

**FINAL 2016 OPENING PHASE
PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE
ROME, NEW YORK**

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Prepared For:

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ACRONYMS AND ABBREVIATIONS

AF	Air Force
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFRPA	Air Force Real Property Agency
AOC	Area of Concern
ARARs	Applicable or Relevant and Appropriate Requirements
BCT	BRAC Cleanup Team
BEC	BRAC Environmental Coordinator
Bhate	Bhate Environmental Associates, Inc.
BRAC	Base Realignment and Closure
CAP	Corrective Action Plan
CDRL	Contract Data Requirements List
CDUT	Contractor Data Uploading Tool
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIBE	BRAC Program Management Execution Branch
CIH	Certified Industrial Hygienist
CO	Contracting Officer
COC	Chemical of Concern
COR	Contracting Officer's Representative
CPSMR	Contractor's Progress, Status, and Management Report
CST	Central Standard Time
DPT	Direct push technology
ERD	Enhanced reductive dechlorination
ERPIMS	Environmental Resources Program Information Management System
ESD	Explanation of Significant Differences
FFA	Federal Facilities Agreement
FYR	Five-Year Review
GSA	General Services Administration
GIS	Geographic Information System
GTS	Geostatistical Temporal-Spatial
H&S	Health and safety
HASP	Health and Safety Plan

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HSM	Health and Safety Manager
IC	Institutional Control
ISEB	In-situ enhanced bioremediation
ISCO	In-situ chemical oxidation
IMS	Integrated Master Schedule
LCC	Life Cycle Cost
LFG	Landfill gas
LTM	Long term monitoring
LTO	Long term operations
LUC	Land Use Control
µg/L	Micrograms per liter
MAROS	Monitoring and Remediation Optimization Systems
MNA	Monitored Natural Attenuation
MPS	Milestone Payment Schedule
NFA	No further action
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operation and maintenance
OES	Optimized Exit Strategy
OPS	Operating properly and successfully
OSHA	Occupational Safety and Health Administration
PA	Public Affairs
PBR	Performance-Based Remediation
PCB	Polychlorinated Biphenyl
PE	Professional Geologist
PG	Professional Geologist
PGM	Program Manager
PhD	Doctor of Philosophy
PM	Project Manager
PMP	Project Management Plan
POC	Point of Contact
POP	Period of Performance
PWS	Performance Work Statement
QAPP	Quality Assurance Project Plan

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QC	Quality Control
QSM	Quality Systems Manager
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RAO	Remedial Action Objectives
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SC	Site Closeout
SQ	Status Quo
SSHP	Site Safety and Health Plan
SSVM	Sub Slab Vapor Mitigation
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TBD	To be determined
TCE	Trichloroethene
TO	Task Order
UFP	Uniform Federal Policy
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound
WSA	Weapons Storage Area

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1 INTRODUCTION

Bhate Environmental Associates, Inc. (Bhate), was awarded a task order (TO) FA8903-16-F-0012 under General Services Administration (GSA) contract GS10F0312K by the Air Force Civil Engineer Center (AFCEC) on June 8, 2016. The Performance Work Statement (PWS) issued by AFCEC for this TO is dated May 3, 2016, and is titled “Environmental Remediation at Base Realignment and Closure (BRAC) Eastern Region Bases”. Attachment 5 to the PWS presents the Base Specific Information for the Former Griffiss Air Force Base (AFB) in Rome, New York. This is the first submittal of the Project Management Plan (PMP) per the outlined contract milestones.

The Bhate Team is composed of Bhate and Arcadis. Our team has experience with the New York State Department of Environmental Conservation (NYSDEC), New York State Department of Health (NYSDOH), and the U.S. Environmental Protection Agency (USEPA) Region 2. The Bhate Team’s technical strategy to meet the objectives of this GSA order is to reduce the overall liability and life-cycle costs (LCCs) for the Air Force (AF) by obtaining closure with unrestricted reuse for the majority of sites; optimizing the exit strategy at other sites; and providing closures with restricted use where it provides the best value for the AF for the remaining sites.

1.1 Facility Background

Griffiss AFB was designated for realignment under the BRAC in 1993 and formerly realigned on September 30, 1995. The former Griffiss AFB occupies approximately 3,552 acres in Oneida County, New York. The base is a former U.S. Air Force Air Combat Command installation situated within the city limits of Rome, New York, approximately 10 miles west of Utica, New York (Figure 1-1). The base was opened on February 1, 1942, as the Rome Air Depot. In 1987, the USEPA added the base to the National Priorities List, and in 1990, the AF, the NYSDEC, and the USEPA entered into a Federal Facilities Agreement (FFA). In 1993, Griffiss AFB was designated for realignment under the federal BRAC and subsequently deactivated. This Performance-Based Remediation (PBR) project is part of the BRAC environmental restoration program. Property transfers have occurred through Economic Development Conveyances Agreements, Public Benefit Conveyance Agreements, Federal to Federal transfers, negotiated sales, and reversion. All property transfer actions are complete. A “Whole Base” property transfer ceremony was held on January 22, 2014.

1.2 Site Geology

The former Griffiss AFB lies in the Mohawk Valley Lowland, just north of the Allegheny Plateau. The land surface generally slopes toward the south with the highest elevations in the northeast and northern areas of the base. Elevations range from 435 feet above mean sea level in the southern extremity of the property to 595 feet above mean sea level near the northeast perimeter. The landforms in the area are a product of glacial deposition and erosion, and the

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erosion and the depositional processes of the Mohawk River that produced features such as valleys, floodplains, and terraces.

The site geology is characterized by dense soils composed of fine- to medium-grained sand with silt and occasional clay lenses. The water table elevation ranges from 16 feet to 20 feet below ground surface. Shallow groundwater flow across the base generally moves from the northeast toward the Mohawk River and New York State Barge Canal to the south. There are two permanent streams within the boundary of the former AFB. Six Mile Creek is the longer stream entering at the base northeast boundary and flowing in a southeasterly direction. Three Mile Creek is located in the central part of the base and also flows to the southeast.

Groundwater aquifers consist of the bedrock and overlying unconsolidated sediments. The bedrock forms a confined aquifer and the unconsolidated sediments form an unconfined aquifer. The two aquifers are separated by the Rome Till which acts as a vertical and horizontal aquitard between the two. Groundwater flows from northeast to southwest and follows the topography and the gentle dip of bedrock to the Mohawk River to the south-southwest.

1.3 Summary of Sites

The 24 Griffiss AFB sites under this contract are summarized in Table 3-1. Nineteen (19) of the 24 sites included in this PBR contract are being addressed following the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. Four (4) of the remaining 5 sites are petroleum sites requiring closure under the NYSDEC Spills Program. Finally, the 24th site is being addressed following the Resource Conservation and Recovery Act (RCRA) process. The sites are shown on Figure 1-2. They are divided into several contractual end state categories which are discussed in the following sections.

The Bhate Team will also provide support for Restoration Advisory Board (RAB) meetings, BRAC Cleanup Team meetings, Geographic Information Systems (GIS), community relations, contract status meetings, and property transfer.

Over the last five years, RAB Meetings and onsite meetings with all stakeholders have been completed on November 16, 2011; December 6, 2012; December 11, 2013; and June 16, 2015. It should be noted that the RAB Meeting scheduled for December 11, 2014, was postponed due to Winter Storm Damon and was rescheduled for June 2015. Semi-annual onsite meetings with the USEPA and the NYSDEC have been completed on March 11, 2011; April 24, 2012; June 27, 2013; June 12, 2014; June 16, 2015; and June 16, 2016.

1.3.1 Status Quo Sites

The five sites listed below are classified as Status Quo (SQ) sites under the contract. By definition, maintaining SQ includes continuing current activities without optimization, for example, landfill cap Long Term Monitoring (LTM), groundwater monitoring, other Long Term

Operations (LTO)/LTM activities, land use control/institutional control (LUC/IC) monitoring, and Five-Year Review (FYR). These activities by site are as follows:

- **AOI66 Steam Plant APDO Storage Yard):** Annual LUC/IC inspections to document the continued LUC/IC implementation and FYR.
- **SS008 (Building 112/Polychlorinated Biphenyl [PCB] Dump Area):** Annual LUC/IC inspections to document the continued LUC/IC implementation and FYR.
- **SS033 (Coal Yard Storage Area-PCB Site):** Annual LUC/IC inspections to document the continued LUC/IC implementation and FYR.
- **SS044 (Substation, Electrical Power-PCB Site):** Annual LUC/IC inspections to document the continued LUC/IC implementation and FYR.
- **SS060 (STW-1300 Building 35/36 Area of Concern [AOC]):** Annual LUC/IC inspections to document the continued LUC/IC implementation and FYR (AF Policy Review)

1.3.2 Optimized Exit Strategy (OES) Sites

There are seven sites with OES as the contractual end state. For three of these sites (SD052-01, SD052-04, and SD052-05), the goal of the OES is to treat hot spots and to optimize performance monitoring requirements to reduce AF LCCs in the out-years until the Remedial Action Objectives (RAOs) are achieved. Performance monitoring will focus on ensuring protection of human health and the environment as well as providing useful information regarding the treatment system overall effectiveness. Specific activities to be performed at each of these sites are as follows:

- **SD052-01 (Apron 2 Chlorinated Plume):** Prepare Remedial Optimization Work Plan to complete pilot study of enhanced reductive dechlorination (ERD) in situ treatment. Prepare Explanation of Significant Difference (ESD) for In-situ Enhanced Bioremediation (ISEB) with monitored natural attenuation (MNA) remedy, if necessary. Conduct focused ISEB injections based upon microcosm study data; use Monitoring and Remediation Optimization Systems (MAROS) or Geostatistical Temporal-Spatial (GTS) software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare OES Report.
- **SD052-04 (Landfill 6 Chlorinated Plume) and SD052-05 (Building 817 Chlorinated Plume):** Conduct follow-on ISEB injections within existing injection wells at SD052-04 and via direct push technology (DPT) at SD052-05; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare Remedial Optimization Work Plan and OES Report.

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- **SD052-SVI (Soil Vapor Intrusion [SVI] System):** Continue operation and maintenance (O&M) of SD052-02 sub slab vapor mitigation (SSVM) system and convert SD052-01 SSVM system to a passive system.
- **SS054 (Building 781 Pumphouse, Petroleum Site):** For site SS054 the goal of the OES is primarily to reduce the chemicals of concern (COCs) to levels that allow for Site Closeout (SC) by 2027. The secondary goal is to reduce LTM requirements and decrease LCCs until the Remedial Action Objectives (RAOs) are achieved. These goals will be achieved by optimizing the biosparge system and monitoring well network; continued O&M of the existing biosparge system, groundwater sampling and reporting, annual LTM and LUC inspections/reporting; and submittal of Corrective Action Plan (CAP), Optimization Plan, OES Report, and FYR (as part of AF Policy).
- **SS062 (AOC 9 Weapons Storage Area [WSA] Landfill Chlorinated Plume):** The goal of OES for site SS062 is primarily to reduce the COCs to levels that allow for achievement of Response Complete (RC) by 2024 through MNA. The secondary goal is to reduce LTM requirements to decrease LCCs until the RAOs are achieved. These goals will be achieved by continued optimization of selected remedy and the monitoring well network; continued groundwater and LUC/IC monitoring and reporting; and submittal of optimization work plan, OES report, and FYR.
- **SS067 (Building 789 Type II Fuel System, Petroleum Site):** The OES goal for site SS067 is to eliminate free product followed by optimization of LTM. A CAP will be prepared to delineate free product and present the design to eliminate free product via excavation coupled with a recovery trench. After free product elimination, optimization of LTM; continued O&M of systems, soil vapor/air/groundwater monitoring/reporting, LUC/IC inspection; and submittal of optimization work plan, OES report, and FYR as part of AF Policy.

1.3.3 Response Complete Sites

Five of these six CERCLA sites are all capped landfills with ongoing post-closure activities that include the performance of routine, preventive, predictive, scheduled, and unscheduled inspections. Groundwater and surface water sample results are compared to NYSDEC Class GA Groundwater Standards and NYSDEC Class C Surface Water Standards. Site activities are conducted under the supervision and recommendations of the USEPA, Region 2 and NYSDEC. The goal of RC is to obtain formalized documentation for the AF that each landfill is considered to have achieved the RAOs presented in the approved record of decision (ROD). OES is primarily to reduce LTM requirements to decrease LCCs in an effective manner through 2045. LTM will focus on ensuring protection of human health and the environment. The sixth site (SD052-02 Building 775) is a chlorinated solvent plume associated with a degreasing system in Building 774. Specific activities to be completed at each site during the period of performance (POP) are as follows:

- **LF001 (Landfill 1):** Reduce landfill gas (LFG) monitoring by 50% and to annual from semi-annual within POP, reduce groundwater monitoring locations by 25% and all sampling to biennial, and perform annual cap inspections.
- **LF002 (Landfills 2 & 3):** Reduce LFG monitoring by 40% and to annual from semi-annual within POP, begin sampling every 5 years with FYR starting in 2019, and perform annual cap inspections.
- **LF003 (Landfill 7):** Reduce sample locations by 25%, begin sampling every 5 years with FYR starting in 2019 and perform annual cap inspections.
- **LF007 (Landfill 5):** Begin sampling every 5 years with FYR starting in 2019 and perform annual cap inspections.
- **LF009 (Landfill 6):** Reduce LFG monitoring by 50% and to annual from semi-annual within POP. Reduce groundwater monitoring locations by 50% and move to biennial sampling within POP and begin sampling every 5 years with FYR starting in 2019. Perform annual cap inspections.
- **SD052-02 (Building 775):** Prepare Remedial Optimization Work Plan to evaluate alternative remedies including completion of an ISEB pilot study, and prepare Focused Feasibility Study, Proposed Plan, and ROD Amendment or Explanation of Significant Difference; . Will propose groundwater extraction system shutdown and rebound monitoring based upon recent groundwater results demonstrating asymptotic conditions coupled with treatment of the 50 micrograms per liter ($\mu\text{g/L}$) trichloroethene (TCE) plume within the radius of influence. Continue LUC/IC monitoring and reporting and FYR until RC is achieved.

