 185 & 185N	Former location of a Tank Truck station used to load a single tank truck with nonhazardous or RCRA hazardous waste (F003) to transport to the former pyrolyzer unit from 1989 to 1995. No reported releases occurred.	VOCs, SVOCs, ETPH, metals	None, area inaccessible.	Remedial Action Plan, Woodard & Curran, December 1999	None	Area inaccessible	None - no detected exceedances	Supplemental Phase II/Phase III	Operating Facility	-
AOC	34	Region D: Northwest area near former incinerators	Building 71 - Paint storage (later Environmental Control)	VOCs, SVOCs, ETPH, metals	Building demolished/decommissioned to make space for Wastewater Treatment Building 1992.	NA	None	Soil borings; downgradient GW monitoring (MW-9906)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	MW-9906
AOC	35	Region D: Northwest area near former incinerators	Building 66 - Paint Shop Building (later Wastewater Testing Lab).	VOCs, SVOCs, ETPH, metals	Building demolished/decommissioned to make space for Wastewater Treatment Building 1992.	NA	None	Soil borings; downgradient GW monitoring (MW-9906)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	MW-9906
AOC	36	Region D: Former Building 110	Building 110 Solvent Storage Area.	VOCs, SVOCs, ETPH, metals	Building demolished/decommissioned to make space for Wastewater Treatment Building 1992.	NA	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	37	Region D: Northwest	Former solvent incinerator used until 1967. Area combined with SWMU 28 and SWMU 29 for investigation purposes.	SVOCs, PCBs, cyanide, lead	An investigation of the area was performed by Woodard & Curran in January 1999. Test pits were completed in soil beneath Building 57, and test borings were completed in the area north of Buiding 57. Soil excavated and removed from under the hydrogen storage area (57) in January 1999. Additional soil was removed in October 1999 and disposed of off site.	Remedial Action Plan, Woodard & Curran, December 1999	Methylene chloride (soil)	Soil borings, groundwater monitoring (MW-D104)	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-D104

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								Unit Investigation Activities				
AOC	38	Region D: Within the footprint of Building 82	Building 42 (aka 142) - Storage and laboratory; later a warehouse	VOCs, SVOCs, ETPH, metals	During decommissioning characterization samples of concrete and/or tile flooring were collected from select areas of the B82 Solvent Recovery Area. Several samples were determined to be contaminated with ETPH and/or methylene chloride above remedial criteria. Concrete disposed of off-site.	Building 82 Solvent Recovery Area Demolition Characterization Report. Soil Disposal Summary Table.	Lead (gw, SWPC)	Soil borings; downgradient GW monitoring (MW-9905, MW-9012)	Remediated to maximum extent prudent, EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III	RC	MW-9905, MW-9012
AOC	39	Region D: Former Building 117 solvent tanks	Buried Solvent Tanks (former Building 117).	VOCs	Tank farm replaced under RCRA Order in 1989. Gravel bed above bedrock removed and disposed off-site during decommissioning.	Phase II	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	40	Region D: Footprint of Building 107	Ammonia Storage Facility within footprint of former Building 107.	VOCs, ammonia	Pfizer demolished building circa 1995-1997.	NA	None	Soil borings; downgradient GW monitoring (MW-9012)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	41	Region D: Former Building 42 (later 52) located in the northwest corner of site	1972 Sanborn map identifies power house in historical photos at this location. Building became research pilot plant and contained two less than 90 day storage areas, both clean-closed in 1995 during building demolition.	VOCs, SVOCs, ETPH, metals	Pfizer demolished building circa 1995.	Re: Closure of Building 52, Less than 90 Day Container Storage Area, Pfizer Internal Memo, 1995.	None	Soil borings: GW monitoring (MW-D103)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	42	Region D: Footprint of former Building 80	Former septic tank(s) associated with Building 56 within footprint of former Building 80.	VOCs, SVOCs, ETPH	Soil excavated for fire main between buildings 48 and 80 on 10/8/96. Groundwater in excavation with oily sheen. Sampled for cyanide. Material disposed off-Site as TPH contaminated soil.	1996 field notes	None	Soil borings; downgradient GW monitoring (BW-D08)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	43	Region D: Footprint of Building 80	Machine Shop associated with former Building 6	VOCs, SVOCs, ETPH	Soil excavated for fire main between Buildings 48 and 80 on October 1996. Groundwater in excavation with oily sheen. Excavated soils disposed off-Site as TPH contaminated soil.	1996 field notes	ETPH (soil, I/C DEC/GB PMC)	Soil borings; downgradient GW monitoring (BW-D08)	GW Monitoring	Supplemental Phase II/Phase III	RC	BW-D08
AOC	44	Region D: Building 54	Paint shop/Paint storage - Building south of former Building 54 (stock room)	VOCs, SVOCs, ETPH	Pfizer demolished building circa 1993.	NA	None	Soil borings; downgradient GW monitoring (OW-D301)	None - no detected exceedances	Supplemental Phase II/Phase III; RAP	NR	OW-D301
AOC	45	Region E: North of Building 85	2 sulfuric acid AST ("OV" tank)	VOCs, SVOCs, ETPH, metals	Pfizer demolished, decommissioned and disposed of unit circa pre-1995.	NA	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	46	Region E: South of Building 69 / North of tanks	Oil storage area (B38)	VOCs, SVOCs, ETPH	Area decommissioned and demolished in 1993. B38B switched over to electrical switchroom (still active).	NA	None	Soil borings; downgradient GW monitoring (BW-E20)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
AOC	47	Region E: Former Craneway F, between existing Building 83 and 90.	Two active 25,000 gallon diesel (#2 oil) tanks used as day tanks within the former Craneway. Soils are currently inaccessible as they are located beneath existing tanks and their associated containment structures within the craneway.	VOCs, SVOCs, ETPH	Craneway is existing and prevents investigation.	NA	None	Area inaccessible	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP	Operating Facility	OW-D336
AOC	49	Region B: Eastern side of PGM	Buildings 31A-C; citric operations - including mycelium pit (31B) and process tanks/transfer area on the southwest side of Building 31.	VOCs, SVOCs, ETPH, metals	Pfizer demolished Building 31A, and closed/decommissioned associated 90-day waste storage area in 1999. Non-hazardous TPH-impacted concrete from 90-day storage area removed and disposed of. Pfizer demolished Buildings 31B and 31C from 2001-2002. Three additional 90-day waste storage areas in buildings 31A/B closed/decommissioned from 1995-2001, no visual indications of impact.	Building 31A Less Than 90-Day Waste Oil Storage Area Closure Assessment Report, Woodard & Curran, December 1998. Re: Closure of Building 31A North End, Less than 90 Day Container Storage Area, Pfizer Internal Memo, September, 1995. Re: Closure of Building 31A Garage, Less than 90 Day Container Storage Area, Pfizer Internal Memo, November 1996. Re: Closure of Building 31B Carbon Room 1st Floor, Less than 90 Day Container Storage Area, July 2001. Building 31 C-NA	None	Soil borings; downgradient GW monitoring (BW-B03)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	50	Region B: Central eastern side of PGM, Building 103	Former Building 103 (demolished in 1998) contained process units on all three floors and used solvents.	VOCs, SVOCs, ETPH, formaldehyde	COCs developed based upon historical use of the building and plan developed for sampling of the buildings and tank farm. September 15-25, 1997 -Woodard & Curran collected 119 concrete, tile and wood samples within Building 103, Building 103/150 tank farm, and Building 167. Samples analyzed for VOCs, alcohols and TCLP barium. No hazardous material identified.	Building 103 Characterization	None	Soil borings; downgradient GW monitoring (BW-B11)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	51	Region B: North of B67	Former Building B49 which was historically used as a lab prior to use as an engineering maintenance shop.	VOCs, SVOCs, ETPH, metals, formaldehyde	Pfizer demolished building in 1995.	NA	None	Soil borings, BW-B201	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	52	Region E: Partially in the footprint of Building 160 South of Building 101	Building 111 Fermentation "G tank"	VOCs, SVOCs, ETPH, metals	Building demolished in 2003 for construction of gas turbine building circa 2008-2009. Soil was excavated to bedrock for foundation construction of gas turbine building and disposed of off-site.	NA	None	Soil borings	None - no detected exceedances, soils isolated/inaccessible under existing building foundation	Supplemental Phase II/Phase III	NR	-
AOC	53	Region E: in footprint to Building 90C	Building 103/150 tank farm - Former solvent tanks (near Building 39B)	VOCs, SVOCs	During decommissioning, 14 representative concrete samples collected from tank containment area. One representative utility tunnel sample collected. Samples analyzed for total VOC, TCLP barium, total alcohol, and flashpoint (at select locations). No detectable levels of toxic compounds identified. Flashpoint analysis identified material as non-ignitable.	Building 103 Characterization	None	Soil borings; downgradient GW monitoring (BW-E104)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
AOC	54	Region E: Between Buildings 90 and 91	Four former molasses tanks	Molasses	Pfizer decommissioned and removed tanks circa 1992.	NA	None	Soil borings; downgradient GW monitoring (BW-E20)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	55	Region F: Former Building 123 (Refer to SWMU #33 and SWMU #34)	Building 123 solvent tanks encompassing SWMUs #33 and #34.	VOCs, SVOCs, ETPH, metals	Refer to SWMU#33 and SWMU #34.	NA	None	Soil borings; downgradient GW monitoring (BW-F13)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	56	Region F: Former Building 123	Building 123 subslab. Pfizer observed impacted soil beneath the slab following demolition.	VOCs, SVOCs, ETPH, metals, PCBs	Closure and decommissioning of 12 less than 90 day hazardous waste storage areas occurred from 1995 to 2003, no visual indications of impact. Five soil samples collected from visually impacted sub-slab soil, results did not exceed RSRs.	Table 1 Building 124 Subslab Samples Pfizer - Groton, Pfizer Internal Email, January 25 2009. Pfizer Internal Closure Memos, 1995 to 2003.	ETPH (soil, I/C DEC); Benzene, ETPH (soil, PMC)	Soil borings; downgradient GW monitoring (BW-F13)	EUR Type 3, HHRA, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	MW-9902, MW-9016
AOC	57	Region B: Building 104	Compressor station and associated transfer area. Pfizer identified TPH impacted soils during demolition of Building 104.	VOCs, SVOCs, ETPH, metals	Visibly impacted soils excavated to bedrock during decommissioning.	Phase II	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	59	Region H: 538 Eastern Point Road in the vicinity of the current South gate guard house	Former retail gasoline station.	VOCs, SVOCs, ETPH, metals	Pfizer demolished building circa 1950.	NA	PCBs (gw, SWPC)	Soil borings; downgradient GW monitoring (BW-H01)	GW Monitoring (one historical PCB exceedance of SWPC in groundwater soon after Building 118 decommissioning followed by seven non-detects, on-going metals monitoring) , EUR Type 1	Supplemental Phase II/Phase III	NR	BW-H01
AOC	60	Region H: 538 Eastern Point Road in the vicinity of the current South gate guard house	Auto repair shop	VOCs, SVOCs, ETPH, metals	Pfizer demolished building circa 1950.	NA	PCBs (gw, SWPC)	Soil borings; downgradient GW monitoring (BW-H01)	GW Monitoring (one historical PCB exceedance of SWPC in groundwater soon after Building 118 decommissioning followed by seven non-detects, on-going metals monitoring) , EUR Type 1	Supplemental Phase II/Phase III	NR	BW-H01
AOC	61	Region B: Adjacent to Building 103	methyl isobutyl ketone (MIBK) release identified during the demolition of former Building 103.	methyl isobutyl ketone	7/17/01 - MIBK contaminated soil transported to Clean Harbors Kimball, NE - Profile # CH180601	Field Notes	None	Soil borings; downgradient GW monitoring (BW-B11)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	62	Region E: Building 116 - west of Building 90	Blue mud apparently identified in soil during tank demolition, underneath tank pad	Cyanide, metals	During decommissioning soils excavated and disposed circa 1998-1999.	NA	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	63	Region A: West of former Building 158	Former n-methylglucamine (NMG) tank farm. This area was used for the storage of bulk materials and finished product for NMG during the 1950s-1990s. The buildings in the vicinity of the tank farm were demolished between the late 1990s and 2007.	VOCs	Tank farm decommissioned circa 1999 with former Building 148.	NA	None	Soil borings	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	64	Region D: North of Building 60	Possible blue mud was identified during excavation for installation of new Building 5, later 77.	VOCs, SVOCs, ETPH, total cyanide, PACN	Pfizer demolished Building 5 in 1992. Building 77 constructed circa 1995. Soils excavated and disposed off-site.	NA	None	Soil borings; downgradient GW monitoring (BW-D16)	None - no detected exceedances	Supplemental Phase II/Phase III	RC	-
AOC	65	Region D: Northeast of former Building 117	Three former ASTs: AE-01; AE-02; and EQ-01 used to store wastewater.	VOCs, SVOCs, ETPH	During 2009 tank removal activities, petroleum was observed in tank bedding attributed to historical construction techniques to facilitate compaction and leveling.	Phase II	Arsenic, lead, copper (gw, SWPC);	Soil borings; downgradient GW monitoring (BW-D02, BW-D19, MW-9906, MW-D104)	EUR Type 3, HHRA, GW Monitoring	Supplemental Phase II/Phase III; RAP	RC	MW-9906, MW-D104