1.3.4 Site Closeout Sites

Six sites have a contractual end state of SC, which will be achieved differently at each site. Specific activities to be complete at each site are as follows:

- **ST006 (Building 101):** Perform soil vapor extraction (SVE) treatment system O&M, soil vapor/air/ groundwater monitoring, LUC/IC monitoring and FYRs until TCE is remediated; then evaluate rebound and revise risk assessment; prepare ESD to remove ROD restrictions; prepare Remedial Action Completion Report (RACR) and then remove/abandon SVE system and monitoring wells. Achieve SC through SC Report. Note: this site is currently being managed by FPM Remediations Inc., under their PBR contract as the contracted end-state has not been achieved. Further direction is needed from the Contracting Officer (CO).
- **SS017 (Lot 69 Former Hazardous Waste Storage Area), DP022 (Building 222), and SS025 (T-9 Storage Area):** Collect current site data, as necessary, to perform direct soil screening followed by an assessment, if necessary, to demonstrate sites meet criteria for unrestricted

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land use; prepare ESD to remove ROD restrictions; continue LUC monitoring (and FYR if necessary) until no further action (NFA) determination is achieved and documented via RACR; abandon monitoring wells. Achieve SC through SC Reports.

- **To be determined (TBD)-Apron 1 (LCP-E9, Petroleum Site):** Submit CAP to delineate plume and to excavate free product and contaminated soils, perform monthly O&M and quarterly performance monitoring/reporting, perform rebound analysis, submit spill closure report, decommission monitoring wells, submit SC Report.
- **TBD-Building 785 Pipeline (Petroleum Site):** Collect groundwater samples to assess current status of remedy implemented in 2015 and then complete additional in-situ treatment, if necessary; continue performance monitoring until cleanup goals are achieved; monitor for another year to verify no rebound; prepare/submit a spill closure report, decommission monitoring wells, prepare SC Report to achieve SC.

2 PROJECT RESOURCES

The Bhate Team will execute this contract in order to achieve the site objectives and performance milestones, while ensuring that safety, quality, and regulatory goals are met. The Bhate Team will support this project with personnel who have the practical onsite experience, enabling them to propose the most effective approach for each site in order to maximize the impact of remediation activities, minimize LCCs, and achieve the performance goals and objectives of this GSA order.

This section identifies the key Bhate Team resources that are in place to perform this TO. As prime, Bhate will be responsible for all program and project management functions. The successful management of this PBR and the achievement of performance objectives will be accomplished by integrating the technical leads from Arcadis, as necessary, into our management approach. Arcadis will be overseeing the work performed at Former Plattsburgh AFB awarded under this TO.

2.1 Program Manager

The Program Manager (PGM), Mr. Frank Gardner, Professional Geologist (PG), has the overall responsibility for all technical, contractual, safety, and administrative matters for Bhate under this contract. Mr. Gardner serves as the focal point for coordination of all contracts-related issues with AFCEC, and facilitates the Bhate Team's ability to consistently deliver a high-quality work product, on time and within budget. Mr. Gardner delegates the day-to-day responsibilities to the Project Manager (PM) and quality control (QC) management to the Quality Systems Manager (QSM). The PGM has the ultimate authority and responsibility for the establishment and maintenance of program administration, control programs, and procedures. Mr. Gardner's duties include, but are not limited to, the following:

- Establishing and interpreting program policies
- Preparing long-range program plans
- Implementing contract requirements

2.2 Project Manager

Ms. Kim Nemmers is assigned as the PM for the former Griffiss AFB. The role of the PM is to maintain administrative responsibility, authority, and accountability for the project, ensuring client satisfaction and providing all needed resources to deliver this TO on time, and with no quality, safety, or regulatory issues. In executing these duties, the PM is responsible for meeting all contractual requirements and ensuring that work is executed in conformance with approved plans. The PM is the primary point of contact (POC) with AFCEC and Griffiss AFB, and is responsible for the overall execution of this project including cost, project status, schedule updates, and technical quality.

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The PM works directly with the management and technical staff to maintain safety, to maintain the technical quality of the work, and to manage the budget and schedule. The PM reports to the PGM. The PM's responsibilities include:

- Interacting with AFCEC and Griffiss AFB
- Monitoring schedule and cost performance
- Managing project work assignments, technical staff performance, and technical quality of work
- Providing additional management or technical support when needed
- Coordinating the development, implementation, and enforcement of all plans
- Serving as final reviewer on all technical documents produced as a result of this project
- Ensuring that the necessary resources are available for this project to be completed safely and in compliance with the Program Health and Safety Plan (HASP), Site-Specific Safety and Health Plans (SSHPs) as needed, Griffiss requirements, and Occupational Safety and Health Administration (OSHA) regulations
- Managing dedicated professional subcontract activities.

2.3 Safety and Health Manager

Ms. Sally Smith, Certified Industrial Hygienist (CIH), acts as the Health and Safety Manager (HSM) and is responsible for overseeing project safety performance. She authorizes all aspects of the Program HASP and SSHP. Any proposed deviations from the approved Program HASP and SSHP or changes in expected site conditions are immediately presented to the HSM for consideration/approval. The HSM coordinates with the PM, but reports directly to Bhate's Chief Executive Officer.

Duties of the HSM include, but are not limited to, the following:

- Serving as the liaison between corporate health and safety (H&S) and the PM
- Overseeing the administration of the Bhate Health and Safety Program
- Ensuring that the appropriate training occurs and that appropriate training and medical records are kept current and on site
- Determining what resources are required to adequately address H&S issues and communicating those resource requirements to the PM
- Developing an activity hazard analysis for any new activity or innovative technology that is not currently in the Program HASP or SSHP
- Conducting random H&S audits in the field
- Assisting in accident investigations with field personnel and reporting to accident review boards, if necessary.

2.4 Quality Systems Manager

The QSM for this project is Corey Green of Bhate. Under this program, the QSM communicates directly with the PM. The QSM is also responsible for the development and interpretation of QC policies and procedures, and carries the requisite authority to oversee and execute QC activities for the projects to be implemented under this contract.

The QSM is responsible for establishing the definable features of work and the appropriate QC monitoring and testing. She provides overall direction to the program QC function; performs audits, surveillance, and document reviews; and executes other quality functions as required in the Quality Project Plan. She interfaces with Ms. Nemmers on the quality functions of the program and coordinates all QC activities.

Implementation of the QC duties are delegated to the QC Officer in the field. Duties of the QSM include, but are not limited to, the following:

- Implementing the project QC requirements
- Overseeing onsite QC staff
- Identifying and reporting nonconforming items or activities
- Initiating or recommending corrective actions
- Verifying implementation of corrective actions
- Notifying the PM of conditions adverse to quality that cannot be resolved at the project level
- Overseeing field activities for compliance with contract requirements

2.5 Senior Engineer

Dr. Mark Stapleton, Professional Engineer (PE), Doctor of Philosophy (PhD), is assigned as the Senior Engineer. He is responsible for assuring all environmental, civil, and process engineering support goals are achieved, managing the technical aspects of project execution, and reviewing all technical documents. Dr. Stapleton also coordinates the technical efforts of Bhate's subcontractors. His duties include:

- Directing efforts of staff assigned to environmental, civil, and geotechnical engineering tasks
- Approving selection of sampling personnel
- Approving selection of analytical laboratory
- Providing technical direction to subcontractors

2.6 Bhate Team Subcontractors

Bhate directs all subcontractors and ensures that subcontractors are performing work in accordance with schedule, safety, and quality requirements of this GSA order. Proper

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subcontract management generates effective work progress that is compliant with federal, state, and local requirements and provides AFCEC with seamless execution. Contractual agreements between Bhate and the Bhate Team subcontractors contain flow-down clauses that require subcontractors to meet all appropriate Griffiss, Federal, and State requirements. Onsite subcontractors coordinate their activities through Bhate Team personnel and are required to submit daily reports documenting their activities.

Bhate Team members and their primary responsibilities are discussed below. Other subcontractors may be used by the PM as needed.

2.6.1 Arcadis

Arcadis will utilize their experience at the former Plattsburg AFB CERCLA sites identified in the PBR. Arcadis' value to the Bhate Team includes experience in site closure and completing property transfers. Arcadis will provide technical resources as necessary to support contract objectives.

3 TECHNICAL APPROACH

This section presents the current performance objective and technical approach for each site. Each site is briefly described in Table 3-1. Sites are discussed in detail in the Site Specific Summary Sheets found in Appendix B.

The Air Force has four possible performance objectives that can be achieved for each site. The Bhate Team's performance objective for each site is shown in Table 3-1. The performance objectives are:

- Status Quo
- Optimized Exit Strategy
- Response Complete
- Site Closeout with Unrestricted Reuse (i.e., no remaining Air Force financial liabilities)

Bhate recognizes that changes to the technical approach may occur over the course of the project. These revisions will be discussed with AFCEC/BRAC Program Management Execution Branch (CIBE), the CO if necessary, and upon concurrence, will be documented within the PMP as a revision.

3.1 PBR Transition

The Bhate Team will work effectively to keep the project on schedule and maintain compliance. The Bhate Team has longstanding existing relationships with AFCEC, the former Air Force Real Property Agency (AFRPA), NYSDEC, NYSDOH, and USEPA regulators which will support a seamless transition to the new contract. The Bhate PM for the former Griffiss AFB completed a site walk with the BRAC Environmental Coordinator (BEC) on 27 and 28 June 2016. The Bhate Team will work closely with the BEC and his support staff to obtain information for transitioning as seamlessly as possible. We will also be subcontracting Parsons, who has recent and relevant experience at the former Griffiss AFB, to provide local field support to complete treatment system maintenance and LTM activities. The Bhate Team will work to establish a dynamic and open communication with the applicable regulators with support from the BEC to hopefully minimize schedule delays due to document reviews or acceptance of approaches presented previously.

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Table 3-1. Griffiss PBR Sites

Site #	Site Identification and Site Name	Performance Objective	Regulatory Program	Technical Approach	PPO Date	SC Date
SQ Sites						
1	AOI66-Steam Plant APDO Storage Yard	SQ	CERCLA	LUC/IC monitoring/reporting and FYR.	NA	Indefinite
2	SS008-Building 112/PCB Dump Area	SQ	CERCLA	LUC/IC monitoring/reporting and FYR.	NA	Indefinite
3	SS033-Coal Storage Area – PCB site	SQ	CERCLA	LUC/IC monitoring/reporting and FYR.	NA	Indefinite
4	SS044-Substation, Electrical Power – PCB Site	SQ	CERCLA	LUC/IC monitoring/reporting and FYR.	NA	Indefinite
5	SS060-STW-1300 Building 35/36 AOC	SQ	RCRA	LUC/IC monitoring/reporting and FYR (FYR is an Air Force Policy requirement).	NA	Indefinite
OES Sites						
6	SD052-01 (Apron 2 Chlorinated Plume)	OES	CERCLA	Conduct focused ISEB injections as pilot study; prepare ESD to support ISEB with MNA remedy, if necessary; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare OES Report.	04/2021	12/2036
7	SD052-04 (Landfill 6 Chlorinated Plume)	OES	CERCLA	Conduct follow-on ISEB injections within existing injection wells; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare Optimization Plan and OES Report.	03/2021	12/2038
8	SD052-05 (Building 817 Chlorinated Plume)	OES	CERCLA	Conduct follow-on ISEB injections via DPT; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare Remedial Optimization Work Plan and OES Report.	02/2021	12/2040
9	SD052-SVI (Soil Vapor Intrusion System)	OES	CERCLA	Continue O&M of SD052-02 SSVM system and convert SD052-01 SSVM system to a passive system.	05/2018	12/2025
10	SS054-Building 781, Pumphouse – Free Product on Groundwater (NYSDEC Spill #9202658)	OES	NYSDEC	Optimize biosparge system and monitoring well network; continue O&M of existing biosparge system, groundwater sampling and reporting, annual LTM and LUC inspections/reporting; submit CAP, Optimization Plan OES reports, and non-CERCLA FYR (FYR is an Air Force Policy requirement).	02/2021	12/2027
11	SS062-AOC 9 Weapons Storage Area Landfill Chlorinated Plume	OES	CERCLA	Optimize selected remedy (In-situ chemical oxidation [ISCO]) and optimize monitoring well network; continue groundwater and LUC/IC monitoring and reporting; submit optimization work plan, OES report, and FYR.	03/2021	12/2027
12	SS067-Building 789 Type II Fuel System (NYSDEC Spill #9810713)	OES	NYSDEC	Prepare CAP to delineate free product and eliminate free product via excavation coupled with a free product recovery trench; after free product elimination, optimize LTM; continue O&M of systems, soil vapor/air/groundwater monitoring/reporting, LUC/IC inspection; submit optimization work plan, OES report, and FYR (FYR is an Air Force Policy requirement).	10/2020	12/2027
RC Sites						
13	LF001-Landfill 1	RC	CERCLA	Prepare technical memorandum to document that RAOs have been achieved to document RC; reduce LFG monitoring by 50% through reduction of gas vents monitored and to annual from semi-annual within POP; reduce groundwater monitoring locations by 25% based upon continued non-exceedance of landfill leachate indicators or Volatile Organic Compounds (VOCs) and all sampling to biennial; and perform annual cap inspections. Prepare Optimization Plan and OES Reports.	11/2016	Indefinite
14	LF002-Landfills 2 & 3	RC	CERCLA	Prepare technical memorandum to document that RAOs have been achieved to document RC; reduce LFG monitoring by 40% and to annual from semi-annual within POP; begin sampling every 5 years starting in 2019 before the FYR in 2020; eliminate sampling from 2 groundwater monitoring wells; and perform annual cap inspections. Prepare Optimization Plan and OES Reports.	11/2016	Indefinite
15	LF003-Landfill 7	RC	CERCLA	Prepare technical memorandum to document that RAOs have been achieved to document RC; reduce sample locations by 25% and begin sampling every 5 years starting in 2019 before the FYR in 2020; perform annual cap inspections. Prepare Optimization Plan and OES Report.	11/2016	Indefinite
16	LF007-Landfill 5	RC	CERCLA	Prepare technical memorandum to document that RAOs have been achieved to document RC; reduce sample locations by 25% and begin sampling every 5 years starting in 2019 before the FYR in 2020; and perform annual cap inspections. Prepare Optimization Plan and OES Report.	11/2016	Indefinite
17	LF009-Landfill 6	RC	CERCLA	Prepare technical memorandum to document that RAOs have been achieved to document RC; reduce LFG monitoring by 50% and to annual within POP; reduce groundwater monitoring to 10 locations; begin sampling every 5 years in 2019 before the FYR in 2020 and perform annual cap inspections. Prepare Optimization Plan and OES Report.	11/2016	Indefinite