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
AOC	66	Region E: Within the footprint of Buildings 101 165, and 168. Central western portion of PGM - along river	Powerhouse and associated utilities operations and fuel storage. Soils are currently environmentally isolated and inaccessible as they are located beneath existing Buildings.	VOCs, SVOCs, ETPH	Area active and not accessible	NA	None	Soil borings; downgradient GW monitoring (OW-D336, BW-E09D); Partially inaccessible	EUR Type 3, GW Monitoring	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	OW-D336, BW-E09D
AOC	67	Region H: Current parking lot between B274 and B260, near Visitors Center	Former Town of Groton Public Works Department. Historical photos indicate material stockpiles.	VOCs, SVOCs, ETPH, metals	In 1993, GZA and LBG were retained by Pfizer to investigate environmental conditions at the Highway Garage parcel. 17 soil borings, 2 hand auger borings, 12 test pits and a trench, 2 soil grab samples, and installation of 9 monitoring wells were completed. Soil and GW samples were analyzed for TPH, VOCs, SVOCs, and trace metals.TPH and/or SVOCs exceeded CT DEP action levels. In April and May 1995, Geoscience Technical Services, Inc. excavated in the five areas where oil-based contamination had been identified. Confirmatory samples taken from the excavations were below CT DEEP action levels, demonstrating that sufficient soil had been removed.	Summary of Remediation Activities, City of Groton Highway Garage	Zinc (gw, SWPC)	Soil borings; downgradient GW monitoring (BW-H06, MW-3)	EUR Type 4	Supplemental Phase II/Phase III; RAP; RAP Addendum	RC	BW-H06R
AOC	48B	Region B: location within former Building 31B	Former mycellium pit. See AOC-49.	VOCs, SVOCs, ETPH, metals	Pfizer demolished Building 31B fom 2001-2002. 90-day hazardous waste storage area decommissioning and closure in 2001. No visual indications of impact.	Re: Closure of Building 31B Carbon Room 1st Floor, Less than 90 Day Container Storage Area, Pfizer Internal Memo, July 2001.	None	Soil borings; downgradient GW monitoring (BW-E20)	None - no detected exceedances	Supplemental Phase II/Phase III	NR	-
AOC	48D	Region D: Caffeine Site - Buildings 48, 51, 73S and 73N	Former process tanks associated with Buildings 48, 51, 73S and 73N	VOCs, SVOCs, ETPH, metals, PCBs	Excavation and off-site disposal of 1,200 tons impacted soil in 1996.	Building 48 Post-Demolition Subsurface Sampling and Analysis Report, Woodard & Curran, December 1996	PCBs, cyanide (gw, SWPC); PCBs (soil, DEC)	Soil borings; downgradient GW monitoring (numerous)	Excavation of 1,370.56 tons of PCB-impacted soil over a 4,194 sq ft area. Excavation of 58.1 tons of lead-impacted soil over a 240 sq ft area. ECV, EUR Types 2 and 4, HHRA, GW Monitoring	Supplemental Phase II/ Phase III; RAP; RAP Addendum; RBDAA; Remedial Action Completion Report; PCB Soil Cleanup Completion Report	RC	BW-D08, BW-D258, BW-D335S/D, OW-D301, BW-E21
AOC	48E	Region E: Between Buildings 168 and 155	Former Fuel Oil Tank,	VOCs, SVOCs, ETPH	Tank decommissioned circa 1995-2000. Concrete foundation remains.	NA	None	Soil borings; Partially inaccessible	EUR Type 3	Supplemental Phase II/Phase III	RC	-
AOC	A	Region D: Former Building 18	LNAPL (weathered #6 oil) found in downgradient wells from former Building 18; possibility of former UST containing #6 oil within bldg	ETPH, PCBs	No historical information available	NA	None	Soil borings; downgradient GW monitoring (numerous)	LNAPL Removal, EUR Type I, GW Monitoring	Supplemental Phase II/Phase III; RAP	RC	BW-D258, BW-E21
AOC	B	Region H: Stormwater and wetland areas	Incoming storm drainage and on-site stormwater run-off (incidental sources) combine into surface water streams and associated on-site wetlands.	SVOCs, ETPH, metals	No historical information available	NA	Arsenic, copper, lead, zinc (gw, SWPC)	Surface water and sediment sampling in wetland areas	EUR Type 3, GW and SW Monitoring, HHRA, Asphalt surface maintenance	Supplemental Phase II/Phase III; RAP	NR	BW-H01, BW-H05, BW-H06, SSW-04, SWG-01, SWG-02, SWG-03, SWG-04
AOC	C	Urban Fill Area - West Campus Regions A, B, D, E and F	Urban Fill containing asphalt fragments and millings graded with near surface soils in a 31-acre area	PAHs, Metals	No historical information available	NA	Arsenic, Beryllium, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene (I/C DEC)	Soil borings, SEM analyses, downgradient GW monitoring (numerous)	EUR Types 1 and 4, HHRA, GW Monitoring	Supplemental Phase II/III; RAP; RAPAE; Eco-Risk Remedial Action Completion Report	RC	Numerous

Unit	#	Location	Source Description	COCs Assessed	Response	Investigation and/or Remediation Summary Document	COCs Exceeding Applicable Standards		Compliance Strategy and/or Response	Investigation and/or Remediation Documented	CA550 Status ⁽²⁾	Monitoring Well Network
								Unit Investigation Activities				
AOC	D	Galvanized Steel Area - West Campus Regions A, B, C, D, E and F	Extensive outdoor galvanized (zinc-coated) metal structures histrocially present across entire site.	NA	NA	NA	Zinc (gw, SWPC)	GW monitoring (numerous)	GW Monitoring, EUR Type 1	NA	NR	Numerous

Legend:

AOC

Area of Concern

SWMU

Solid Waste Management Unit

REL

Release

ETPH

Extractable Total Petroleum Hydrocarbons

SVOC

Semivolative Organic Compounds

VOC

Volatile Organic Compounds

PACN

physiologically available cyanide

PCB

polychlorinated biphenyl

EUR

Environmental Land Use Restriction

GPRA

Government Performance and Results Act

HHRA

Human health risk assessment

RAP

Remedial Action Plan

-

None identified or needed

NA

Not applicable

TI

Technical Impracticability Waiver

Notes:

1. USEPA GPRA CA550 Status:
NR-No remedy constructed. No physical remedy needed since site characterization activities began.
RC- Remedy Construction. All necessary physical construction has been completed.

2. Historical information supplemented through document review and conversations with George Vassallo, Site EH&S lead, in February 2022 who was responsible for building demolition, assessment and closure activities for the Site.

EUR Types

1. Residential Activity Restriction Soil

2. Residential Activity Restriction Soil PCBs

3. Exposure of Inaccessible Soil Restriction

4. Disturbance of Engineered Control and Polluted Soil Restriction

Referenced Documents:

Phase II/Phase III Site Investigation Report - East Campus, May 2017

Phase II/Phase III Site Investigation Report - West Campus, July 2017


Risk-Based Disposal Approval Application (RBDAA), Golder, July 2020

Remedial Action Plan (RAP), Golder, July 2020

RAP Addendum, Golder, May 2021

Remedial Action Completion Report, Golder, August 2021

PCB Soil Cleanup Completion Report, Golder, August 2021

 WSP GOLDER

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Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

APPENDIX D

Previously Approved Plans

Pfizer Inc

EPA ID No. CTD001147495
Permit No. DEEP/REM/SP/2024-9574

Pfizer Inc
445 Eastern Point Road, Groton CT

EPA ID No. CTD001147495
DEEP/REM/SP/2024-9574

Approved Maintenance and Monitoring Plan for PCB Area and Eco-risk Cap Areas



REPORT

Maintenance and Monitoring Plan

Engineered Controls, Pfizer Inc, Groton, CT
REM ID. 9574

Submitted to:

CT Department of Energy and Environmental Protection

Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106

United States Environmental Protection Agency

Region 1 PCB Coordinator
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June 2024

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APPENDIX A

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APPENDIX B

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1.0 INTRODUCTION AND PURPOSE

WSP USA Inc. (WSP) prepared this Maintenance and Monitoring Plan (MMP) on behalf of Pfizer Inc (Pfizer). The 165-acre, 445 Eastern Point Road, Groton, Connecticut facility (the Site; Figure 1) is comprised of two parcels of land and improvements – the approximately 55-acre West Campus, which provides Facility-wide support services and was the primary location of historical manufacturing activities, and the 110-acre East Campus, which is actively involved in research and development (R&D) activities. The facility is bordered by the Thames River to the west and is surrounded by a mix of industrial, commercial, and residential properties to the north, east and south. The West Campus provides Site-wide support services and was the primary location of historical manufacturing activities which ceased by 2008. Each Campus is security-fenced and access is controlled by a combination of manned and electronic gates and full-time security personnel and procedures.

Within West Campus there is one installed Engineered Control (EC), and two installed ecological-risk (eco-risk) caps designed to render soil inaccessible to human or ecological receptors (see Figure 2). No ECs or eco-risk caps were required on East Campus. This MMP 1) details background information for the EC and each eco-risk cap, and 2) summarizes long-term maintenance and monitoring obligations to maintain the integrity of the EC and eco-risk caps in conformance with approvals issued by the U.S. Environmental Protection Agency (USEPA; October 20, 2020) and the Connecticut Department of Energy & Environmental Protection (CT DEEP; October 20, 2020 and July 18, 2022).

2.0 BACKGROUND

The following sections briefly summarize the rationale and regulatory framework driving the installation of the EC and eco-risk caps within West Campus. For a comprehensive description of remedial actions taken and the driving risk factors, refer to the Remedial Action Plan (RAP; Golder, 2020c), Remedial Action Plan Addendum for Eco-Risk (RAPAE; Golder, 2022a), the Polychlorinated Biphenyl (PCB) Cleanup Completion Report (Golder, 2021) and the Eco-Risk Remedial Action Report (ERRAR; Golder, 2022b).

2.1 PCB AREA

In July 2021, Pfizer completed remediation of PCB-impacted soils at an approximate 0.10-acre area of West Campus (see Figures 2 and 3). This area was the location of caffeine and other organic chemicals production and was identified by USEPA as an Area of Concern (AOC) and designated AOC-9 and AOC-48D. Historical caffeine manufacturing used a PCB-oil heating system. Pfizer investigated the AOCs and found that a release of PCBs had occurred to soil. The extent of the impacted area was delineated, and a Risk-Based Disposal Approval Application for Clean-Up of PCB Remediation Waste (RBDA) was submitted to USEPA in accordance with 40 CFR 761.61(c) on July 7, 2020 (Golder, 2020a). In addition, an Engineered Control Variance (ECV) Application (Part 1 and Part 2) was submitted to CT DEEP on July 15, 2020 (Golder, 2020b). The ECV application requested CT DEEP's approval to render PCB-impacted soils inaccessible beneath a geotextile warning layer and four feet of clean fill. The RBDA and the ECV, respectively, were approved by USEPA on October 22, 2020, and conditionally approved by CT DEEP on October 28, 2020.

Completion of the PCB soil remediation is described in the PCB Soil Cleanup Completion Report submitted to USEPA and CT DEEP on August 17, 2021 (Golder, 2021). In accordance with RBDA and ECV approval conditions, this document summarizes long-term maintenance and monitoring obligations for AOC-9 and AOC-48D (former Caffeine Production Area).

2.2 ECO-RISK AREAS

On December 28, 2021, CT DEEP submitted a comment letter to Pfizer highlighting specific areas of eco-risk driven by metals in shallow soils (<2 feet below ground surface [ft bgs]) above CT DEEP calculated eco-risk thresholds. In the comment letter, CT DEEP requested an eco-risk focused addendum to the Site RAP (Golder, 2020c). These communications provided guidance to Pfizer indicating removal or cap placement may be warranted. The RAPAE was submitted to CT DEEP for approval in June 2021 (Golder, 2022a). CT DEEP provided an approval letter on July 18, 2021 allowing the proposed remediation to proceed.

3.0 ENGINEERED CONTROL AND ECO-RISK CAP CONSTRUCTION

The following sections describe the design and construction of the EC and eco-risk caps installed to render soils inaccessible to eco-risk and human-health risk receptors.

3.1 PCB AREA REMEDIAL EFFORTS

Excavation and disposal activities to address PCBs in exceedance of human health risk criteria were completed in June and July 2021. The remediation included the removal of approximately 1,371 tons of PCB impacted soils from ground surface to a depth of either the seasonally high groundwater table (at approximately 5.5 feet below ground surface), bedrock, or immobile concrete foundation slabs/footings, whichever was shallower. Upon completion of PCB-impacted soil removal, an engineered control (EC) was constructed.

Clean backfill was placed and compacted from the excavation bottom up to 4 feet below ground surface at which point a brightly colored geotextile warning layer was installed, except where immobile pre-existing concrete remained at depths shallower than 4 ft bgs. Where concrete remained at depths shallower than 4 ft bgs, the warning layer was gently graded from 4 ft bgs to the top of concrete with clean fill placed as necessary to prevent damage to the warning layer upon compaction of overlying fill (see Figures 4 and 5 for as-built cross-sections). Pre-existing grade was then restored within the remedial excavation area using certified clean fill, loam (6-inches thick), and grass seed.

Based on the results of confirmatory sampling and analyses performed in accordance with USEPA approval, the final PCB excavation area is an irregular shape. To make the EC footprint easily identifiable, the shape is rectangular with a monument installed at the centroid the excavation area, from which the limits can be measured, and additional monuments at the four corners (See Figure 3).

Disturbance of soils less than one foot below grade does not constitute disturbance of the EC; thus allowing flexibility for lawn maintenance activities. Pfizer is in the process of applying for an Environmental Use Restriction (EUR) which will consist of a notification on the property deed to prohibit EC disturbance. The EUR, in conjunction with the warning layer and clean fill, will render impacted soils “inaccessible”, as defined by Section 22a-133k-1(39) and Section 22a-133k-2(b)(3) of the Remediation Standard Regulations (RSRs).

3.2 ECO-RISK AREAS REMEDIAL EFFORTS

Two locations, one each within Regions D and F, from which shallow (<2 ft bgs) soil samples exceeded CT DEEP eco-risk criteria were capped to render soil inaccessible to ecological receptors (see Figure 2). Excavation, cap construction, and disposal activities were completed in conformance with the RAPAE (Golder, 2022a) on behalf of Pfizer in July and August 2022. Completion of the Eco-Risk Remedial Efforts is described in detail in the ERRAR submitted to CT DEEP on September 8, 2022 (Golder, 2022b).

In Region F, one 50-by-47-foot (approximately 2,370 square feet) concrete cap was constructed (See Figure 6) and is occasionally used by Pfizer personnel as a basketball court. Typical cross-sections of the completed concrete cap in Region F are provided as Figure 7. In concordance with the RAPAE, the Region F cap consists of the following layers from top to bottom:

- A sealed, approximately six-inch thick concrete cap.
- Approximately six inches of one-half to one-inch diameter gravel.
- Overlapping rolls of brightly-colored, orange, woven demarcation textile.

Consistent with the approach described in the RAPAE, an aggregate cap was constructed across an approximately 0.5-acre area within West Campus Region D. The general cap location is shown on Figure 2. Figure 8 presents a detail of the aggregate cap area. The Region D cap consists of a six-inch layer of approximately one to two-inch diameter gravel atop overlapping rolls of brightly-colored, orange, woven demarcation textile. Survey monuments were installed at the three cap corners not bounded by curbing, as shown on Figure 8. As-built cross-sections of the Region D aggregate cap are included as Figure 9.

4.0 MAINTENANCE AND MONITORING

Pfizer will follow this Maintenance and Monitoring Plan to ensure the integrity of the West Campus EC and eco-risk caps. Pfizer's Facility Emergency Health and Safety (EHS) Regulated Waste Compliance Lead (or designated EHS Subject Matter Expert as selected by the site EHS Director) will be responsible for the maintenance and monitoring of the EC and eco-risk caps. Inspections of the PCB Area EC will be performed consistent with the requirements of CT DEEP's Conditional Approval of the Application for Environmental Control Variance Part 1 and Part 2 and Section 22a-133q-8 of the CT Remedial Standard Regulations. The semi-annual inspections will occur during the second and fourth calendar quarters and will include observation of the general EC and eco-risk areas including cap integrity, vegetation conditions, the presence of animal burrows, soil erosion, etc. Site-specific inspection forms to be used for each area are included as Appendix A. In the event the inspection identifies an issue requiring repair, Pfizer will complete the required repair within 30 days or upon the earliest reasonable procurement of requisite materials and services and any necessary Pfizer or local permits..

Financial assurance for these activities will be incorporated into the pending Stewardship Permit in accordance with §22a-133-1(f) of the RSRs.

5.0 SCHEDULE FOR ADMINISTRATIVE CONTROLS IMPLEMENTATION

Pfizer will submit an EUR application to prevent residential use and disturbance of the PCB EC area in perpetuity. The EUR will be filed on the land records in accordance with the USEPA October 22, 2020 RBDA Approval Letter. Administrative controls to prevent disturbance of the eco-risk caps will be instituted by Pfizer. Pfizer will also maintain existing security fencing, access controls, and internal procedures for all Facility work which includes excavation permitting to ensure disturbance of the EC and eco-risk cap areas do not occur.

A report summarizing inspections and including completed inspection forms will be submitted to CT DEEP and USEPA with the annual facility report. Semi-annual inspection reports will be signed by Pfizer. The report will also include a description of any maintenance or repair activities completed since the last report submittal. Beginning in 2025, and on a five-year basis, Pfizer will retain a Licensed Environmental Professional (LEP) to conduct a comprehensive inspection of the EC and eco-risk cap areas and submit a signed and sealed report of the findings. In years when the five-year inspection is completed, it will replace the second quarter inspection.

6.0 FINANCIAL ASSURANCE ESTIMATE

All EC and eco-risk cap areas are small (approximately 0.8-acre in total) and are located within a much larger Facility which is carefully managed and maintained and thus is expected to require minimal maintenance. Attachment L-2 provides an MMP activities and potential repairs cost estimate of \$10,764. This includes 20% of the estimated 10-year cost for annual inspections and reporting, with the cost to repair 10% of the EC or eco-risk caps, including excavation, replacement of the warning/demarcation layer, backfilling, and restoration of the vegetated topsoil layer, crushed stone/gravel layer, or concrete/asphalt layer. The May 2024 Consumer Price Index 12-month percentage change of 3.3% was used as the inflation rate in the calculator.

A comprehensive financial assurance cost estimate including all activities described in Attachments L, M, N and O is provided as Attachment P of this Stewardship Permit Application. The total amount will be maintained in effect with the conditions of the Stewardship Permit, or as required by the Commissioner. The financial instrument will include at least one of the following: Irrevocable Standby Letter of Credit, Performance or Payment Bond, Trust Fund and/or Insurance. The owner of the subject parcel will demonstrate that he has posted or will post a surety in a form and amount approved in writing by the Commissioner.

7.0 REFERENCES

Connecticut Department of Energy & Environmental Protection 2002, Water Quality Standards, Hartford Connecticut, December 17, 2002.

Golder, 2017. *Phase II / Phase III Site Investigation Report – West Campus*. Pfizer Inc, Eastern Point Road, Groton, CT. July 31, 2017.

Golder, 2020a. *Risk Based Disposal Approval Application for Clean-Up of Polychlorinated Biphenyl Remediation Waste Under 40 CFR 761.61(c)*. Pfizer Inc, Eastern Point Road, Groton, CT. July 7, 2020.

Golder, 2020b. *Engineered Control Variance Request Application: Parts 1 and 2, Supporting Information – PCB Remediation Area (AOC-9/48D)*. July 15, 2020.

Golder, 2020c. *Remedial Action Plan*. Pfizer Inc, 445 Eastern Point Road, Groton, CT. July 15, 2020.

Golder, 2021. *PCB Soil Cleanup Completion Report – Former Caffeine Production Area, AOC-9 and AOC-48D*. Pfizer Inc, Eastern Point Road, Groton, CT. August 17, 2021.

Golder, 2022a. *Remedial Action Plan for Eco-Risk*. Pfizer Inc. 445 Eastern Point Road, Groton, CT. March 2022.

Golder, 2022b. *Ecological Risk (Eco-Risk) Remedial Action Report*. Pfizer, Inc, 445 Eastern Point Groton, CT. September 2022.

[https://golderassociates.sharepoint.com/sites/10555e/shared documents/2022-2023/deliverables/stewardship permit/groton stewardship permit/2023nov rev1 to ct deep/final/review complete drafts for assembly/new or to replace 20231222/attachment I/attachment I1 mmp .docx](https://golderassociates.sharepoint.com/sites/10555e/shared%20documents/2022-2023/deliverables/stewardship%20permit/groton%20stewardship%20permit/2023nov%20rev1%20to%20ct%20deep/final/review%20complete%20drafts%20for%20assembly/new%20or%20to%20replace%2020231222/attachment%20I/attachment%20I1%20mmp%20.docx)

Tables

Attachment L-2
EC and Eco-Risk Cap Maintenance, Monitoring and Repair Cost Estimate
Stewardship Permit
Pfizer Inc, Groton, Connecticut

	Total Cost in Current Year \$	Current Year Cost Plus 15 % contingency	Cost of Activity Adjusted for Annual Inflation (10 years)
PCB Area Warning/Demarcation Layer Repair cost (Entire EC Area) ¹	\$4,252	\$4,890	\$6,550
PCB Area Topsoil Repair (Entire EC Area) ¹	\$5,727	\$6,586	\$8,821
PCB EC Labor (Earthwork contractor - assumes repair in 2 days of Entire EC) ¹	\$5,000	\$5,750	\$7,701
Region D Eco-Risk Cap Repair	\$54,030	\$62,134	\$83,221
Region F Eco-Risk Cap Areas Repair	\$57,637	\$66,283	\$88,778

Divide Cost by Assumed Infrastructure Lifespan of 30 years

Year 1	Year 2-10
\$218	\$437
\$294	\$588
\$257	\$513
\$2,774	\$5,548
\$2,959	\$5,919

	Current Year \$	Current Year \$ Plus 15 % contingency
Annual Engineer Control and Ecological Risk Cap Monitoring and Reporting	\$2,500	\$2,875

Cumulative Annual M&M Adjusted for Annual Inflation	
Year 1	Year 2-10
\$2,875	\$5,845

Total Annual M&M	\$2,500
------------------	---------

Including quarterly inspection by third party, completion of inspection checklist, regular maintenance (e.g., repairing settlement), any required sampling and analyses, and annual reporting to CT DEEP.