Table 3-1. Griffiss PBR Sites

Site #	Site Identification and Site Name	Performance Objective	Regulatory Program	Technical Approach	PPO Date	SC Date
18	SD052-02	RC	CERCLA	Prepare Remedial Optimization Work Plan to evaluate alternative remedies, including completion of an ISEB pilot study; prepared Focused Feasibility Study, Proposed Plan and ROD; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and reporting and FYR.	02/2021	12/2022
SC Sites						
19	ST006-Building 101	SC	CERCLA	Perform SVE treatment system O&M, soil vapor/air/groundwater monitoring, LUC/IC monitoring and FYRs until TCE is remediated; then evaluate rebound and revise risk assessment; prepare ESD to remove ROD restrictions; prepare RACR and then remove/abandon SVE system and monitoring wells. Achieve SC through SC Report.	06/2021	06/2021
20	SS017-Lot 69 Former Hazardous Waste Storage Area	SC	CERCLA	Collect current site data to perform assessment demonstrating sites meet criteria for unrestricted land use; prepare ESD to remove ROD restrictions; continue LUC monitoring (and FYR if necessary) until NFA determination is achieved and documented via RACR; abandon monitoring wells. Achieve SC through SC Reports.	06/2020	06/2020
21	DP022-Building 222	SC	CERCLA		06/2020	
22	SS025-T-9 Storage Area—contaminated soil/groundwater	SC	CERCLA		06/2020	
23	CSS681-Apron 1 Area LCP-E9 (NYSDEC Spill #1501553)	SC	NYSDEC	Submit CAP to delineate plume and to excavate free product and contaminated soils; perform monthly O&M and quarterly performance monitoring/reporting, perform rebound analysis, submit spill closure report, decommission monitoring wells, submit SC Report.	12/2020	12/2020
24	CSS682-Building 785 Pipeline (NYSDEC Spill #1408594)	SC	NYSDEC	Complete additional in-situ treatment, if necessary; continue performance monitoring until cleanup goals are achieved; monitor for another year to verify no rebound; prepare/submit a spill closure report, decommission monitoring wells, prepare SC Report to achieve SC.	11/2020	12/2020

3.2 Technical Support

The Bhat Team will provide technical support to AFCEC and Griffiss, in accordance with the PWS, including the following activities:

- Attending RAB meetings and preparing RAB meeting agendas, handouts, and meeting minutes
- Supporting regulatory meetings of the BRAC Cleanup Team (BCT), developing presentations and preparing meeting minutes as required
- Attending other public meetings and preparing meeting minutes as required
- Supporting community involvement activities as required
- Preparing and submitting annual LUC/IC documents
- Providing LUC/IC assistance to ensure property owner activities do not impact remediation efforts (e.g., review of development plans)
- Providing timely response to applicable utility location request tickets
- Providing informal or formal dispute resolution or alternative dispute resolution support
- Providing GIS support to produce environmental property condition maps, tables, and other graphics as required
- Providing technical and documentation support for AF data calls, meetings, annual work cell events, real property-related actions, etc.
- Support of Property Transfer Management Actions (deed modifications to add/delete environmental requirements and preparation of Operating Properly and Successfully [OPS] Determinations).

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4 PROJECT SCHEDULE

The Base Year Contract POP expires on June 15, 2017. All actions required to meet the objectives of this TO (identified in the Milestone Payment Schedule [MPS] and the Integrated Master Schedule [IMS] as Appendices C and E, respectively), are presently on track to be accomplished by that date. Bhate will work with AFCEC and the regulatory community to stagger the delivery of documents as much as possible to avoid delays.

The major objective regarding the project schedule is to ensure proper planning has occurred in order to complete the project within the TO POP and to maintain compliance with the requirements of the PWS.

Contractor's Progress, Status and Management Reports (CPSMRs) will be issued by the 10th business day of each month and will include document delivery schedule and minutes from the monthly team meetings and monthly meetings with NYSDEC CERCLA Group and USEPA 2 representatives. The CPSMRs will include site status updates to facilitate review of specific performance objectives for each site.

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5 MANAGEMENT APPROACH

The general management approach for this TO is described in this section. In addition to the plans and reports discussed in this section, work conducted at the sites will require Work Plans and/or Documentation Reports.

5.1 Performance and Payment Milestones Completion

Performance and payment milestones for this TO are summarized below and forecasted milestones have been updated on the performance MPS as shown in the table in Appendix C. The individual performance and payment milestones discussed below are proposed for most sites.

Periodic reporting will evaluate performance and monitoring data using statistical and/or graphical/tabular interpretation. The data analysis will be relied upon to make optimization, remediation, or SC recommendations. Monthly and annual reports will be submitted as appropriate. From previous Griffiss experience, staggering submittal of performance and monitoring reports is preferred by the Government and the regulators, facilitating timely reviews.

5.2 Documents

Working Copy documents will be submitted to AFCEC for review and comment. Following AFCEC review, the draft version documents will be submitted to NYSDEC and USEPA for review and comment. Bhate will provide responses to regulatory comments. Draft final documents may be submitted that incorporates regulator comments. Once all comments are received, final documents addressing all comments will be submitted.

To the greatest extent possible, documents will be submitted as groups, but individual documents within these groups will be submitted for closure, etc. when needed. In line with previous Griffiss submissions, the following types of sites will be grouped together:

- LUC/IC Sites
- Landfills
- Petroleum Spill Sites
- SVI Sites

5.2.1 PMP

Bhate will submit the draft PMP to AFCEC for review. The PMP will meet the requirements of Contract Data Requirements List (CDRL) A002. The final document will be submitted within 14 calendar days of receipt of Government comments to the draft PMP. Once written approval

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from AFCEC is received, Bhate will invoice for the PMP performance milestone in accordance with the proposed performance milestone and payment schedule. Annual updates will be submitted and invoices will be submitted for the PMP performance milestones when the PMP updates are approved.

5.2.2 Five-Year Review

FYRs will be conducted for all Griffiss Sites containing contamination above levels that allow for unrestricted use. Of the 24 sites listed in Table 3-1, 19 will undergo the FYR as prescribed under CERCLA. The five, non-CERCLA sites listed in Table 3-1 will undergo AF policy required reviews as part of the FYR process unless they achieve SC before the next FYR.

5.2.3 Uniform Federal Policy-Quality Assurance Project Plan and HASP

The Bhate Team will submit the Working Copy Uniform Federal Policy (UFP)-Quality Assurance Project Plan (QAPP) and Program HASP to AFCEC for review and comment. Following AFCEC review, the draft UFP-QAPP will be submitted to the NYSDEC and the USEPA for review. Bhate will provide responses to regulatory comments. The final document will be submitted within 14 calendar days of receipt of Government comments to the draft documents. After receiving approval from AFCEC, the USEPA, and the NYSDEC, Bhate will invoice for the UFP-QAPP and Program HASP performance milestone in accordance with the proposed performance milestone and payment schedule. Annual Program HASP updates will be submitted and invoices will be submitted for the PMP performance milestones when the UFP-QAPP and Program HASP updates are approved.

5.2.4 Annual Well Inventory/Maintenance Reports

The Bhate Team will submit the Working Copy annual site inspection and repairs reports to AFCEC for review and comment. Inspections will document features such as monitoring wells, piping, remediation equipment, and fencing. Well location information along with a list of wells not located during field inventory/inspection requiring follow-up during the next inspection event will also be reported. The draft reports will document inspection findings and any repairs conducted. Following AFCEC review, the final annual site inspection and repairs reports will be submitted to the NYSDEC and the USEPA for informational purposes. Bhate will provide responses to regulatory comments to the final documents through correspondence or as part of the next reporting cycle for that document. Once approval from AFCEC, the USEPA and the NYSDEC is received, Bhate will invoice for the Annual Inspection and Repairs Reports performance milestone in accordance with the proposed performance milestone and payment schedule.

5.2.5 Annual LTM Reports

The Bhate Team will submit the Working Copy of annual LTM Reports to AFCEC for review and comment. The annual LTM Report will consist of the Data Quality Control Report, the annual groundwater monitoring report, data validation, the Environmental Resources Program Information Management System (ERPIMS) data submittal, and the required GIS data. The annual LTM Reports will include monitoring results, site conclusions, and recommendations.

Following AFCEC review, the final LTM Report will be submitted to the NYSDEC, NYSDOH, and the USEPA for informational purposes. If regulatory comments are received they will be addressed either via correspondence or as part of the next reporting cycle for that document. Once approval from AFCEC, the USEPA, NYSDOH, and the NYSDEC is received, Bhate will invoice for the annual Final Annual LTM Report performance milestone in accordance with the proposed performance milestone and payment schedule. The Final LTM Report will include the Electronic Data Deliverables from the laboratory for NYSDEC use.

Data review will be done on 100% of sample data, and level IV data validation will be performed on 10% of the sample data. The data review will confirm that the criteria specified in the project-specific QAPP and method was met. If any corrective action or flagging criteria was needed, data review will verify that these actions were performed.

5.2.6 Annual LUC/IC Inspection Reports

The Bhate Team will submit the Working Copy annual landfill LUC/IC inspection reports to AFCEC for review and comment. The LUC/IC report will include property owner certification of compliance with the applicable LUC/ICs. Following AFCEC review, the final annual landfill LUC/IC inspection reports will be submitted to the NYSDEC, NYSDOH and the USEPA for informational purposes. If regulatory comments are received they will be addressed either via correspondence or as part of the next reporting cycle for that document. Bhate will provide responses to regulatory comments to the draft documents, and will submit final reports. Once approval from AFCEC, the USEPA, NYSDOH, and the NYSDEC is received, Bhate will invoice for the Annual LUC/IC Inspection Reports performance milestone in accordance with the proposed performance milestone and payment schedule.

5.2.7 Optimization Plans

The Bhate Team will submit Working Copy Optimization Plans to AFCEC in 2016 for review and comment. Following AFCEC review, the draft Optimization Plan will be submitted to the NYSDEC and the USEPA for review. Bhate will provide responses to regulatory comments to the draft documents, and will submit final documents. Once approval from AFCEC, the USEPA, and the NYSDEC is received, Bhate will invoice for the Optimization Plan performance milestone in accordance with the proposed performance milestone and payment schedule. Sites that are not closed will be evaluated for optimization opportunities throughout the POP. It is anticipated

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that optimization implementation will occur as early in the POP as practical. Necessary mitigation actions needed to keep moving the site toward achievement of the proposed objective will be implemented as soon as practical.

5.2.8 Additional Performance Milestones

Additional performance and payment milestones are proposed for one or more sites, as shown in the Performance and Payment Milestones table in Appendix C. These milestones include, Design/Plan Remedy Optimization plans, Optimization plans, Site Closure Reports, Groundwater Monitoring Reports, Corrective Action Plans, and ESD. After receiving individual approval from AFCEC, the USEPA, and the NYSDEC for these deliverables, Bhate will invoice for each individual performance milestone in accordance with the proposed performance milestone and payment schedule.