\$2,875	\$5,845
---------	---------

Total Value of Surety (Sum of yearly value for replacement costs and annual M&M. Total Value accrues over 5 years until final value is achieved.)

Total MMP Activities and Potential Repairs Cost Estimate	\$10,764
--	----------

Year 1	Year 2-10
\$9,377	\$18,850

Input anticipated inflation rate as a decimal value (for example 3% should be input as 0.03) ²	0.033
--	-------

Attachment L-2
EC and Eco-Risk Cap Maintenance, Monitoring and Repair Cost Estimate
Stewardship Permit
Pfizer Inc, Groton, Connecticut

COSTS FOR PCB AREA REPAIR OF 10% of the EC WARNING/DEMARCATIION LAYER OR TOPSOIL³

Area Estimates	Total Area	Units
Area	0.17	acres

Estimated Engineered Control Costs	Subtotal Costs	Area
Brightly Colored Warning/Demarcation Layer - Plastic Grid ³	\$ 25,013	per acre

Source: RS Means Data - Line Number 015626500600 - Revised Crew Type from Q2 2020, adjusted to Q2 2024 dollars using the Federal Reserve Deflators

Estimated Cost to Repair Turf (Includes 6-inches topsoil delivered and placed) ³	\$ 33,688	per acre
--	-----------	----------

(Source: RS Means Data - Line Number 321216130300 & 312323209018 from Q2 2020, adjusted to Q2 2024 dollars using the Federal Reserve Deflators)

Annual M&M Estimate Annual EC Maintance, Inspection and Reporting to DEEP:	\$ 2,500	total
---	----------	-------

Demarcation Layer Cost (10% of total cost):	= 0.1*(\$28,127/acres x 0.17 acre) = \$	425
---	---	-----

Topsoil Repair Cost Replacement of Topsoil- 10% of Full Cost:	= 0.1*(\$37,880/acre x 0.17 acre) = \$	573
--	--	-----

Inflation Deflators Used	
Q3 2022	118.962
Q3 2023	122.817
Q1 2024	124.203
Source link: https://fred.stlouisfed.org/series/GDPDEF	
Retrieval date: June 25, 2024	

COSTS FOR REPAIR OF 10% of the Eco-Risk CAP AREAS⁴

Area Estimates	Total Area (acres)	Total Area (sq ft)
Region D Cap	0.47	20,470
Region F Cap	0.05	2,370

Region D Aggregate Cap Installation Cost	Subtotal Costs	Area
Region D Procurement and Placement of Aggregate Cap with Demarcation layer.	\$ 114,972	per acre

Region F Cap Installation Cost Region F Cap Concrete, Aggregate and Demarkation Layer Installation Cost	\$ 1,059,136	per acre
--	--------------	----------

Region D Cap Repair Cost (10% of total cost):	= 0.1*(\$113,689/acre x 0.05 acres) = \$	5,403
---	--	-------

Region F Cap Repair Cost (10% of total cost):	= 0.1*(\$1,047,317/acres x 0.47 acre) = \$	5,764
---	--	-------

Created by: JCR
Checked by: GRD
Reviewed by: MAH

Notes:

- 1) An existing financial assurance is in place for PCB area maintenance, monitoring and repairs.
- 2) The 12-month May 2024 inflation rate as calculated by the US Bureau of Labor Statistics from the Consumer Price Index was used for the anticipated inflation rate.
- 3) Estimated repair costs are taken from RS means for the PCB EC area, and adjusted from Q2 2020 dollars to Q1 2024 dollars with the appropriate Federal Reserve Bank of Saint Louis Deflator.
- 4) Estimated Eco-Risk Cap repair costs taken from initial construction cost, and adjusted from Q3 2022 dollars to Q1 2024 dollars with the appropriate Federal Reserve Bank of Saint Louis Deflator.
- 5) This financial assurance calculator is intended to generate a financial assurance estimate of 20% of 10-year costs.
- 6) Repair costs assume replacement of 10% of cap and that any soil excavated can be reused in-place and not be disposed of off-Site.
- 7) Includes 20% of the estimated 10-year cost for annual inspections and reporting, with the cost to repair 10% of the EC or eco-risk caps, including excavation, replacement of the warning/demarcation layer, backfilling, and restoration of the vegetated topsoil layer, crushed stone/gravel layer, or concrete/asphalt layer.

Figures



LEGEND

- Monitoring Well Location
- Monitoring Well for Verification Groundwater Sampling
- Bedrock Wall
- Remediated PCB-impacted soils >1 ppm within 4 feet of existing grade
- Historical Site Building
- Engineered Control Extent
- Survey Monuments

0 50 100
1" = 33 feet Feet

NOTE(S)

REFERENCE(S)

- COORDINATE SYSTEM: NAD 1983 STATEPLANE CONNECTICUT FIPS 0600 FEET
- IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT

PFIZER INC
EASTERN POINT RD.,
GROTON, CT

PROJECT

MONITORING AND MAINTENANCE PLAN

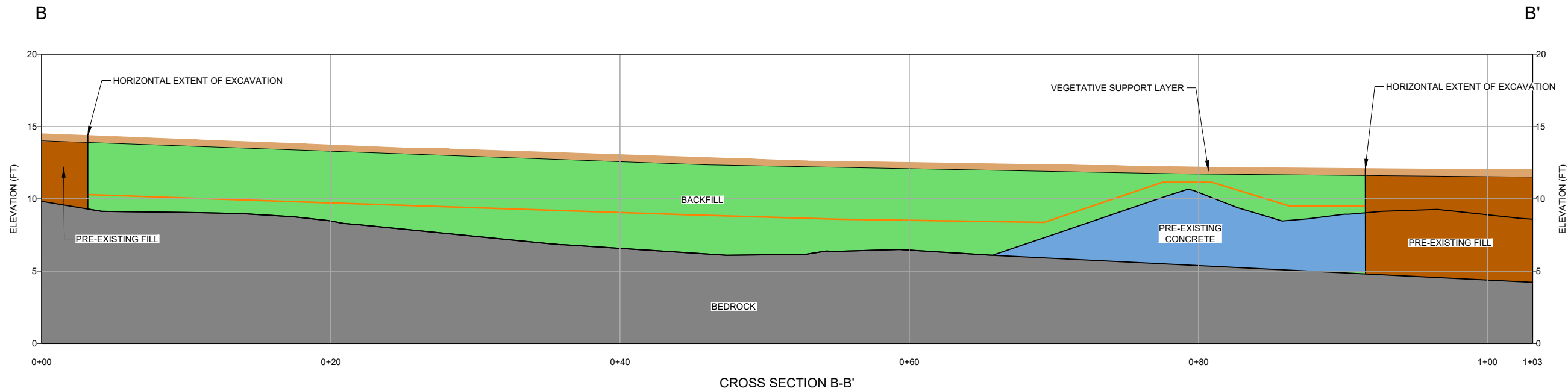
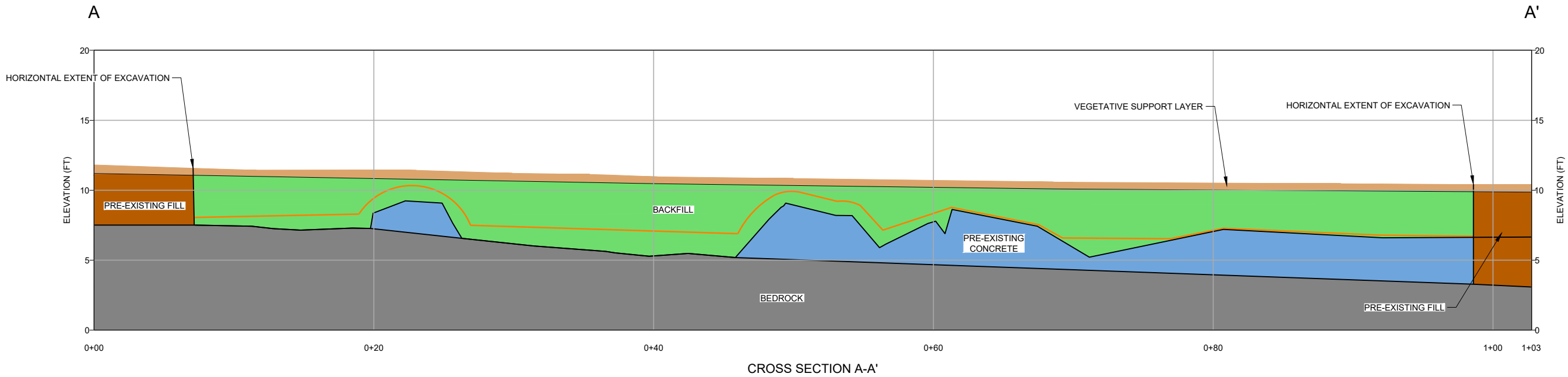
TITLE

**AOC-9 AND AOC-48D
ENGINEERED CONTROL
PCB SOIL REMEDIATION AREA**

	CONSULTANT	YYYY-MM-DD	2023-12-01
	DESIGNED	DPJ	
	PREPARED	EMM	
	REVIEWED	DPJ	
	APPROVED	JLF	

PROJECT NO.	CONTROL	REV.	FIGURE
31405041.080	-	-	3

Path: \\gdr-gb.com\projects\offices\manchester\pfc\Gron199_PROJ\31405041_0005_Site_Closure\40_PROJ\1 File Name: 31405041_018_0005.01_001.dwg | Last Edited By: jheacock Date: 2023-12-01 Time: 2:31:27 PM | Printed By: jheacock Date: 2023-12-01 Time: 2:40:39 PM



LEGEND

- DEMARCATION LAYER
- VEGETATIVE SUPPORT LAYER
- BACKFILL
- PRE-EXISTING FILL
- CONCRETE
- BEDROCK

REFERENCE(S)

BASE MAP TAKEN FROM DIGITAL FILE "EWMI Exc Expansion.dwg", DATED AUGUST 8, 2021, FROM STADIA ENGINEERING ASSOCIATES, INC.

CLIENT
PFIZER INC
EASTER POINT ROAD
GROTON, CONNECTICUT

CONSULTANT



YYYY-MM-DD	2023-11-28
DESIGNED	DPJ
PREPARED	JSH
REVIEWED	DPJ
APPROVED	JLF

PROJECT
MAINTENANCE AND MONITORING PLAN

TITLE
**AOC-9 AND AOC-48D PCB-IMPACTED SOILS ENGINEERED
CAP/COVER AS-BUILT N-S CROSS-SECTIONS A-A' AND B-B'**

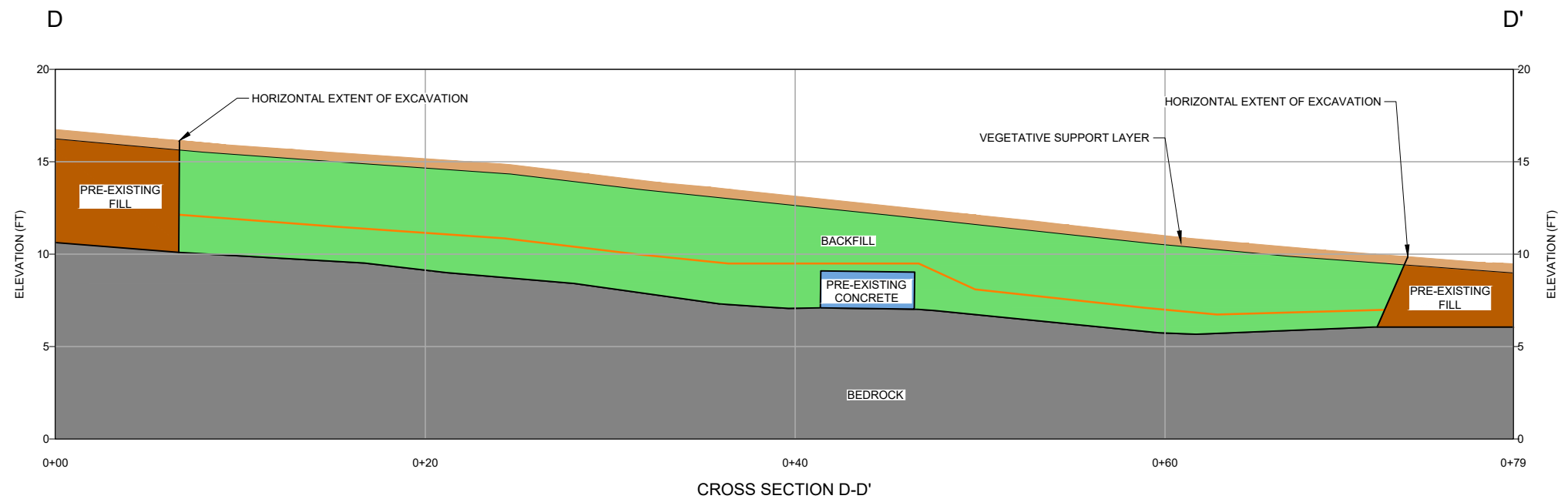
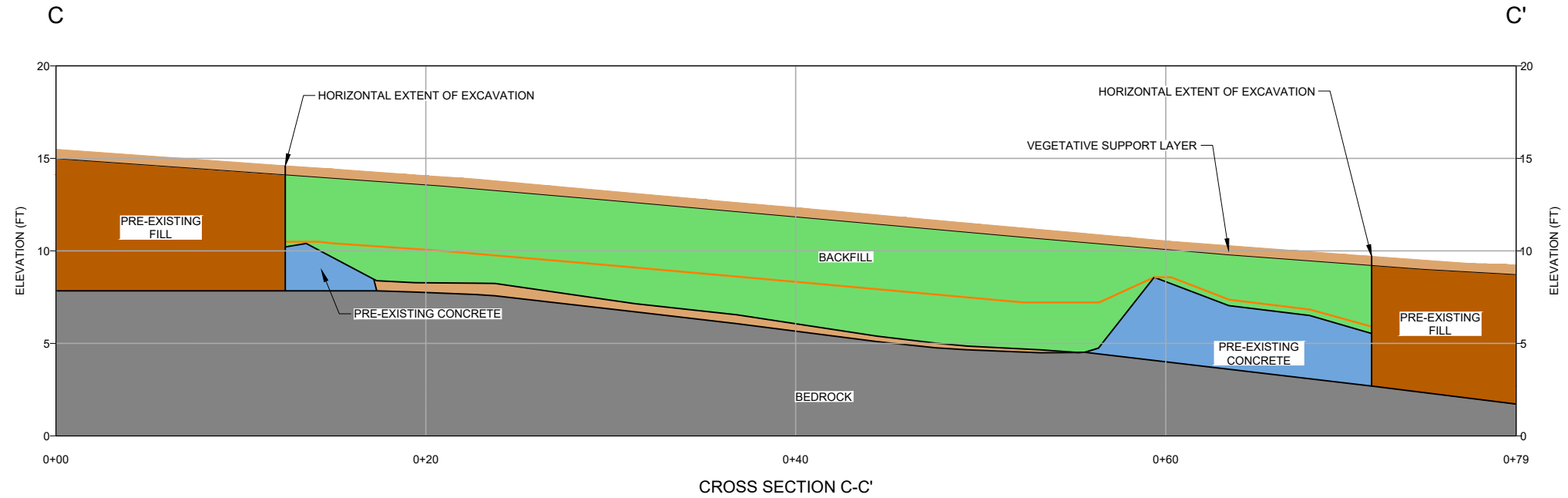
PROJECT NO.
31405041.018

PHASE
0005.01

REV.
A

FIGURE
4

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



LEGEND

———— DEMARCATION LAYER

VEGETATIVE SUPPORT LAYER

BACKFILL

 PRE-EXISTING FILL

 CONCRETE

BEDROCK

REFERENCE(S)

BASE MAP TAKEN FROM DIGITAL FILE "EWMI Exc Expansion.dwg", DATED AUGUST 8, 2021, FROM STADIA ENGINEERING ASSOCIATES, INC.

CLIENT
PFIZER INC
EASTER POINT ROAD
GROTON, CONNECTICUT

CONSULTANT



YYYY-MM-DD 2023-11-28

DESIGNED	DPJ
----------	-----

PREPARED	JSH
----------	-----

REVIEWED DPJ

APPROVED JLF

PROJECT MAINTENANCE AND MONITORING PLAN

TITLE
AOC-9 AND AOC-48D PCB-IMPACTED SOILS ENGINEERED
CAP/COVER AS-BUILT E-W CROSS-SECTIONS C-C' AND D-D'

PROJECT NO.
31405041.018

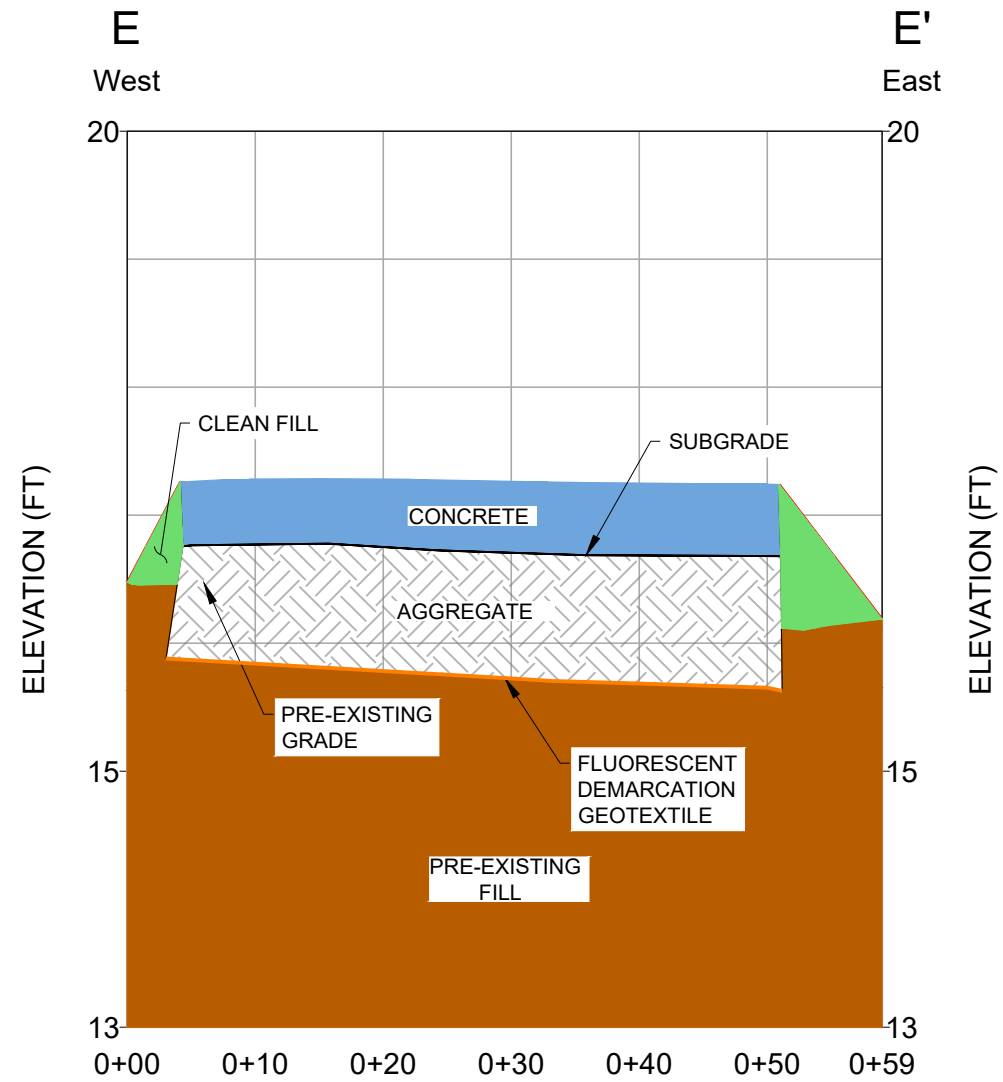
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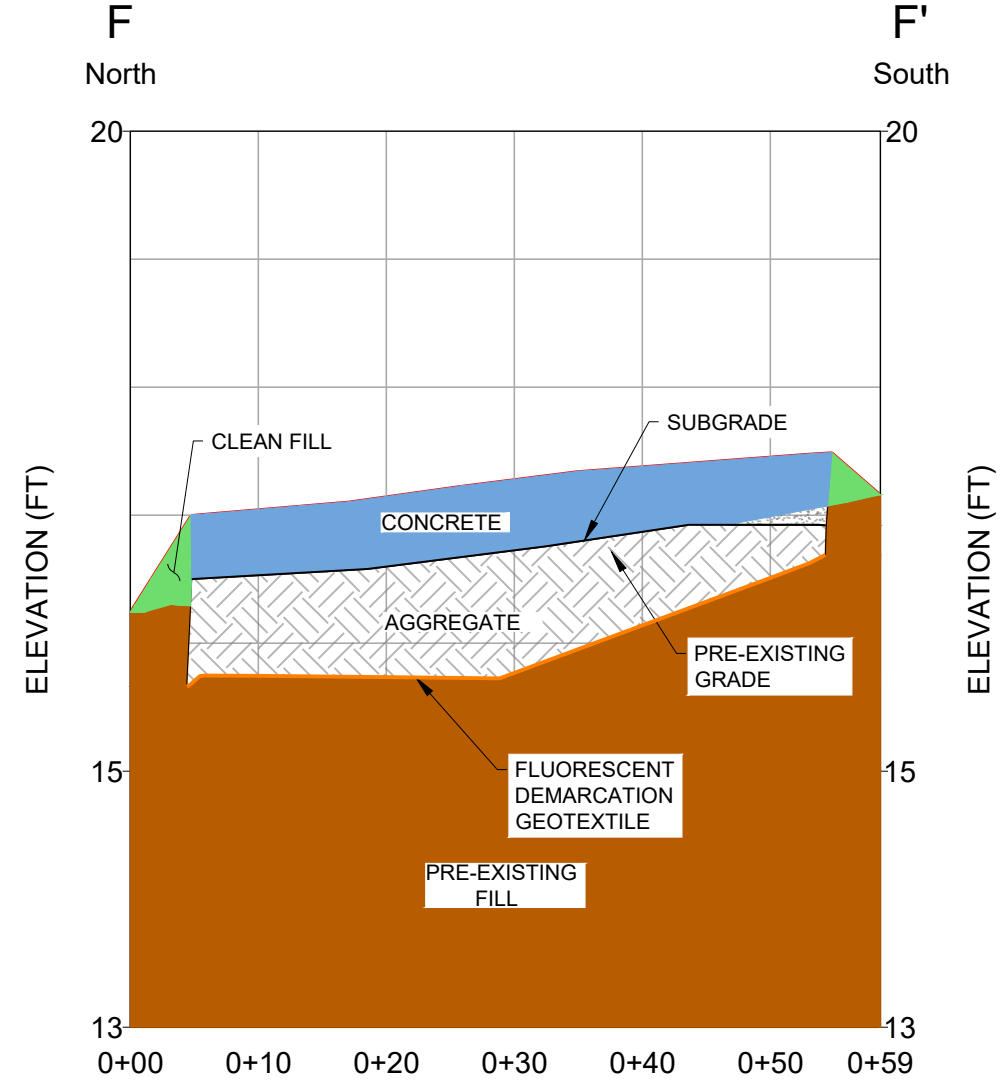
FIGURE 5

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



HORIZ. SCALE 1" = 15' **A** REGION F - TYPICAL CROSS SECTION E-E'
VERT. EXAGG. 10x 08



HORIZ. SCALE 1" = 15' **B** REGION F - TYPICAL CROSS SECTION F-F'
VERT. EXAGG. 10x 08

NOTE(S)

1. SURVEY DATA FOR TOPOGRAPHY AND SUBLEVEL LAYERS WERE RECEIVED BY WSP GOLDER ON AUGUST 18TH, 2022 FROM LOUREIRO ENGINEERING ASSOCIATES, INC.