5.2.9 ERPIMS

Bhate will provide an ERPIMS Data Submission Schedule within 30 days of contract award (CDRL B009). ERPIMS submittals will be provided within 90 days of the sampling event unless a written waiver or extension is obtained from the CO in coordination with the Contracting Officer's Representative (COR) (CDRL B010). Additionally, documentation of successful uploads will be provided to AFCEC and included as backup as appropriate with invoices.

5.2.10 AFCEC Website Uploads

AFCEC Website uploads will be completed as batches of final reports for the preceding quarter. Documentation of successful uploads will be provided to AFCEC and included as backup as appropriate with invoices. Current AFCEC website upload instructions are to use the Contractor Data Uploading Tool (CDUT) which is an electronic data delivery, storage, and retrieval system used to standardize electronic delivery and document management for deliverables related to this AFCEC contract. Over the past several years there has been repeated difficulties with the AFCEC website for uploading final deliverables. As a temporary remedy, Bhate will be providing, per AFCEC direction, compact discs with PDF files of final documents to the CO designee that will be inclusive of GIS data. These deliverables will be suitable for uploading to the Administrative Record (including metadata sheets with electronic copies submitted to Mr. Monico Luna).

5.3 Communications

The Bhate Team will maintain high levels of communication. This has and will continue to result in the coordination and fostering of stakeholder partnering and will ensure that the appropriate resources are fully available to the project. The PM will promote constant communication among AFCEC, the Bhate Team, and regulatory stakeholders to achieve the project goals and SCs proposed for the successful execution of this PBR Contract.

The Bhate Team will work with NYSDEC and USEPA Region 2 to improve the document process within the established review time periods per the FFA. Bhate will continue to conduct monthly BCT meetings with NYSDEC CERCLA and USEPA Region 2 personnel to review needed action by these agencies for submitted documents, to provide a forecast for upcoming document submittals, and to discuss progress and issues at applicable sites as necessary. A summary table of document submittals requiring their action and a forecast of upcoming document deliverables will be updated and provided each month. Bhate will continue to proactively communicate its needs to NYSDEC and the USEPA and seek their support in meeting contract objectives. Additional weekly internal contract status meetings between the AF and Bhate will be held until the COR and Bhate determine the frequency should be reduced.

The PM will continue to make his primary objective the achievement of a level of communication which is appropriate, efficient, and focused on project goals and agreed upon initiatives. The PM met with the BEC onsite on 27 and 28 June to visit the sites and discuss our approaches. A more formal kick-off meeting will be held in July with AFCEC. The next opportunity for the Bhate Team to meet with all stakeholders will be at the end of 2016. At this time, all stakeholders will agree to communication protocols and meeting document review periods as established in the FFA. In the interim, on board reviews and scoping sessions will be scheduled as necessary, to provide open lines of communication and input as the Bhate Team finalizes works plans and prepares for field efforts. The Bhate Team will provide advance notification for planned field work as well as notification of system outages.

Communication protocols were designed to build trust and a commitment of cooperation among stakeholders while addressing the AF's need to close sites and reduce LCCs.

5.3.1 Project Management Team

The first avenue of communication is between the project management team and AFCEC. This team consists of our PM, PGM, and other technical resources as necessary. This team will monitor and record progress toward site goals and compliance with regulatory, quality, and safety metrics. Project and site-specific goals are communicated among team members during our monthly meetings.

5.3.2 Program Management Team

The second avenue of communication is the AFCEC program management team. This team, located in San Antonio, Texas will ensure that Bhate is meeting all of AFCEC's contractual requirements and is available to respond immediately to AFCEC requests. Bhate's PGM, as discussed earlier, will ensure that a proper flow of communication exists between the project management team and AFCEC.

5.3.3 Field Weekly Status Reports

During active field project activities, Bhate will notify the BEC, who is also the COR, a week ahead of the scheduled field activity date and check in with him on the day of the scheduled activity prior to traveling to the site. Every attempt will also be made to notify the regulatory agencies in advance of any planned field work to facilitate any necessary or desired site visits. Field activity updates will be provided during the monthly project status conference calls at a minimum or more frequently as needed. Status reports will include a planned look-ahead schedule for any subsequent work to be performed during the following week of work. The status report will also include a brief discussion of any problems encountered requiring resolution.

Any immediate issues encountered during field activities or other contract activities will be addressed promptly in accordance with the appropriate reporting procedures required by law and the critical issues notification procedures outlined in the PWS.

5.3.4 Conference Calls

Weekly conference calls will be conducted with the Bhate Team and AFCEC to provide updates on project status and the milestone schedule. Communication will focus upon progress made toward achieving site goals while maintaining quality, safety, and compliance throughout the life of the contract. Weekly conference calls will be scheduled for every Wednesday at 10:00 AM Central Standard Time (CST). An Action Item tracker for these weekly meetings is prepared by the Bhate PM and distributed prior to the next weekly meeting for project team review.

In addition, monthly meetings (BCT meetings) have been scheduled on the fourth Thursday of each month with AFCEC, Bhate, NYSDEC, and USEPA CERCLA representatives. These meetings are scheduled for 10:00 AM CST. Minutes for these monthly meeting are prepared by the Bhate PM and distributed prior to the next monthly meeting for team for project team review. Key participants on the monthly team calls are:

- Dave Farnsworth, AFCEC COR
- Sean Eldredge, AFCEC
- Brad Juneau, AFCEC
- Adalberto Ramirez, AFCEC
- Kim Nemmers, Bhate
- Frank Gardner, Bhate

5.3.5 Monthly Project Reports

Monthly project reports (CPSMR) will be prepared and submitted to AFCEC by the third week of each month and address progress and issues noted during the preceding month as well as a

forecast of planned future activities including fieldwork. Monthly reports will include updates to the milestone schedule as needed. The project schedule is attached as Appendix E.

5.3.6 Semiannual Onsite Meetings

Semiannual onsite meetings will be held between the PM, AFCEC personnel, NYSDEC representatives, and USEPA Region 2 representatives. One of the semiannual meetings will be scheduled to coincide with the Annual RAB meeting typically held in the second quarter of each calendar year (e.g. June).

5.3.7 Written Correspondence

All written correspondence pertaining to this TO will be addressed to the COR unless otherwise directed by the CO or COR. Questions and requests for information will be directed to the COR or PM. TO submittals (e.g., work plans and reports) will be made to the PM. Written directions or clarifications to the PWS will only be provided by the CO.

5.3.8 Community Relations

Issues relating to public relations will be resolved in a timely manner to the satisfaction of the Government. Bhate will not converse with the public on issues relating to the PWS without the prior approval of the Government. Direction from AFCEC in March 2013 regarding public relations and dealing with the media is as follows:

“It is important to respond to media inquiries in a timely manner, but what’s equally important, if not more so, is making sure the information provided is accurate, properly vetted and releasable. That’s where public affairs (PA) can help.

What to do if approached by the media...

Record as much of the reporter’s information as possible, including the reporter’s name, phone number, email address, the name of his or her organization and deadline for a response. Reach out to the BRAC Environmental Coordinator (BEC) at your installation and let him or her know of the inquiry so he/she can help you get in touch with PA. Contact AFCEC Public Affairs at 866-725-7617. For AFCEC.PA@us.af.mil to let PA know about the media interest. Provide the reporter’s information, the name of the base and their areas of interest so PA can follow up with appropriate experts.”

5.3.9 Contracts Office Communication

Bhate will maintain active communication with the AFCEC CO and their designated representative. Currently these individuals are Patricia Rodreguez and Adalberto Ramirez. AFCEC Contract representatives are invited and actively participate in monthly meetings held

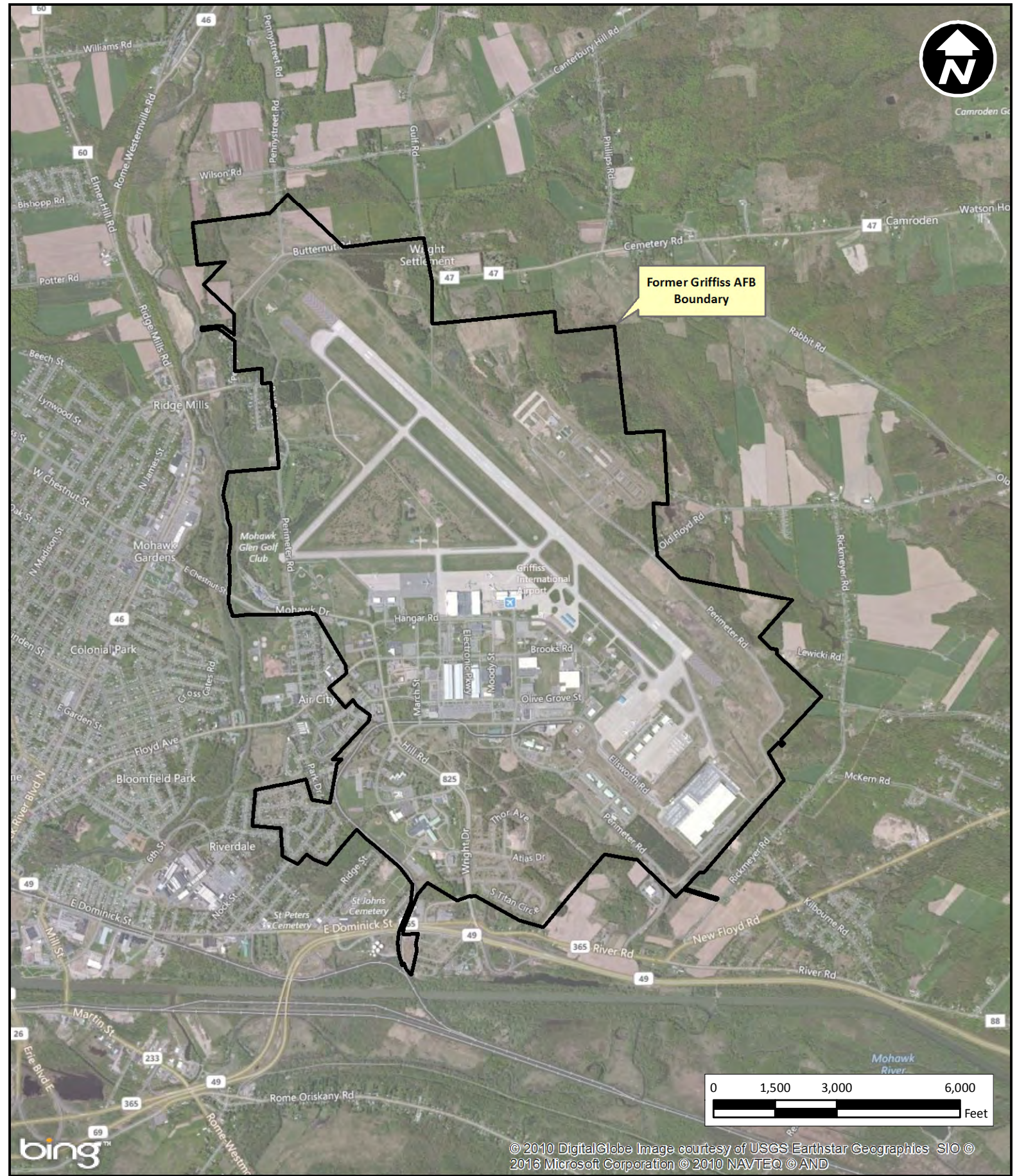
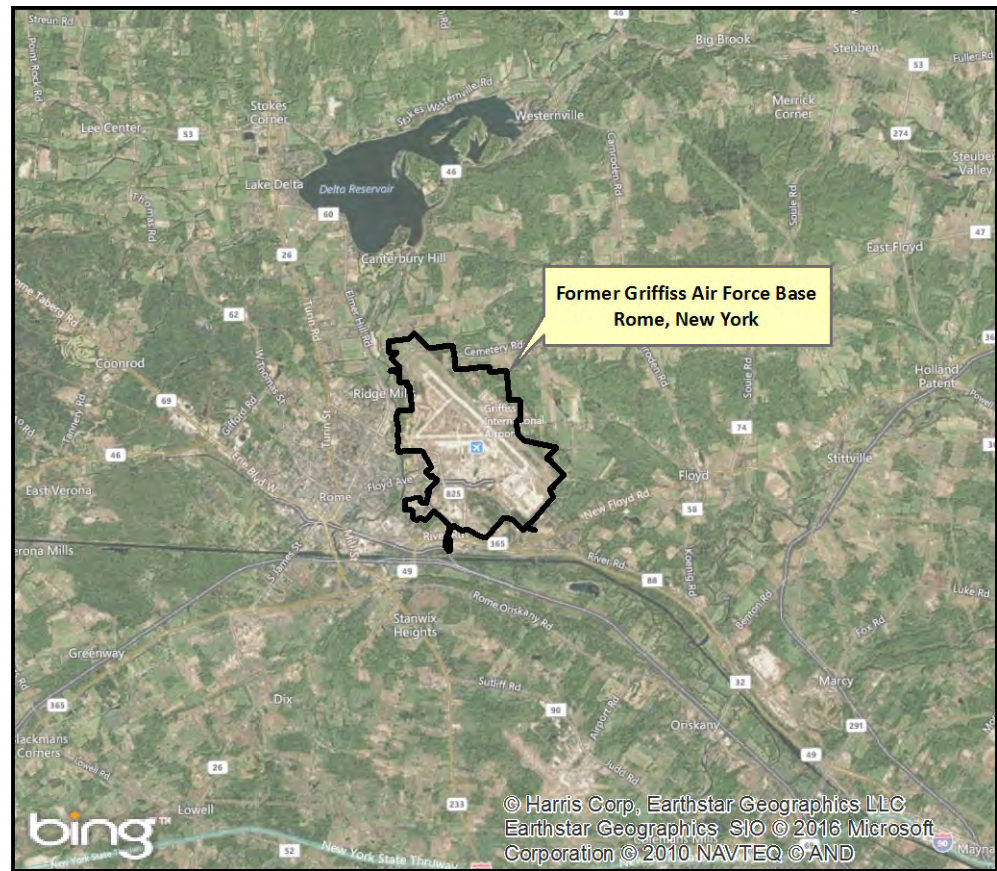
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the fourth Tuesday of each month, and are provided the minutes for these meetings. They also participate in the monthly meeting with the USEPA and NYSDEC, held the fourth Thursday of each month. They are also provided the minutes from these meetings. The CPSMR and Document Submittal Tracking Sheet are provided to the designated Contracting Representatives as well. If any contracting issues or questions regarding contract expectations occur, such as need to extend a period of performance, contract modification requests, or potential change orders due to a differing site condition, change in contract personnel, etc., the appropriate AFCEC Contracts personnel (Rodreguez and Ramirez) will be immediately notified and a solution based on the contract requirements and the Federal Acquisition Regulations will be decided. Contact information for these individuals are included in Appendix D.