REFERENCE(S)

BASE MAP TAKEN FROM DIGITAL FILE "EWMI Exc Expansion.dwg", DATED AUGUST 8, 2021, FROM STADIA ENGINEERING ASSOCIATES, INC.

LEGEND

-
- DEMARCATION LAYER
 AGGREGATE LAYER
 CONCRETE LAYER
 CLEAN BACKFILL LAYER
 PRE-EXISTING FILL



CLIENT
PFIZER INC
EASTER POINT ROAD
GROTON, CONNECTICUT

CONSULTANT

WS |

YYYY-MM-DD 2023-11-28

DESIGNED	DF
----------	----

PREPARED JS

REVIEWED	DE
----------	----

APPROVED _____ II

PROJECT MAINTENANCE AND MONITORING PLAN

TITLE
REGION F AS-BUILT CAP CROSS SECTIONS

PROJECT NO.
31405041.018

PHASE
0005.01

REV.
A

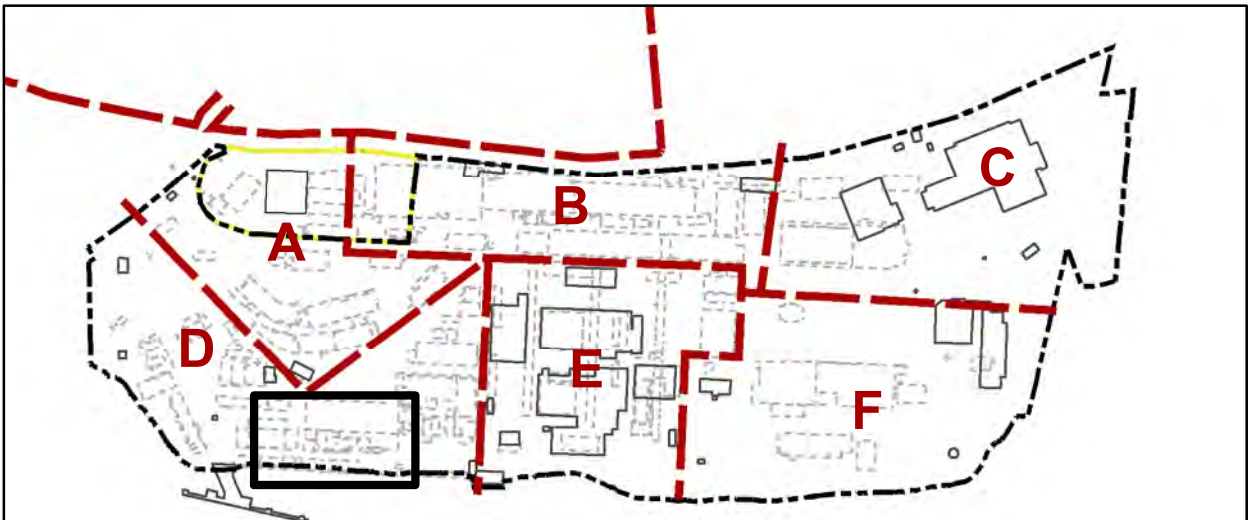
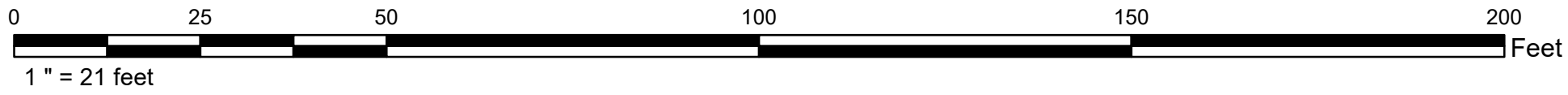
FIGURE 7



V:\001 GIS Projects\Pfizer\CT Groton\99 PROJ\07288837 EAM\0 PROJ\00036 Maintenance and Monitoring_2023\07288837-0036-HS-0008.mxd

LEGEND

- ▲ Survey Monuments
- Monitoring Well Location
- Aggregate Ecological Risk Cap
- Location of Cross Section G-G'
- Location of Cross Section H-H'



CLIENT
PFIZER INC
EASTERN POINT RD.,
GROTON, CT

CONSULTANT



YYYY-MM-DD 2023-12-01

DESIGNED DPJ

PREPARED EMM

REVIEWED DPJ

APPROVED JLF

NOTE(S)

- REFERENCE(S)
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CONNECTICUT FIPS 0600 FEET
 2. SOIL BORING AND MONITORING WELL SURVEY LOCATIONS PROVIDED BY CME ASSOCIATES INC. HISTORICAL SITE BUILDINGS DIGITIZED USING 1993 WOODARD & CURRAN FIGURE ENTITLED "LOCATION OF SOIL EXCEEDING RESIDENTIAL DIRECT EXPOSURE CRITERIA FOR TOTAL PETROLEUM HYDROCARBONS."
 3. IMAGERY: SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 4. SAMPLES WERE COLLECTED FROM SHALLOW SOIL BETWEEN AUGUST 25 AND SEPTEMBER 9, 2010 AND ON OCTOBER 19, 2011.

PROJECT

MAINTENANCE AND MONITORING PLAN

TITLE

REGION D AGGREGATE CAP

PROJECT NO.
31405041.080

CONTROL

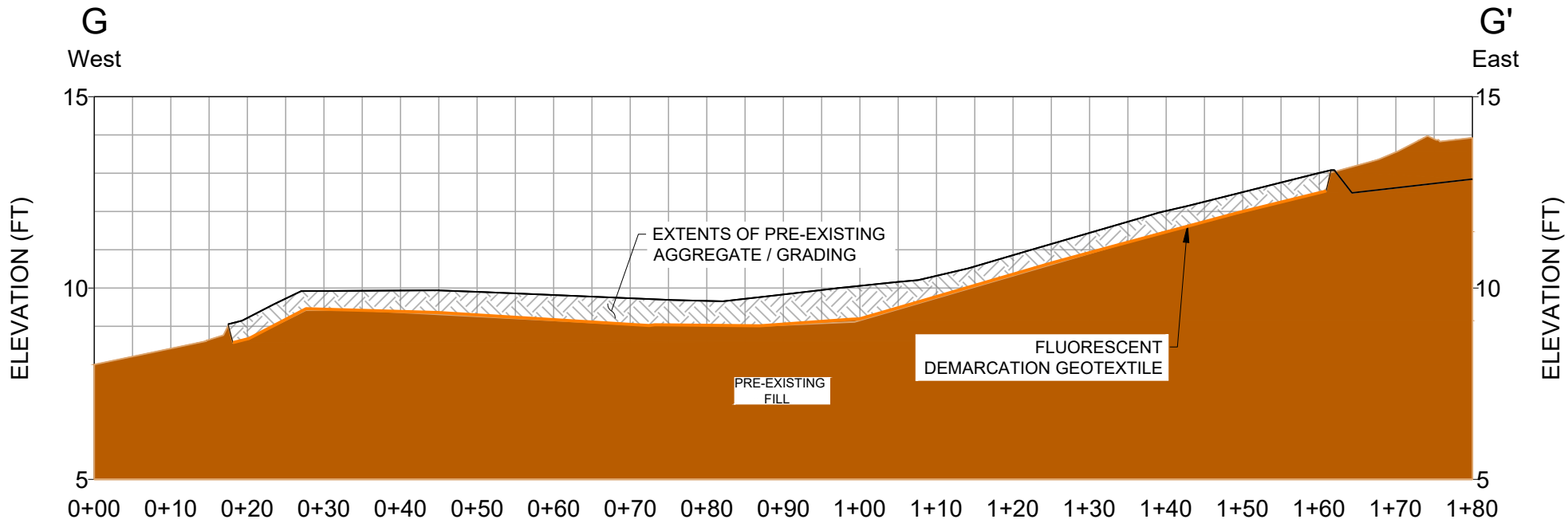
REV.

FIGURE

8

1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

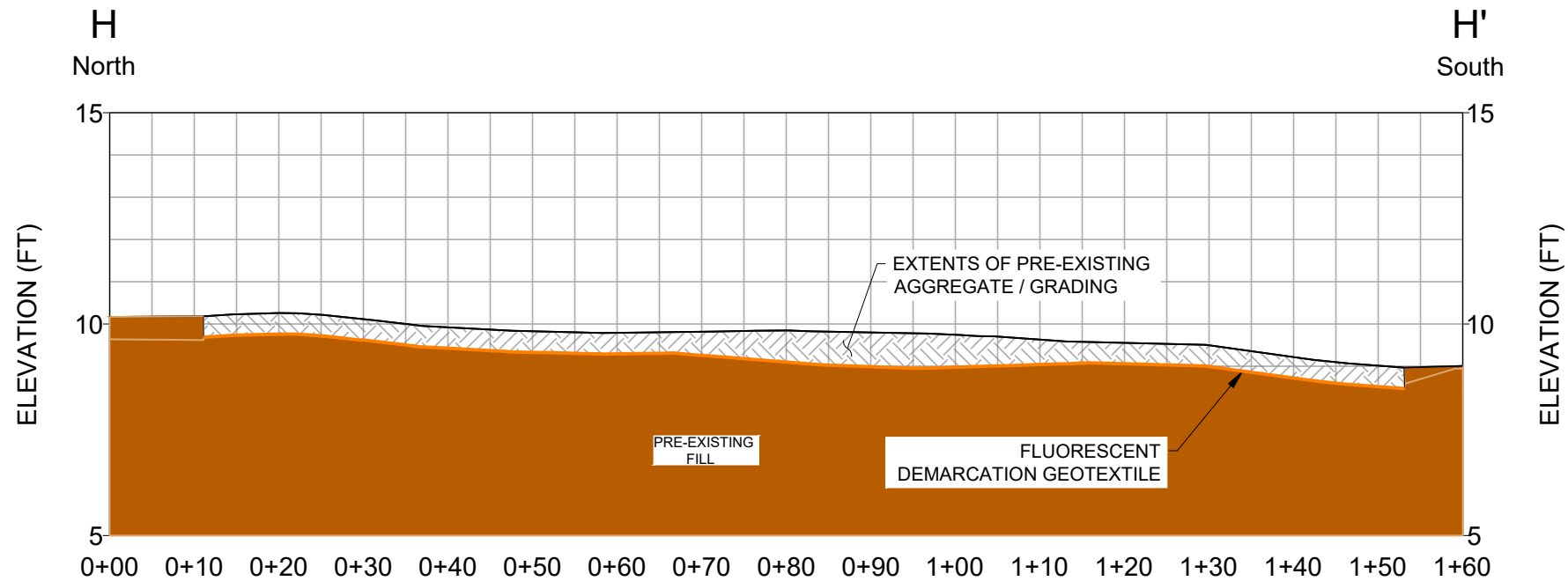
Path: \\golder-gba.com\projectdata\offices\manchester\pfr\Groton\99_PROJ\3145041_0005_Site_Clear\40_PROJ\1 File Name: 7 REGION F AS-BUILT CAP CROSS SECTIONS.dwg | Last Edited By: jheacock Date: 2023-12-01 Time: 2:43:38 PM



HORIZ. SCALE 1" = 20'
VERT. EXAGG. 5x

C
09

REGION D - TYPICAL CROSS SECTION G-G'



HORIZ. SCALE 1" = 20'
VERT. EXAGG. 5x

D
09

REGION D - TYPICAL CROSS SECTION H-H'

LEGEND

- DEMARCATION LAYER
- AGGREGATE LAYER
- PRE-EXISTING FILL

REFERENCE(S)

BASE MAP TAKEN FROM DIGITAL FILE "EWMI Exc Expansion.dwg", DATED AUGUST 8, 2021, FROM STADIA ENGINEERING ASSOCIATES, INC.