FIGURES

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PROJECT NO: AFCGSA3. 2000.0001	SCALE: AS SHOWN	DATE: 6/30/2016	DRAWN BY: MRM
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APPENDIX A
PROJECT MANAGEMENT PLAN REVISION SUMMARY

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APPENDIX B
SITE SPECIFIC SUMMARY SHEETS

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Griffiss Air Force Base Understanding of Work

Griffiss Air Force Base (AFB) was designated for realignment under the Base Realignment and Closure Act (BRAC) in 1993 and formerly realigned September 30, 1995. The former Griffiss Air Force Base (AFB) has a Federal Facilities Agreement (FFA) signed in 1990 that was supplemented by a letter re-establishing review times for documentation (April 1991). Twenty-four (24) sites are included in this contract with 19 sites following the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, 1 site following the Resource Conservation and Recovery Act (RCRA), and 4 petroleum sites requiring closure under the New York State Department of Environmental Conservation (NYSDEC) Corrective Action (Spills) Program.

To significantly reduce Air Force (AF) Life Cycle Costs (LCCs) and advance sites towards Site Closeout (SC), Bhatte will optimize the exit strategy at 7 of the 24 sites, achieve SC at 6 sites, and achieve Response Complete (RC) at 6 sites. We have elected to maintain Status Quo (SQ) at 5 sites that only have Land Use Control (LUC)/Institutional Control (IC) inspections and Five Year Reviews (FYRs). SQ was determined to be the lowest LCC for the AF for those sites due to the high remediation costs required to achieve SC. FYRs and LUC/IC inspections will be conducted for all Griffiss sites containing contamination above levels that allow for unrestricted use.

To ensure achievement of the Proposed Performance Objectives (PPOs) and maintain regulatory compliance, we will participate in monthly teleconferences with the BRAC Cleanup Team (BCT) as well as weekly internal contract status teleconferences. We will participate in the semiannual face-to-face BCT meetings and the Restoration Advisory Board (RAB) meetings, currently held annually. We will coordinate with the county airport to obtain access to the flightline area, when necessary, including facilitation of site inspections within the boundaries of the airfield. We will complete the annual inspection and inventory of existing wells, including an annual well inventory/maintenance report. Bhatte will subscribe and respond timely to utility location request tickets from the New York Dig Safe Program. Bhatte will maintain a log of all dig request tickets and notify the AF as appropriate including any specific details that may need input from the COR/BEC. Bhatte will prevent and/or mitigate potential flooding impacts due to beaver activity by removing beavers and dams, as necessary, including coordination and permitting with the property owner(s) and appropriate regulatory agencies. Specifically, breach of beaver dams, when necessary, requires U.S. Army Corps of Engineers (USACE)/New York District approval and permitting as well as a NYSDEC Environmental Conservation Law Title II Permit.

Technical approaches by sites or site grouping are presented here in.

Site # 1, 2, 3, 4, and 5	AOI66 (Steam Plant APDO Storage Yard), SS008 (Building 112/Polychlorinated Biphenyl [PCB] Dump Area), SS033 (Coal Storage Area PCB Site), SS044 (Substation Electrical Power PCB Site), SS060 (STW-1300 Building 35/36 AOC)
Projected Closure Date	Indefinite
Performance Objective:	Status Quo
General Strategy:	LUC/IC Monitoring and FYR

Maintenance of SQ includes continuing current activities without optimization. For sites AOI66, SS008, SS033, SS044, and SS060 current activities include LUC/IC monitoring and reporting and FYR.

Site # 6, 7, and 8	SD052-01 (Apron 2 Chlorinated Plume), SD052-04 (Landfill 06 Operable Unit [OU]), SD052-05 (Building 817 OU)
Projected Closure Date:	SD052-01: 2036, SD052-04: 2038, SD052-05: 2040
Performance Objective:	Optimized Exit Strategy
General Strategy:	<p>SD052-01: Complete pilot study to evaluate in-situ enhanced bioremediation (ISEB) with monitored natural attenuation (MNA) remedy. Conduct focused ISEB injections in locations where trichloroethene (TCE) is present above the Remedial Action Objective (RAO) of 5 micrograms per liter (µg/L); use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare ESD, if necessary. Prepare Remedial Optimization Work Plan and OES Report.</p> <p>SD052-04 and SD052-05: Conduct focused ISEB injections in hot spot areas based upon most recent groundwater data; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and FYR. Prepare Remedial Optimization Work Plan and OES Report.</p>

Current Site Conditions

The RODs for the SD052-01 (Apron 2 Chlorinated Plume), SD052-04 (Landfill 6 OU), and SD052-05 (Building 817 OU) were signed in March 2009. The ROD for SD052-01 specified the remedy of MNA including groundwater and surface water monitoring to verify that human health and the environment are protected. Soil vapor intrusion (SVI) is addressed in the technical approach for SD052-SVI. The RODs for both SD052-04 and SD052-05 selected enhanced bioremediation to remove chlorinated volatile organic compounds (CVOCs) from the groundwater. The RAOs specified in each of the RODs consist of achieving the cleanup goals for 1,2-dichloroethene (DCE); TCE; and vinyl chloride (VC) (5 µg/L, 5 µg/L, and 2 µg/L, respectively).

Site SD052-01: The CVOC contamination at Apron 2 OU is present as a plume approximately 2,800 feet (ft) long and 500 ft wide and appears to originate in the area of the nosedock wash water system near Building 786. Data indicates that dechlorination is occurring at the site based on the decreasing trend in TCE and stable/increasing trends in cis-1,2-DCE and VC. Operating properly and successfully (OPS) for MNA was conferred in August 2013. The high hydraulic conductivity of gravel layers has produced an estimated average groundwater velocity of 106 ft/year. The total aquifer thickness ranges from 45 ft in the source areas to less than 20 ft in the downgradient areas. Aerobic degradation of VC is occurring near the leading edge of the plume; however, VC in the southern plume has migrated eastward to well 782VMW-101 within 100 ft of Six Mile Creek.

Site SD052-04: The ROD requires that contaminated groundwater from the site be prevented from adversely impacting surface water (in Three Mile Creek), which is defined as surface water

concentrations above performance indicators (NYSDEC Class GA Groundwater Quality Standards of 5 µg/L for DCE and 2 µg/L for VC). Surface water sample locations show only minor CVOC detections.

Site SD052-05: The ROD for the SD052-05 (Building 817 OU) includes contingency for an air sparge wall if surface water samples from the culvert section of Six Mile Creek contain elevated concentrations of DCE and/or VC that could be attributed to site groundwater. Similar to the ROD for SD052-04, the ROD requires that contaminated groundwater be prevented from adversely impacting the surface water in Six Mile Creek. The plume is stable to receding, and CVOC concentrations are relatively low (maximum ~50 µg/L for each CVOC). No detections of chlorinated compounds above the NYSDEC groundwater standards have been detected in Six Mile Creek.

Comprehensive Technical Approach

The goal of the OES is to treat hot spots and to optimize performance monitoring requirements to reduce AF LCCs in the out-years until the RAOs are achieved. Performance monitoring will focus on ensuring protection of human health and the environment as well as providing useful information regarding the treatment system overall effectiveness. **In order to achieve the PPO of OES, the Bhate Team will:**

1) Prepare Required OES Documentation throughout POP: We will prepare the Remedial Optimization Work Plan to memorialize the OES outlined in the proposal and obtain approval of our performance model and metrics. We will prepare an OES Report prior to the end of the POP to evaluate the optimizations and present further optimization in post-POP years.

2) Implement Remedial Action to Achieve OES: A Work Plan will be prepared to conduct hot spot treatments using ISEB.

Focused treatments using sodium lactate and/or emulsified vegetable oil (EVO), buffer (as needed), and nutrient injections will be completed via direct push technology (DPT) points at identified hot spots, with the exception of existing injection wells that will be utilized at SD052-04. Reduction of the CVOCs at SD052-01 will provide secondary risk reduction to the AF by significantly advancing the SD052-SVI system towards shut-off and decommissioning.

At SD052-01, the injections will focus around Nosedock 4 and Building 785, specifically at and around monitoring wells 782VMW-105B and 782VMW-81.

At SD052-04, the injections will bracket hot spot wells: LF6MW-12, -16, -17, and -20.

At SD052-05, the injections will bracket and encompass the following monitoring wells: WSA-MW16, WSA-MW18, and B817-MW-003.

Rationale: Optimization of the ongoing reductive dechlorination provides the AF with the most cost-effective and low risk approach to treat groundwater at SD052-01, SD052-04, and SD052-05. Remediation of “hot spots” within the source of the plume at SD052-01 will reduce the time required to achieve RAOs, as well as provide secondary benefits to SD052-SVI. At both SD052-04 and SD052-05, ISEB treatment of the hot spot in the core of the plume and parallel to the axis of groundwater flow will have significant impacts on reducing concentrations in downgradient monitoring wells and reduce the time to achieve SC.

3) Revise DD for SD052-01: An ESD will be prepared, if necessary, to revise the selected remedy from MNA to ISEB with MNA at SD052-01. Initial ISEB will be implemented as a pilot study at Site SD052-01.

Rationale: Due to the remedy selection of MNA at SD052-01, an ESD is required to document

the revised remedy of ISEB to advance the site towards SC.

4) Conduct and Optimize Performance Monitoring: Continue required LUC/IC monitoring and FYRs. LTM sampling will be optimized during the POP, as remedies are implemented.

Groundwater Sampling Year 1: LTM at SD052-01 (Apron 2) will be performed annually for the first year at 13 monitoring wells and 3 surface water locations. LTM at SD052-04 (Landfill 6) will be performed annually for the first year at 13 monitoring wells/direct push locations and 1 surface water sampling location. LTM g at SD052-05 (Building WSA/817) will be performed annually for the first year at 12 monitoring wells, 3 surface water, and 3 man-hole locations.

Sampling frequency optimization will be implemented after sampling is completed in 2016, with the exception of SD052-05 (Building WSA/817) where sampling will be reduced to annual starting in 2016. The monitoring wells will be analyzed for VOCs and natural attenuation parameters (sulfate; dissolved oxygen concentration; and methane, ethane, and ethene). Results will be documented in an Annual Monitoring Report.

LTM optimization will be accomplished by reducing the number of samples collected at each site as follows:

- SD052-01: Reduce annual samples by at least 43%
- SD052-04: Reduce annual samples by at least 35%
- SD052-05: Reduce annual samples by at least 70%

We will use GTS and/or MAROS software (or equivalent) to determine the optimum number and location of existing monitoring wells, and the sampling frequency. We will develop nonlinear trends and trend maps. Future sampling data will be incorporated into GTS/MAROS, and inconsistent data will be flagged for further assessment. Monitoring well eliminated from the LTM program will be properly decommissioned IAW NYSDEC Groundwater Monitoring Well Decommissioning Policy (Commissioner Policy-43) to eliminate AF liability.

A FYR will be completed to ensure ROD compliance and protection of human health and the environment.

Rationale: Proposed approach will minimize AF LCC and future liabilities, while maintaining compliance with the ROD.

Deliverables

Remedial Optimization and LTM Work Plans, Annual LTM Report (includes LUC/IC monitoring), ESD for SD052-01 (if necessary), Optimization Plan, OES Report, and FYR.