CLIENT
PFIZER INC
EASTER POINT ROAD
GROTON, CONNECTICUT

CONSULTANT



YYYY-MM-DD	2023-11-28
DESIGNED	DPJ
PREPARED	JSH
REVIEWED	DPJ
APPROVED	JLF

PROJECT
MAINTENANCE AND MONITORING PLAN

TITLE
REGION D AS-BUILT CROSS SECTIONS

PROJECT NO.
31405041.018

PHASE
0005.01

REV.
A

FIGURE
9



NOTE(S)

- SURVEY DATA FOR TOPOGRAPHY AND SUBLEVEL LAYERS WERE RECEIVED BY WSP GOLDER ON AUGUST 18TH, 2022 FROM LOUREIRO ENGINEERING ASSOCIATES, INC.
- AASHTO No. 3 THICKNESS OF GREATER THAN OR EQUAL TO SIX INCHES WERE FIELD VERIFIED BY GOLDER AT 25 INDIVIDUAL LOCATIONS.

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

APPENDIX A

Engineered Control Inspection
Form

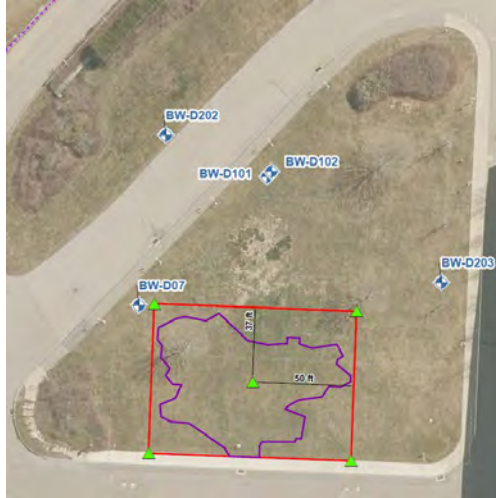
Engineered Control Inspection Form PCB RBDA Remediation Area

Owner/Location:

Pfizer Inc

445 Eastern Point Road

Groton, Connecticut



Inspection Category		YES	NO	Comments (Identify locations on the Site Plan)
A. GENERAL SITE ACCESS & CONDITIONS				
1	Was there adequate access to the EC area?			
2	Were there any unanticipated site conditions (other use, constructed features)?			
B. VEGETATED AREAS				
1	Evidence of damaged or stressed vegetation which may require replacement?			
2	Evidence of animal burrows?			
3	Evidence of soil erosion?			
4	Ponding or muddy conditions/saturated areas?			
5	Monuments intact/in-place?			
C. GROUNDWATER MONITORING WELL NETWORK				
1	Surface protections of groundwater monitoring wells are intact and in good condition (concrete seals and covers)?			
2	PVC riser location/elevation is preventing stormwater infiltration into the well?			
3	PVC riser gripper cap installed and secure?			
D. CONCLUSION				
1	Overall condition of EC (circle one):	GOOD	SATISFACTORY	POOR
2	List other observations and recommendations. Include explanations of comments made above (as needed):			
Inspected by: _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <i>Printed Name and Title</i> <i>Signature</i> <i>Time and Date of Inspection</i> </div>				
Reviewed By: _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <i>Printed Name and Title</i> <i>Signature</i> <i>Date</i> </div>				
Attachments: Photographs Yes/No Additional Sheets Yes/No				

Eco-Risk Cap Inspection Form

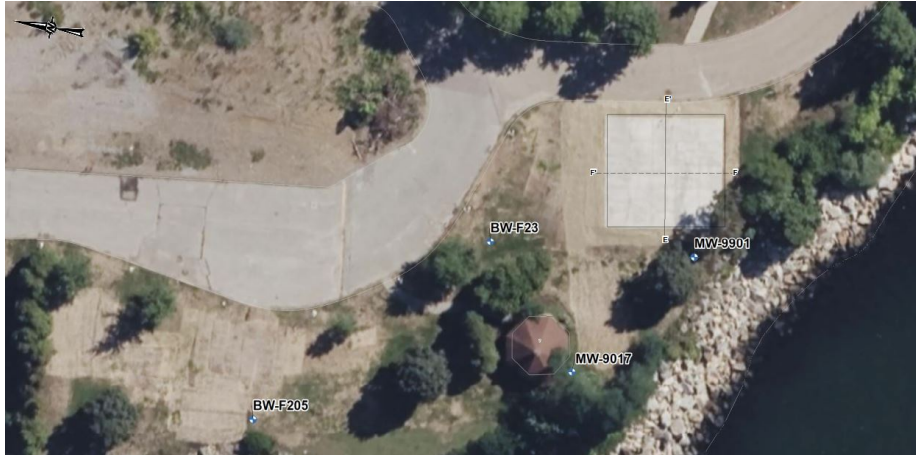
Concrete Cap Area

Owner/Location:

Pfizer Inc

445 Eastern Point Road

Groton, Connecticut



Inspection Category		YES	NO	Comments (Identify locations on the Site Plan)
---------------------	--	-----	----	---

A. GENERAL SITE ACCESS & CONDITIONS

1	Was there adequate access to the EC area?			
2	Were there any unanticipated site conditions (other use, constructed features)?			

B. CONCRETE AREA

1	Evidence of damaged to concrete which might require maintenance?			
2	Is cracking confined to relief joints?			
3	Evidence of soil erosion around edges of concrete?			
4	Is the perimeter of the cap vegetated?			
5	Ponding or muddy conditions/saturated areas?			

D. CONCLUSION

1	Overall condition of EC (circle one):	GOOD	SATISFACTORY	POOR	
2	List other observations and recommendations. Include explanations of comments made above (as needed):				

Inspected by:

Printed Name and Title

Signature

Time and Date of Inspection

Reviewed By:

Printed Name and Title

Signature

Date

Attachments:

Photographs

Yes/No

Additional Sheets

Yes/No

Eco-Risk Cap Inspection Form

Aggregate Cap Area

Owner/Location:

Pfizer Inc

445 Eastern Point Road

Groton, Connecticut



Inspection Category		YES	NO	Comments (Identify locations on the Site Plan)
A. GENERAL SITE ACCESS & CONDITIONS				
1	Was there adequate access to the cap area?			
2	Were there any unanticipated site conditions (other use, constructed features)?			
B. AGGREAGE CAP AREA				
1	Is the aggregate cap free of vegetation other than mature trees?			
2	Is any of the high-visibility demarcation layer visible?			
3	Are monuments intact/in-place?			
4	Any other needs for maintenance or repair?			
5	Ponding or Muddy conditions/saturated areas?			
D. CONCLUSION				
1	Overall condition of cap (circle one):	GOOD	SATISFACTORY	POOR
2	List other observations and recommendations. Include explanations of comments made above (as needed):			
Inspected by: _____				
Printed Name and Title		Signature		Time and Date of Inspection
Reviewed By: _____				
Printed Name and Title		Signature		Date
Attachments: Photographs Yes/No Additional Sheets Yes/No				

APPENDIX B

Financial Assurance



Gareth J. Port
Manager
Environmental & Sustainability Law

Pfizer Inc.
235 East 42nd Street, New York, NY 10017
Tel 212 733 2814 Fax 646 487 9163
gareth.port@pfizer.com

August 19, 2022

BY FEDERAL EXPRESS

Jing Chen
Connecticut Department of Energy & Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Pfizer Inc.
c/o Russell Downey, Director
Global Engineering, Pfizer Inc.
100 Route 206 North
Peapack, NJ 07977

Re: Pfizer Inc. (Groton, CT)
RCRA Corrective Action Financial Assurance
445 Eastern Point Road, Groton, Connecticut 06340
EPA ID # CTD001147495

Dear Ms. Chen and Mr. Downey:

Pfizer Inc. is writing to submit insurance provided by Blue Whale Re Ltd. of Burlington, Vermont to satisfy the above-referenced financial assurance requirement.

Please find enclosed the required instruments.

Ms. Jing Chen and Mr. Russell Downey
August 19, 2022
Page 2

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read 'G. Port', with a stylized flourish extending from the end.

Gareth J. Port

Manager
Environmental & Sustainability Law, Pfizer Inc.

Enclosure(s)

Ms. Jing Chen and Mr. Russell Downey
August 19, 2022
Page 3

bcc: R. Schott, Esq. (Environmental & Sustainability Law, Pfizer Inc.) (via email)

**State of Connecticut
Hazardous Waste Management Facility
Certificate of Insurance for
Closure and/or Post-Closure Care**

Name of Insurer (herein called the "Insurer"): Blue Whale Re Ltd.

Address: 76 St. Paul St., Suite 500, Burlington, VT 05401

Name of Insured (herein called the "Insured"): Pfizer Inc.

Address: 235 East 42nd Street, New York, New York 10017

For Each Facility Covered:

The EPA Identification Number: CTD001147495

Facility Name: Pfizer Inc.

Facility Address: 445 Eastern Point Road, Groton, CT 06340

The Amount of Insurance for:

Closure: \$92,647

Post-closure: \$0

(these amounts for all facilities covered must total the face amount shown below).

Face Amount: \$92,647


Policy Number: 361-22CAGROT

Effective Date: 8/1/2022

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d) as incorporated by reference in sections 22a-449(c)-104 and 105 of the Regulations of Connecticut State Agencies (RCSA), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

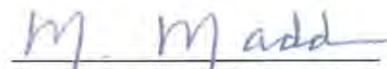
Whenever requested by the commissioner of Energy and Environmental Protection the Insurer agrees to furnish to the commissioner a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 40 CFR 264.151(c) as amended by Sections 22a-449(c)-100 through 119 of the RCSA, as such regulations were constituted on the date shown immediately below.


Authorized signature for Insurer

Chryssa O'Toole

Authorized Representative


Signature of witness or notary

August 1, 2022

BLUE WHALE RE LTD.
76 ST. PAUL ST., SUITE 500
BURLINGTON, VERMONT 05401
"the Company"

RCRA OR OTHER REGULATORY CORRECTIVE ACTION POLICY

POLICY NUMBER 361-22CAGROT

THIS IS A CLAIMS MADE POLICY. COVERAGE IS LIMITED TO LIABILITY FOR CLAIMS FIRST MADE AGAINST AN INSURED AND REPORTED TO THE COMPANY DURING THE POLICY PERIOD. PLEASE READ THE POLICY CAREFULLY.

DECLARATIONS

- Item 1. Named Insured:** Pfizer Inc. and/or all of its subsidiary and affiliated entities (including, but not limited to corporations, partnerships or joint ventures), including any former subsidiary, associated or financially controlled company, as may now or hereafter be constituted or acquired, including any other entity (including but not limited to any corporation, joint venture or partnership) for which the Named Insured has assumed control or responsibility.
- Item 2. Mailing Address:** 235 East 42nd Street
New York, New York 10017
- Item 3. Policy Period:** August 1, 2022 to April 30, 2023 at 12:01AM Standard Time at the Named Insured's address shown above.
- Item 4. Coverage:** This policy only provides coverage for RCRA or Other Regulatory Corrective Action Costs as set forth in the policy.
- Item 5. Site Location:** EPA Identification Number CTD001147495
(Engineering Control Inspections & Maintenance)
Pfizer Inc, 445 Eastern Point Road, Groton, CT 06340
- Item 6. Limits Of Insurance:**
- a) \$92,647 Corrective Action Costs
 - b) \$92,647 Corrective Action Face Amount
- Item 7. Deductible:** \$ 0 Each Occurrence
- Item 8. Premium:** \$127

BLUE WHALE RE LTD.


By. _____
Authorized Representative

RCRA OR OTHER REGULATORY CORRECTIVE ACTION POLICY

THIS IS A "CLAIMS-MADE AND REPORTED" POLICY. THE POLICY REQUIRES THAT A CLAIM BE MADE UPON THE INSURED AND REPORTED TO THE COMPANY DURING THE POLICY PERIOD OR EXTENDED REPORTING PERIOD, IF ANY. PLEASE READ CAREFULLY.