Why the Selected PPO is the Optimal Solution

This PPO is in the best interest of the AF because OES of the ROD-selected remedies provides the lowest possible LCC, while ensuring protection of human health and the environment. Given that the ROD RAOs are concentration-based, the cost to achieve RC or SC are essentially equivalent. Due to the plume size and mass, the cost to achieve RC or SC within the POP is at least four times that of the LCC for implementing our OES. We propose to actively remediate impacted groundwater by enhancing reductive dechlorination to reduce the COCs over time by completing focused ISEB at SD052-01, -04, -05. Focused ISEB at SD052-01 will also have a beneficial impact on the time to achieve SC at SD052-SVI.

Technical Approach Risks and Mitigations

The primary risk to the AF with ISEB is that microbes are present, but with a low population and/or they lack the VC reductase gene. Bhate's approach mitigates this by completing the microbial study followed by optimization of the design, which may include bioaugmentation. If

necessary, Bhate will use zero valent iron (ZVI) as a contingent action in recalcitrant locations to abiotically reduce the CVOCs. A secondary risk is that the ESD at SD052-01 is required to be a ROD Amendment per USEPA. We will mitigate this risk with contingency time in the IMS.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements and schedule by continuing LUC/IC inspections, FYRs, and sampling. Bhate will also complete all CERCLA-required documentation to change the remedy to ISEB at SD052-01.

Business Case Analysis

SD052-01: Proposed approach results in 22% decrease in LCC versus SQ and a projected SC date of 12/2036.

Post-POP LCC activities include the following at a cost of \$251K:

FY2021-FY2034: Annual LUC/IC maintenance and inspections, groundwater sampling of 13 wells for Volatile Organic Compounds (VOCs) and 3 surface water locations and reporting. The annual cost of \$14K or a total of \$196K post-POP LCC.

FY2035: Rebound sampling at a cost of \$20K

FY2036: RACR and well/system abandonment at a cost of \$35K

SD052-04: Proposed approach results in 19.5% decrease in LCC versus SQ (Indefinite, assumed FY50 for comparison) and a projected SC date of 12/2038.

Post-POP LCC activities include the following at a cost of \$279K:

FY2021-FY2036: Annual LUC/IC maintenance/inspections, groundwater sampling of 13 wells and 1 surface water location for VOCs and reporting. The annual cost of \$14K or a total of \$224K post-POP LCC.

FY2037: Rebound sampling at a cost of \$20K

FY2038: RACR and well/system abandonment at a cost of \$35K

SD052-05: Proposed approach results in 46.6% decrease in LCC versus SQ and a projected SC date of 12/2040.

Post-POP LCC activities include the following at a cost of \$307K:

FY2021-FY2038: Annual LUC/IC maintenance and inspections, groundwater sampling of 12 wells for VOCs, 3 surface water locations, 3 manholes, and reporting. The annual cost of \$14K or a total of \$252K post-POP LCC

FY2039: Rebound sampling at a cost of \$20K

FY2040: RACR and well/system abandonment at a cost of \$35K

Performance Model

The Bhate Team will finalize and submit a performance model within the Remedial Optimization Work Plan for SD052-04 and SD052-05. SD052-01 will not include a performance model as the ERD treatment will initially be a pilot study. The key performance metric of OES for each site is hot spot treatment and to optimize performance monitoring requirements to reduce AF LCCs in the out-years until the RAOs are achieved.

Site # 9	SD052-SVI (Soil Vapor Intrusion System)
Projected Closure Date:	2025
Performance Objective:	Optimized Exit Strategy
General Strategy:	Continue operations and maintenance (O&M) of SD052-02 Sub Slab Vapor Mitigation (SSVM) system; convert SD052-01 SSVM system to a passive system.

Current Site Conditions

Interim Remedial Action (IRA) SVI mitigation by horizontal sub-slab depressurization is underway at SD052-01 Apron 2 Chlorinated Plume Site (Buildings 785/786) and SD052-02 Building 775 Site (Buildings 774/776). The recommended action addresses the vapor intrusion (VI) potential associated with contaminated groundwater beneath these buildings. The Final DD for SD052-02 Building 775 Site (Buildings 774/776) and SD052-01 Apron 2 (Buildings 785/786) is anticipated by September 2015 and will aim to document OPS at the site.

Comprehensive Technical Approach

To achieve the PPO, the Team will:

1) Prepare Required OES Documentation throughout POP: Upon finalization of the ROD, the Bhate Team will prepare the Optimization Plan to memorialize the OES and obtain approval of our performance model and metrics. An OES Report will be prepared prior to the end of the POP to evaluate the implemented optimizations and present further optimization in post-POP years.

Rationale: This OES documentation will ensure compliance with the Performance Work Statement (PWS) and ROD.

2) Evaluate Sub-Slab and Influent Soil Vapor Concentrations: Currently, the sub-slab is actively depressurized by imposing negative pressure under the slabs by mechanical (regenerative) blowers, and the extracted vapors are discharged to a vapor treatment system consisting of granular activated carbon (GAC) vessels. The latest sampling results from the IRA where compared to the baseline sampling results at SD-052-02 Building 775 Site (Buildings 774 and 776) and SD-052- 01 Apron 2 Chlorinated Plume Site (Buildings 785 and 786) SSVM systems and indicate a decreasing trend in sub-slab TCE vapors. With Regulator and AF concurrence, the SSVM systems will be shut down when it has been determined that the SVI RAO has been achieved or that continued operation of the system is not effective or needed; i.e., contamination is no longer being removed, sub-slab soil gas concentrations have been reduced to a level that would not impact indoor air at unacceptable levels, and/or there is no remaining groundwater contamination in the vicinity of the buildings at concentrations greater than groundwater applicable or relevant and appropriate requirements (ARARs) (New York State Ambient Water Quality Standards and Guidance Values, NYSDEC, June 1998) that could impact the SVI pathway into the buildings. Laboratory results for the SSVM system indicate the sub-slab soil gas concentrations are at or below the New York State Department of Health (NYSDOH) no further action (NFA) screening criteria (NYSDOH, October 2006 or updated criteria). NFA values in the NYSDOH guidance range from 5 to 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Please note that New Ambient Air Guideline for TCE were implemented in August 2015. NYSDOH lowered their guideline for TCE in ambient air from $5 \mu\text{g}/\text{m}^3$ to $2 \mu\text{g}/\text{m}^3$. A review of the Indoor Ambient Air results for 774/776 and 785/786 adjusted to the new

regulatory standard indicates that the recent air analytical results are still below the regulatory threshold. It is worth noting that both systems are at or below the current $0.25 \mu\text{g}/\text{m}^3$ for TCE to justify NFA when comparing sub-slab concentrations to ambient air.

Rationale: This OES documentation will ensure compliance with the PWS and ROD.

3) Convert to Passive SSVM System: The proposed outcome includes a strategy for converting the active SSVM systems into passive SSVM systems. Under the passive SSVM system, the horizontal wells will be connected to vertical pipes with wind-powered exhaust turbines. The SSVM components of the active systems will remain in place once the systems are converted to passive systems. During the operation of the passive systems, the active systems will be inspected/tested on an annual basis. The following are optimization strategy provisions as detailed in the signed ROD for converting the SSVM systems into passive SVI mitigation systems:

- Groundwater Samples: The concentrations of VOCs in groundwater in the vicinity of the soil vapor extraction (SVE) systems will be evaluated to assess the SVI pathway into the buildings. Conversion of the active SSVM system to a passive SSVM system will be evaluated if the VOC concentrations do not meet groundwater ARARs (i.e., established groundwater quality standards). Therefore, conversion of the system will be evaluated using the SSVM influent and Sub-Slab Soil Vapor Rebound Sample Result indicators discussed in the next two bullets.
- SSVM Influent: As an indicator of remediation progress in the sub-slab environment, VOCs in the influent to the SSVM system prior to any carbon treatment will be sampled periodically for laboratory analysis. When influent air data reach a stable trend (i.e., they are no longer decreasing) or the laboratory results for the SSVM system influent indicate that the sub-slab soil gas concentrations are below the NYSDOH no further action screening criteria (NYSDOH, October 2006 or updated criteria) http://www.health.ny.gov/environmental/investigations/soil_gas/svi_guidance/docs/svi_g_final2006_complete.pdf and/or USEPA industrial use Regional Screening Levels (RSLs) (<http://www.epa.gov/region9/superfund/prg/>) for contaminants of concern, the active SSVM systems will be converted into passive SSVM systems. Update: August 2015, NYSDOH has lowered their guideline for TCE in ambient air from $5 \mu\text{g}/\text{m}^3$ to $2 \mu\text{g}/\text{m}^3$ and developed a recommended immediate action level of $20 \mu\text{g}/\text{m}^3$.
- Sub-Slab Soil Vapor Rebound Sample Results: Following the conversion of the systems, periodic (annual) performance monitoring will be conducted. If sub-slab soil gas concentrations are reported higher than the industrial use screening criteria cited for two consecutive sampling events, the active SSVM systems will be re-started.

The conversion of the SD052-01 SSVM to a passive system will be documented in a Construction Completion Report (CCR), or similar. The work plan will also detail continued operations and sampling of the SD052-02 SSVM system under OES. Indoor and outdoor air sampling, sub-slab vapor sampling, and influent sampling will be conducted annually. O&M includes monthly system component readings (system temperature, flow, vacuum, and motor status), annual vapor monitoring point vacuum measurements, and GAC disposal and replacement (when necessary).

Rationale: Physical removal of COC vapors to below NYSDOH NFA screening criteria (NYSDOH,

October 2006 or updated criteria) and the applicable USEPA RSLs is the most effective and low risk approach (most protective of human health) to significantly reducing the time to achieve SC.

Deliverables

Optimization Plan, LTM Work Plan, Quarterly O&M Reports, OES Report, and FYR

Why the Selected PPO is the Optimal Solution

Accelerated SC will be demonstrated by achievement of RC for the groundwater under Buildings 785 and 786 at Site SD052-01; and Buildings 774 and 776 at Site SD052-02 within the POP. However, demonstrating permanent shut down status of the SSVM systems, as described in the signed ROD (September 2016), will not be possible due to the rebound evaluation requirement for three heating season sampling events. This time requirement would extend beyond the POP. Therefore, SSVM Systems will continue operations until it has been determined that the SVI RAO has been achieved or that continued operation of the system is not effective or needed; i.e., contamination is no longer being removed, sub-slab soil gas concentrations have been reduced to a level that would not impact indoor air at unacceptable levels, and/or there is no remaining groundwater contamination in the vicinity of the buildings at concentrations greater than groundwater ARARs (New York State Ambient Water Quality Standards and Guidance Values, NYSDEC, June 1998) that could impact the SVI pathway into the buildings. The SSVM systems will then be advanced towards SC by converting to a passive system as required by Section 1.2 of the Site Specific PWS. This PPO is in the best interest of the AF because the PPO combines remediation of impacted groundwater at SD052-01 and SD052-02 with the conversion of active SSVM system to a passive system. The selected remedy provides the AF with limited LCCs while advancing the system towards achieving SC.

Technical Approach Risks and Mitigations

If sub-slab soil gas concentrations are reported higher than the industrial use screening criteria cited for two consecutive sampling events, the passive system will be reconnected to the active SSVM systems and the system will be re-started. Following reactivation of the SSVM systems, Bhate will conduct an evaluation to determine the cause of the rebound and if necessary, install up to 12 air inlet wells around Building 785 and 786 (6 per building) to control the subsurface airflow and possibly overcome preferential pathways and dead zones that may be impeding the SSVM systems. The air inlet wells are passive and will be installed at the edge of the buildings so as not to induce flow of contamination from an adjacent site.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements and schedule by continuing to optimize the selected remedies, complete LUC/IC inspections, FYRs, and sampling.

Business Case Analysis

Preferential pathways and dead zones appear to be impeding the SSVM system closure activities based on the sub-slab concentration data and mass removal rates to date. The proposed approach results in a 75% decrease in LCC versus SQ and a projected SC date of 12/2025.

Post-POP LCC activities include the following at a cost of \$201K:

- FY2021-FY2023: O&M, Quarterly Reporting, Indoor and Outdoor Sampling. Annual cost of \$10K to \$43K (system dependent) or a total of \$116K post-POP LCC.

- FY2024: Rebound sampling at a cost of \$30K.
- FY2025: Closure Report and well/system abandonment at a cost of \$55K.

Performance Model

The PWS stipulates two performance metrics for the OES at SD052-SVI: 1) accelerate SC from the SQ date of Fiscal Year 2035 and 2) convert the system to passive operation or shut it down. The Bhate Team’s OES will accelerate SC by 10 years and convert the system to passive operation by removing preferential pathways and dead zones that are impeding the SSVM system closure. We will finalize and submit a performance model within the Optimization Plan for SD052-SVI. The proposed approach will result in a 75% decrease in LCC versus SQ and a projected SC date of 12/2025.

Site # 10	SS054 (Building 781 Pumphouse)
Projected Closure Date:	2027
Performance Objective:	Optimized Exit Strategy
General Strategy:	Optimize biosparge system and monitoring well network; continue O&M of existing biosparge system, groundwater sampling and reporting, annual LTM and LUC inspections/reporting; submit Corrective Action Plan (CAP), OES reports, and FYR.

Current Site Conditions

The spill number was assigned by the NYSDEC in June 1992; and Building 781 and the associated underground storage tanks (USTs) were removed in May 1995. The existing biosparge system was expanded in 2012 based upon a supplemental site investigation and a remedial optimization evaluation. Residual soil impacts and light non-aqueous phase liquid (LNAPL) are at or near the water table and free product is currently present in and near 781-MW-13. The southern end of the dissolved phase plume is being contained by the biosparge system. Measuring free product thickness in monitoring wells and removal of this free product is completed weekly in 5 wells. COCs in the groundwater include benzene, toluene, ethylbenzene, and xylenes (BTEX) and both 1,2,4- and 1,3,5-trimethylbenzene.

Comprehensive Technical Approach

The goal of the OES is primarily to reduce the COCs to levels that allow for SC by 2027. The secondary goal is to reduce LTM requirements and decrease LCCs until the RAOs are achieved.

In order to achieve our OES, the Bhate Team will:

1) Continue O&M of existing systems, FYRs, and ongoing LTM program: O&M of the existing biosparge system will continue. All portions of the system will operate since free product is present (<1 ft in thickness). Quarterly groundwater monitoring will be completed to evaluate performance. Oxidation reduction potential (ORP) and dissolved oxygen (DO) will be measured concurrent with the quarterly groundwater monitoring. LTM/LUC inspections will be completed and included in the annual report.

Rationale: Our actions will ensure compliance with ongoing remedial actions and recommendations.

2) Optimize the biosparge system: Since the free product is primarily a sheen at SS054, the biosparge system should significantly reduce the plume mass. If free product does not continue

to decrease, passive skimmers will be placed into the free product recovery well(s) to optimize the removal and to supplement the current weekly skimming program. The key to optimizing the biosparge system is distribution of sufficient oxygen to the plume. Therefore, we will evaluate iron concentrations to ensure that iron precipitation does not impact distribution. Increasing oxygen into the aquifer will be assessed both in the wells as bubbling and mounding and by reduction of COC concentrations. Together this additional data will be used to optimize the system.

Rationale: While additional sparge wells were installed, evaluation of their performance and further optimization has not been completed. The location and design of the wells appears to be appropriate for the aquifer plume. Biosparge techniques have been successfully used throughout the former Griffiss AFB to remediate the dissolved phase petroleum plumes and achieve SC.

3) Optimize the well network: Based on the most recent data, at least 8 wells do not currently exceed the cleanup standards. These wells are proposed for decommissioning throughout the POP. Our optimization of the biosparge system will reduce the plume by 50% and may result in elimination of additional monitoring wells within the POP.

Rationale: Removal of the existing monitoring wells will eliminate all future costs to the AF. Bhate will right-size the monitoring well network to advance the site towards SC.

Deliverables

LTM Work Plan, Annual LTM/O&M Reports, Optimization Plan, OES Report, and Non-CERCLA FYR

Why the Selected PPO is the Optimal Solution

The projected SC date in the PWS is FY18, which is not possible due to the persistence of free product. Given that free product has significantly reduced in thickness, the existing, optimized biosparge system should achieve SC within 5 years after the POP. Continuing to operate the existing systems at SS054 provides the AF with the lowest LCC versus aggressive, high-risk in-situ or ex-situ treatment that will not significantly reduce the time to achieve SC or RC and will result in a significantly higher LCC.

Technical Approach Risks and Mitigations

The primary risk to the AF is that COC reductions become asymptotic with the biosparge system. We will mitigate this by optimizing with blending nutrients (nitrogen and phosphorus) into the air stream to enhance the aerobic biodegradation process. A supplemental blower may be required to increase flow rates to the existing biosparge wells to optimize the distribution of oxygen and nutrients to groundwater. Pulsing of the system with variable on/off run times will also be evaluated and incorporated.

A secondary risk is that the NYSDEC and/or USEPA do not concur with reduction in sample locations. Bhate will mitigate this risk by requesting sampling optimization ahead of the proposed 2019 date to gain consensus with the Regulators on the data needed to support this request.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements by ensuring that treatment reduces the plume size to prevent offsite migration and eliminate free product.

Business Case Analysis

While the existing system has been optimized, the COCs continue to exceed 100 milligrams per liter (mg/L) and there is measurable free product in 5 wells. Therefore, Site SS054 contamination

will not reduce below the cleanup levels by the projected FY18 in PWS Enclosure 1B without a more aggressive remedial approach that is likely to cost 2 to 3 times that of OES of the existing biosparge system. Further, SC within the POP is a risk to the AF given the current plume mass, including the continued presence of free product, and would require a longer POP and greater LCC than OES during the POP with SC achieved by FY2027.

Performance Model

The Bhate Team will finalize and submit a performance model to AFCEC in the OES Plan. The key performance metric for LTM is to reduce sampling by 20% annually through elimination of upgradient wells and to reduce the plume VOCs by 50% of baseline by the end of the POP. This reduction of COCs will allow the site to achieve RC by 2025 and SC by 2027.

Site # 11	SS062 (AOC 9 Weapons Storage Area [WSA] Landfill Chlorinated Plume)
Projected Closure Date:	2027
Performance Objective:	Optimized Exit Strategy
General Strategy:	Complete a follow-on ISCO injection and optimize monitoring well network; continue groundwater and LUC/IC monitoring and reporting; submit Optimization Plan, OES report, and FYR.

Current Site Conditions

AOC 9 is the location of the former Griffiss AFB’s first landfill used between 1943 and 1960. Most of the landfill material was removed from the area in the 1950s as the WSA was constructed. An Interim Remedial Action Completion Report (IRACR) was completed in 2010, which included excavation, dewatering, and backfilling with sodium persulfate oxidant and an iron chelate activator. The Final ROD was completed in July 2010 and selected excavation of contaminated soil, ISCO for groundwater, and LUCs. In November 2013, PermeOx® Plus was injected to enhance aerobic bioremediation of the groundwater plume and Remedy in Place (RIP) was achieved in 2015 based upon performance monitoring results.

The primary COCs exceeding groundwater standards are chlorobenzene; TCE; and cis-1,2 DCE. The plume is approximately 1,400 ft long but relatively narrow at approximately 150 ft wide. LUCs/ICs will remain in place until groundwater RAOs are achieved. The center of the contaminant mass appears to be migrating downgradient.

Comprehensive Technical Approach

The goal of the OES is primarily to reduce the COCs to levels that allow for achievement of RC by FY24 through MNA. The secondary goal is to reduce LTM requirements to decrease LCCs until the RAOs are achieved. **OES will be achieved through the following activities.**

1) Prepare Required OES Documentation throughout POP: the Bhate Team will prepare the Optimization Plan to memorialize the OES outlined in the proposal and obtain approval of our performance model/metrics. We will prepare an OES Report prior to the end of the POP to evaluate the optimizations and present further optimization in post-POP years.

Rationale: Our OES will be documented to ensure compliance with the PWS.

2) Continue Annual LTM: Bhate will prepare a Work Plan for the annual groundwater sampling and LUC/IC inspection and maintenance.

Rationale: Our activities will ensure compliance with the ROD.

3) Optimizing Groundwater and Surface Water sampling: Continue to optimize LTM by reducing the number of samples collected on a quarterly basis. The OES will ensure sampling of 7 monitoring wells versus the 9 monitoring wells currently sampled (22% reduction). To ensure protection of human and ecological health, as well as regulatory compliance, surface water sampling will remain SQ and sampling will be quarterly due to ongoing plume treatment activities. We will use GTS and/or MAROS software (or equivalent) to determine the optimum number, placement of wells, and sampling frequency in the network. We will develop nonlinear trends and trend maps. Future sampling data will be incorporated into GTS/MAROS and inconsistent data flagged for further assessment. Monitoring wells eliminated from the LTM program will be properly decommissioned to eliminate AF liability.

Rationale: The plumes are stable and/or decreasing. Sampling is primarily done to verify that COCs are not migrating offsite or into the stream environment. MAROS analysis supports biennial sampling for a majority of the wells and COCs. However, additional data is needed to support request for all wells to move to biennial sampling, as presented in the 2014 Annual LTM Report.

4) Optimizing ISCO with Additional Injections: PermeOx[®] Plus injection reduced COCs in MW-14 by 10 fold, immediately downgradient of the injections. Bhate will prepare a work plan for the full scale design and implementation of additional ISCO injections using Oxygen BioChem (OBC[®]), which is a formulated mixture of sodium persulfate and calcium peroxide,. Injections are planned to focus on MW-15 where the COCs have remained stable for the past 2 years and MW-17 where TCE and chlorobenzene are present above the RAOs upgradient of Six Mile Creek. Annual LTM Reports will document the results of ISCO.

Rationale: The IRACR (excavation and persulfate injections), performed in 2010, reduced the COCs by 10-fold compared to the baseline conditions. However, the chlorobenzene and TCE plumes have stabilized and may be starting to demonstrate a slight backdiffusion based upon a comparison of the April 2014 to the April 2015 data.

5) Complete FYR: to ensure ROD compliance and protection of human health and the environment.

Rationale: The goal of the OES is primarily to reduce the COCs to levels that allow for natural degradation over time. The secondary goal is reduction of the LTM requirements to reduce LCCs until the RAOs are achieved. LTM will focus on ensuring the RAOs are achieved by ensuring COCs are not migrating offsite or into the stream environment.

Deliverables

Remedial Optimization and LTM Work Plans, Annual LTM Reports (includes ISCO injection information), Optimization Plan, OES Report, and FYR

Why the Selected PPO is the Optimal Solution

Given the plume length and constituent concentrations, OES within the 5-year POP provides the AF with the lowest LCC. ISCO has performed well at the site but the COCs appear to have reached asymptotic levels in the past 2 years. Modeling in 2013 indicated that RAOs would be achieved in 11 years, but that didn't account for the currently observed asymptotic levels. Achieving RC or SC is a high risk to the AF given chlorobenzene concentrations exceeding 100 µg/L over 50% of the plume with a RAO of 5 µg/L. Also, given that the site is known to have been used as a landfill, it is uncertain that SC can be achieved as residual landfill material is likely present.

Technical Approach Risks and Mitigations

The primary risk is that the COCs do not decrease as modeled such that the goal of reducing the COCs to less than 10 µg/L cannot be achieved within the POP. Since ISCO is known to reduce these COCs, the primary cause would be uneven distribution of the oxidant. We will mitigate this risk by completing a pilot test to assess and optimize oxidant delivery and distribution. A secondary risk is that the NYSDEC and/or USEPA do not concur with reduction in sample locations. Bhate will mitigate this risk by requesting sampling optimization ahead of the proposed 2019 date to gain consensus with the Regulators on the data needed to support this request.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet existing agreements by completing the FYRs and completing LUC/IC inspections. Our optimization will allow the AF to meet the goal of RC in FY24, as projected, despite the recently observed asymptotic concentrations of the COCs within the plume.

Business Case Analysis

Our optimization will result in limited groundwater sampling, FYR, and Annual LUC/IC maintenance to ensure compliance with the ROD. The LCC post-POP includes the FYR, additional monitoring well abandonment, and LUC/IC inspections and reports for 5 years beyond the POP, which includes one year of rebound sampling to demonstrate closure. The cost per year is \$10K plus well decommissioning for a total of \$60K post-POP LCC.

Performance Model

The key performance metric for LTM is to reduce sampling by 20% annually through elimination of upgradient wells. The Bhate Team will prepare the Optimization Plan to memorialize the OES outlined in the proposal and obtain approval of our performance model/metrics. Our plan will also reduce the primary COC, chlorobenzene to 10 µg/L or less by the end of the POP. This COC level will allow the site to achieve RC by 2024, as previously projected, and SC the following year.

Site # 12	SS067 (Building 789 Type II Fuel System)
Projected Closure Date:	2027
Performance Objective:	Optimized Exit Strategy
General Strategy:	Prepare CAP to delineate free product and eliminate free product; after free product elimination, optimize LTM; continue O&M of systems, soil vapor/air/groundwater monitoring/reporting, LUC/IC inspection; submit Optimization work plan, OES report, and FYR.

Current Site Conditions

Soil was removed to approximately 25 ft bgs in 2001 to prevent further migration of petroleum contamination from the site. While sidewall samples indicated that soil cleanup objectives were met in all but 3 locations, the samples were collected approximately 8 ft above the smear zone. Free product was observed to be leaching into the excavation from the smear zone. While the excavation removed unsaturated soil contamination and a large portion of the smear zone

contamination, free product recovery is currently ongoing using the existing skimmer system. In addition, a dissolved phase plume is present and defined by existing LTM wells. A horizontal biosparge well is effectively preventing migration of the dissolved phase VOCs into Six Mile Creek.

Comprehensive Technical Approach

OES will be achieved through elimination of free product followed by optimization of LTM. **In order to achieve our OES, the Bhate Team will:**

1) Prepare Required OES Documentation throughout POP: The Bhate Team will prepare the Optimization Plan to memorialize the OES outlined in the proposal and obtain approval of our performance model and metrics. An OES Report will be prepared prior to the end of the POP to evaluate the implemented optimizations and present further optimization in post-POP years.

Rationale: The OES documentation will be prepared to ensure compliance with the PWS.

2) Continue O&M of existing systems and ongoing monitoring program, including GW and LUC/IC inspections and FYRs: O&M of the existing VES and biosparge system will continue to be optimized. Monitoring groundwater and free product recovery wells for offsite laboratory analysis will continue on a quarterly basis. ORP and DO will be measured monthly in addition to the quarterly groundwater monitoring.