In consideration of the payment of the premium, in reliance upon the statements in the Declarations and Application made a part hereof and subject to all the terms of this Policy, the Company agrees with the NAMED INSURED as follows:

SECTION I. COVERAGES

1. Insuring Agreement.

The Company agrees to pay on behalf of the **Insured**, or the **Regulatory Body**, subject to the limits of liability of this Policy, for such **Corrective Action Costs** that the **Insured** becomes legally obligated to pay by reason of a **Corrective Action** at a **Hazardous Waste Facility** scheduled in the Declarations ordered by a **Regulatory Body**. **Claims** for such **Corrective Action Costs** must be first reported in writing to the Company during the **Policy Period**. This coverage applies only to **Corrective Action Costs** that first take place on or after the Retroactive Date shown in the Declarations.

SECTION II. EXCLUSIONS

This insurance does not apply to expenses, losses, liabilities, or damages of any kind incurred by, accruing to, or alleged to be liabilities of the **Insured**, by reason of:

- A. Any criminal or civil penalties imposed by reason of the violation of any law or regulation.
- B. Any third-party claims for **Bodily Injury** or **Property Damage**.
- C. Any expenses, charges or costs resulting from the defense and/or investigation of any liability or obligation for **Corrective Action Costs** hereunder. However, this exclusion shall not apply to any investigations required for compliance with a **Corrective Action** at a **Covered Location** including but not limited to investigation of groundwater quality, hydrogeology, chemical fate and transport.

SECTION III. CLAIMS PROVISIONS

- A. In the event the **Insured** receives a demand from a **Regulatory Agency** or information that **Corrective Action** at a **Hazardous Waste Facility** is being considered or required by the **Regulatory Agency**, the **Insured** shall immediately forward to the Company any communication, demand or notice from the **Regulatory Agency** regarding the proposed or required **Corrective Action** received by the **Insured** or its designated representative.
- B. The **Insured** shall cooperate with the Company and, upon the Company's request, assist in obtaining information relative to any **Claim** made. The **Insured** shall not, except at its own cost, voluntarily make or approve any payments, assume any obligations or incur any expenses relating to a **Corrective Action** which are not in accordance with the **Corrective Action Plan** without the Company's written permission.
- C. Any notices required by these conditions shall be sent to:

Blue Whale Re Ltd.
76 St. Paul Street, Suite 500
Burlington, VT 05401
- D. The Company, upon receipt of a **Claim**, shall review and issue payment to the **Insured** for all undisputed **Corrective Action Costs** within thirty (30) days of receipt of a statement or bill of expenditures made for such costs and all necessary information verifying the amount of the **Corrective Action Costs** for which reimbursement is being sought. The Company further agrees to notify the **Insured** in writing within thirty (30) days of receipt of any statement or bill of expenditures made for **Corrective Action Costs** what amount, if any, of the statement or bill of expenditures is in dispute and what back up information is needed to resolve the

dispute. The Company and the **Insured** agree to cooperate to resolve any dispute, and if a dispute cannot be resolved promptly, to submit the same to binding arbitration upon the request of the **Insured** on or after the expiration of thirty (30) days after the submission of any statement or bill of expenditures for **Corrective Action Costs** by the **Insured**, which arbitration shall be conducted, in accordance with the rules and regulations outlined in the American Arbitration Association guidelines.

SECTION IV. DEFINITIONS

- A. **Bodily Injury** means bodily injury, sickness, disease, fear of sickness or disease, mental anguish and mental injury, emotional distress, psychic injury, or disability including care, loss of services or death resulting therefrom.
- B. **Claim** means a request by the **Insured** or a **Regulatory Agency** for payment of a statement or bill of expenditures for **Corrective Action Costs** by reason of a **Corrective Action** at a **Hazardous Waste Facility** in accordance with the applicable **Corrective Action Plan(s)** provided that such request is first submitted in writing to the **Regulatory Agency** for approval and reported in writing to the Company during the **Policy Period**.
- C. **Corrective Action** means the investigation, cleanup or remediation of a release of hazardous wastes or hazardous constituents required pursuant to an approved **Corrective Action Plan** at a **Hazardous Waste Facility** by closing, capping and otherwise managing one or more **Hazardous Waste Management Units**.
- D. **Corrective Action Costs** means all expenses identified in the **Corrective Action Plan** that has been approved by a **Regulatory Agency**.
- E. **Corrective Action Face Amount** means the Company's maximum limit of liability for **Corrective Action Costs** for the specific **Hazardous Waste Facility** as designated in the Declarations.
- F. **Corrective Action Plan** means the written plan for **Corrective Action** at a scheduled **Hazardous Waste Facility** incorporated herein by reference, and prepared in order to comply with regulations promulgated under 40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d) modified to replace the terms "post-closure" and "closure" with "corrective action" or other applicable federal, state or local regulations and U.S. EPA Identification Number CTD001147495 regarding a **Corrective Action** at a **Hazardous Waste Facility**, and provided that such plan shall first have been approved by a **Regulatory Agency** or other applicable federal, state or local regulatory body.
- G. **Hazardous Waste Facility** means the facility designated by legal description in the Declarations which has received authorization from a **Regulatory Agency** to engage in the treatment, storage or disposal of hazardous waste and includes one or more **Hazardous Waste Management Units**.
- H. **Hazardous Waste Management Unit** means a surface impoundment, waste pile, land treatment area, landfill cell, incinerator, tank (and associated piping), container storage area, and the underlying containment systems for any of these located on, within or under a **Hazardous Waste Facility**.
- I. **Insured** means the **Named Insured**, and any trustee, principal, member, director, officer, partner or employee thereof while acting within the scope of his/her duties as such, and any person or entity designated as an additional insured by an endorsement issued to form a part of this Policy.
- J. **Named Insured** means the person or entity designated as such in Item 1 of the Declarations.
- K. **Policy Period** means the period set forth in the Declarations, or any shorter period arising as a result of cancellation of this Policy.
- L. **Property Damage** means:
 - 1. physical injury to or destruction of tangible property, including the personal property of third parties; or
 - 2. loss of use of such property that has not been physically injured or destroyed; or
 - 3. diminished third party property value.

- M. **Regulatory Agency** means the U.S. Environmental Protection Agency or any successor person or state agency designated by the Regional Administrator or any agency that becomes responsible for the supervision of the **Closure/Post Closure Maintenance**.

SECTION V. LIMIT OF LIABILITY AND DEDUCTIBLE

- 1) With respect to each **Hazardous Waste Facility** shown in the Declarations, the Company's total liability for all **Corrective Action Costs**:
 - a. Shall not exceed the Limit of Liability shown in the Declarations as aggregate;
 - b. Subject to (a), the total policy liability for all **Corrective Action Costs** at a scheduled **Hazardous Waste Facility** shall not exceed the Limit of Liability for that scheduled facility shown in the Declarations as the **Corrective Action Face Amount**.regardless as to the number of:
 - a. facilities shown in the Declarations;
 - b. **Insureds** under this policy; or
 - c. **Claims** made or suits brought.
- 2) The Limits of Liability shown in the Declarations with respect to each scheduled **Hazardous Waste Facility** are separate Limits of Liability.

SECTION VI. TERRITORY

This Policy only applies to a **Claim** for **Corrective Action Costs** arising from a **Corrective Action** incurred at **Hazardous Waste Facilities** shown in the Declarations and only if such **Claims** are made or brought in the United States of America.

SECTION VII. CONDITIONS

- A. **Inspection and Audit** - The Company shall be permitted but not obligated to inspect, sample and monitor on a continuing basis a scheduled **Hazardous Waste Facility** at any time. Neither the Company's right to make inspections, sample and monitor, nor the actual undertaking thereof nor any report thereon, shall constitute an undertaking, on behalf of the **Insured** or others, to determine or warrant that the **Hazardous Waste Facility** or the operations at the **Hazardous Waste Facility** are safe, healthful or conform to acceptable engineering practice or are in compliance with any law, rule or regulation. The Company or its designee may examine and audit the **Insured's** books and records at any time during the **Policy Period** and extensions thereof, as far as they relate to the subject matter of this insurance, and within any periods of **Corrective Action** for which coverage is provided whether insurance provided by this Policy has expired.
- B. **Cancellation** - The Company may not cancel, terminate or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the **Insured** with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the Company may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the **Insured** and the **Regulatory Agency**.

This Policy may be cancelled by the **Named Insured** by surrender hereof to the Company or any of its authorized agents or by mailing to the Company written notice stating the date thereafter the cancellation shall be effective. The mailing of notice in the manner set forth shall be sufficient proof of notice.

Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty (120) days beginning at the receipt of the notice by both the **Regulatory Agency** and the **Insured** as evidenced by return receipt. Cancellation, termination or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

1. The **Insured** is named as a debtor in a voluntary or involuntary proceeding under Title II (Bankruptcy), US Code; or
2. The premium due is paid in full.

- C. **Representations** - By acceptance of this Policy, the **Named Insured** agrees that the statements in the Declarations and Application(s) are their representations, that this Policy is issued in reliance upon the truth of such representations, and that this Policy embodies all agreements existing between the **Named Insured** and the Company or any of its agents relating to this insurance.
- D. **Action Against Company** - No third-party action shall lie against the Company, unless as a condition precedent thereto, there shall have been full compliance with all of the terms of this Policy, nor until the amount of the **Insured's** obligation to pay shall have been finally determined either by judgment against the **Insured** after actual trial, expedited declaratory proceeding or by written agreement of the **Insured**, the claimant or **Regulatory Agency** and the Company, as applicable.
- Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this Policy to the extent of the insurance afforded by this Policy. No person or organization shall have any right under this Policy to join the Company as a party to any action against the **Insured** to determine the **Insured's** liability, nor shall the Company be impleaded by the **Insured** or his legal representative. Bankruptcy or insolvency of the **Insured** or of the **Insured's** estate shall not relieve the Company of any of its obligations hereunder.
- E. **Assignment** - This Policy may be assigned to another organization, corporate entity with the same parent or a third-party corporate entity, with the consent of the Company, which consent shall not be unreasonably withheld, delayed, or denied.
- F. **Changes** - Notice to any agent or knowledge possessed by any agent or by any other person shall not effect a waiver or a change in any part of this Policy or estop the Company from asserting any right under the terms of this Policy; nor shall the terms of this Policy be waived or changed, except by endorsement issued to form a part of this Policy.
- G. **Other Insurance** - This insurance is primary with respect to other valid and collectible insurance available to the **Named Insured**.
- H. **Mutual Construction** - The Company and all **Insured** agree that the rule of contract construction that ambiguities are to be construed against the drafter shall not apply to any dispute arising under this Policy. Any such ambiguity shall be construed to give effect to the mutual intent of the parties as expressed herein.
- I. **Warranty** - The Company has issued this policy to provide financial assurance for **Corrective Action Costs** for scheduled **Hazardous Waste Facilities**. The Company hereby warrants that the policy conforms in all respects with the requirements of 40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d) modified to replace the terms "post-closure" and "closure" with "corrective action", as applicable, as such regulation was constituted on the inception date of the policy and with U.S. EPA Identification Number CTD001147495. It is agreed that any provision of the policy inconsistent with such regulation is hereby amended to eliminate such inconsistency, except that the limits of insurance shall not be amended.

SECTION VIII. SERVICE OF SUIT

- A. **Service of Suit** - It is agreed that in the event of any dispute under the Policy in which the **Regulatory Agency** or the **Named Insured** is a party, the Company, at the request of the **Regulatory Agency** or the **Named Insured**, will submit to the jurisdiction of the United States District Court, in the State of Connecticut. It is further agreed that service of process in such suit may be made upon Counsel, Legal Department, Blue Whale Re Ltd., 76 St. Paul Street, Suite 500, Burlington, VT 05401, or his or her representative, and that in any suit instituted against the Company upon this Policy, the Company, will abide by the final decision of such court or of any appellate court in the event of any appeal.

IN WITNESS WHEREOF, the Company has caused this Policy to be signed by a duly authorized representative or countersigned in states where applicable.


Authorized Representative