Rationale: Our proposed activities will ensure compliance with ongoing remedial actions and recommendations.

3) Delineate and then Optimize Free Product Recovery: A CAP in UFP-QAPP format will be prepared to complete supplemental delineation of the residual free product. We proposed to evaluate residual impacts from the pipe as well as assess the soils where free product is known to be present based upon onsite free product recovery and groundwater monitoring wells. The work plan will also include the OES for optimizing free product recovery. Once LNAPL has been eliminated and is not present for 1 year, the extraction and injection wells installed along with the VES system will be decommissioned per NYCRR, Chapter V, Part 555. Contingent actions (e.g., expansion of the excavation, recovery trench, or similar) will also be presented in the work plan to eliminate future work plans and mitigate the risk of failing to eliminate free product within the POP.

Rationale: Further assessment and delineation is warranted before optimizing the free product recovery. The assessment will allow the optimization to be right-sized and appropriate to ensuring that free product is eliminated within the POP.

4) Optimize LTM: Following the elimination of free product, the continuing source will be removed and groundwater sampling frequency can be reduced from quarterly to semi-annually within 1 year of the free product elimination. Annual sampling will be proposed by 2020 to allow for significant reduction in LCCs.

Rationale: Optimized LTM will reduce LCCs while still supporting achievement of SC.

Deliverables

CAP, CCR, Annual Performance Monitoring Reports, Optimization Plan, OES Report, and non-CERCLA FYR

Why the Selected PPO is the Optimal Solution

Bhate's OES uses site evaluation to determine the optimal approach and provide the lowest LCC. The existing biosparge system will continue to ensure protection of human health and the

environment by minimizing the potential for the fuel contamination to migrate to Six Mile Creek. The cost to achieve RC versus SC is essentially the same because remediation for groundwater to the cleanup levels has to be achieved for both. The cost to achieve groundwater cleanup standards in the 5 year POP is 2 to 3 times more than our proposed OES, which will use the biosparge system and MNA to achieve SC post-POP.

Technical Approach Risks and Mitigations

The primary risk is that the optimization of the existing system does not result in elimination of free product at the site. This will be mitigated through the additional site evaluation that will allow for further assessment of the optimization prior to full-scale implementation.

Achieving the PPO IAW Applicable Agreements & Schedule

Our approach will meet the existing agreements and schedule by operating the biosparge system, completing LUC/IC inspections and FYRs, and continuing sampling.

Business Case Analysis

Given the continued presence of free product at SS067, SC is not technically feasible or cost effective by FY18 as presented in Attachment 1B of the PWS. The proposed SC date in Exhibit 1 is 12/2027. Post-POP LCC activities will include the following, at a cost of \$270K:

- FY2021-FY2025: Annual LUC/IC maintenance and inspections, O&M of air sparge system and GW sampling of 12 wells for VOCs at an annual cost of \$35K for a total of \$175K
- FY2026: Rebound sampling at a cost of \$50K
- FY2027: Spill Closure Report and well/system decommissioning at a cost of \$45K

Performance Model

Bhate will eliminate the free product by 2020. LTM OES will reduce sampling from quarterly to annual by 2021.

Site # 13, 14, 15, 16, and 17	LF001 (Landfill 1), LF002 (Landfill 2 & 3), LF003 (Landfill 7), LF007 (Landfill 5), and LF009 (Landfill 6)
Projected Closure Date	Indefinite
Performance Objective:	Response Complete followed by Optimized Exit Strategy (OES)
General Strategy:	Document that RAOs have been achieved to document RC, optimize groundwater monitoring/ reporting, optimize landfill gas monitoring, cap inspections, and conduct LUC/IC monitoring and FYR

Current Site Conditions

The Record of Decision (ROD), signed in June 2000 by the U.S. Environmental Protection Agency (USEPA), for LF001, LF002, LF003, and LF007, was developed with presumptive remedies that require: 1) installation and maintenance of an impermeable cover per the current New York Codes, Rules, and Regulations (NYCRR), Part 360 landfill closure regulations; 2) Long Term Monitoring (LTM) for groundwater, surface water, and sediment per the NYCRR Part 360 landfill post-closure regulations; 3) evaluation of LTM data to confirm the effectiveness of the presumptive remedy; 4) implementation of ICs in the form of deed restrictions; and 5) joint FYRs. The RAO in the ROD does require monitoring groundwater and a stream environment assessment downgradient of the site to evaluate the effectiveness of the presumptive remedy. The ROD for

LF009 was signed by the USEPA in June 2001. Per the FFA, the landfills will continue LTM until 2040. These five CERCLA sites are all capped landfills with ongoing post-closure activities that include the performance of routine, preventive, predictive, scheduled, and unscheduled inspections. Groundwater and surface water sample results are compared to NYSDEC Class GA Groundwater Standards and NYSDEC Class C Surface Water Standards. Site activities are conducted under the supervision and recommendations of the USEPA, Region 2 and NYSDEC.

Comprehensive Technical Approach

The goal of RC is to obtain formalized documentation for the AF that each landfill is considered to have achieved the RAOs presented in the approved RODs. OES is primarily to reduce LTM requirements to decrease LCCs in an effective manner through 2040. LTM will focus on ensuring protection of human health and the environment.

To achieve the PPOs of RC followed by OES for LTM, the Bhate Team will:

1) Achieve RC: On 17 March 2010, the USEPA Region 2 issued a letter indicating that LF001 had achieved closure and can begin LTM as required by the ROD and ROD amendment. This letter was issued in response to the “Report on Implementation of Remedial Action at Landfill 1” and response to USEPA’s comments dated January 2010. This letter supports RC at LF001. The Bhate Team will prepare a Technical Memorandum to document that RC has been achieved at all five of the landfills based upon similar documentation available for each of the sites. This technical memorandum will demonstrate that the sites have achieved closure and that the sites are considered to be in LTM (post-RC) as required by the ROD. Bhate will summarize the basis and background of the RODs for these four landfill sites (including relevant information regarding presumptive remedies) and the existing site conditions (e.g., chemicals of concern [COCs], secured by fencing) in the report. The submittal of the final technical memorandum to the Regulators will serve as the basis of having achieved RC per the Performance Work Statement (PWS) for LF001, LF002, LF003, LF007, and LF009.

Rationale: The Bhate Team will obtain formalized documentation with Regulator concurrence that the AF is justified in recording these landfill sites as RC.

2) Continue LTM per Final O&M Plan, FYRs, and ICs for Landfills: The Bhate team will implement the approved O&M Plan, FYR, and ICs for these landfills; the O&M Plan will be revised to include Bhate key contacts.

Rationale: Our actions will ensure compliance with the ROD and established O&M Plan.

3) Prepare Required OES Documentation throughout the Period of Performance (POP): Upon award, the Bhate Team will prepare the Optimization Plan to memorialize the OES outlined in the proposal and obtain approval of our performance model and metrics. An OES Report will be prepared prior to the end of the POP to evaluate the implemented optimizations and present further recommended optimization in post-POP years.

4) Implement OES for LTM: Systematic reduction of LTM built upon the ongoing OES, by others. The table below presents the most recent, comprehensive sampling activities followed by our proposed OES.

Site ID	2015 LTM Activities (Current)	OES during POP
LF001	<ul style="list-style-type: none"> Semi-annual landfill gas (LFG) monitoring at 18 gas monitoring probes/31 gas vents. Annual groundwater monitoring at 12 monitoring wells. Surface water monitoring at 3 locations. Semi-annual cap inspections. 	<ul style="list-style-type: none"> Reduce LFG monitoring by 50% through reduction of gas vents monitored and to annual from semi-annual within POP. Reduce groundwater monitoring locations by 25% based upon continued non-exceedance of landfill leachate indicators or Volatile Organic Compounds (VOCs) and all sampling to biennial. Annual cap inspections.
LF002	<ul style="list-style-type: none"> Semi-annual LFG monitoring at 9 gas monitoring probes/14 gas vents. Biennial groundwater monitoring at 6 monitoring wells and biennial surface water monitoring at 3 locations. Semi-annual cap inspections. 	<ul style="list-style-type: none"> Reduce LFG monitoring by 40% and to annual within POP. Sampling every 5 years with the next sampling event to coincide with the FYR in 2020. Eliminate sampling from 2 groundwater monitoring wells. Annual cap inspections.
LF003	<ul style="list-style-type: none"> Annual groundwater monitoring at 8 monitoring wells and biennial surface water monitoring at 2 locations. Semi-annual cap inspections. 	<ul style="list-style-type: none"> Reduce sample locations by 25% and sampling every 5 years with the next sampling event to coincide with the FYR in 2020. Annual cap inspections.
LF007	<ul style="list-style-type: none"> No LFG monitoring. Biennial groundwater monitoring at 5 monitoring wells and biennial surface water monitoring at 3 locations. Semi-annual cap inspections. 	<ul style="list-style-type: none"> Sampling every 5 years with the next sampling event to coincide with the FYR in 2020. Annual cap inspections.
LF009	<ul style="list-style-type: none"> Semi-annual LFG monitoring at 13 gas monitoring probes/16 gas vents. Annual groundwater monitoring at 19 monitoring wells, 2 leachate locations, 1 wetland location, and 3 surface water monitoring locations. Semi-annual cap inspections. 	<ul style="list-style-type: none"> Reduce LFG monitoring by 50% and to annual within POP. Reduce groundwater monitoring to 10 locations. Sampling every 5 years with the next sampling event to coincide with the FYR in 2020. Annual cap inspections.

We will use Geostatistical Temporal-Spatial (GTS) and/or Monitoring and Remediation Optimization System (MAROS) software, developed for AFCEC, (or equivalent) to determine the optimum number, placement of wells, and sampling frequency in each landfill network. We will develop non-linear trends and trend maps. Future sampling data will be incorporated into GTS/MAROS and inconsistent data flagged for further assessment. Monitoring wells and LFG probes and vents eliminated from the LTM program will be properly decommissioned in accordance with (IAW) NYSDEC Groundwater Monitoring Well Decommissioning Policy (Commissioner Policy-43) to eliminate AF liability.

Rationale: Per 6 NYCRR Part 360, site conditions must be evaluated at least once every 5 years. The plumes are stable and/or decreasing. Sampling is primarily done to verify that COCs are not migrating offsite or into the stream environment and ensuring human and ecological health, thus, maintaining regulatory compliance. NYSDEC Sub Part 360 for landfills does not require LFG monitoring such that continued reduction of this LTM activity is reasonable. Per the O&M Manual, Bhate will petition the NYSDEC to modify the inspection requirements based upon the fully established cap and no visual signs of deterioration of the cap within the previous years. Per the

Landfill Optimization Plan, Bhate plans to conduct emergency inspections after large scale (5 year) storm events. Per the O&M Manuals for the landfills, the 5-year, 24-hour storm event is approximately 3.3 inches of rainfall for Rome, New York.

The Bhate Team will support FYRs to ensure ROD compliance and protection of human health and the environment. The landfills will be surveyed during these FYRs to evaluate settlement.

The ROD and State-regulations provide some flexibility for optimization of the O&M over time. While continued LTM will be required for over 20 years, cost reductions through OES are achievable both within the POP and post-POP. Sampling data supports that the plumes are stable. LTM will focus on ensuring the RAOs are achieved by demonstrating that COCs are not migrating offsite or into the stream environment.

Deliverables

LTM Work plan, Annual LTM Reports, Optimization Plan and OES Reports, FYR, Report on Implementation of Remedial Action, and RC Memorandum.

Why the Selected PPO is the Optimal Solution

This PPO is in the best interest of the AF because the landfills are at RC under the Defense Environmental Restoration Program (DERP). RC is based upon 1) the RAOs in the ROD have been achieved and 2) the only on-going activities are LTM. OES of the ROD-selected remedies provides the AF with the lowest LCC, while ensuring protection of human health and the environment. The Post-Closure care groundwater monitoring period will extend until the year 2040 per the FFA.

Technical Approach Risks and Mitigations

The primary risk at the landfills is COC detections in groundwater or surface water indicating an increasing trend. This risk is considered to be low given the known stability of the groundwater plumes based upon LTM implementation beginning over 10 years ago for all but LF009 (LTM began in June 2006). Sampling will increase if any increasing trends are identified to mitigate this risk. Another risk is damage to the landfill cap from a burrowing animal, large rainfall event, or similar. Mitigation will be IAW the landfill O&M Manual.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements and schedule by maintaining the landfill cap, inspecting LUC/IC, optimizing water and gas sampling, and completing FYRs.

Business Case Analysis

Our proposed approach results in an approximately 50% decrease in LCC versus SQ through reduction of LTM costs. Post-POP LCC activities include:

- **Fiscal Year (FY) 2021-FY2040:** FYRs, annual LUC/IC maintenance and inspections, no LFG monitoring, and groundwater and surface water sampling every 5 years coinciding with the FYR (except LF001 and LF009 which will remain biennial).

Every 5 years, the 5 landfills cost \$40K for a total of \$200K post-POP LCC.

Performance Model

Bhate will prepare and submit a performance model within the Optimization Plan. The key performance metric for O&M is to reduce sampling as presented in the previously presented table.

Site # 18	SD052-02 (Building 775 OU)
Projected Closure Date:	2022
Performance Objective:	Response Complete
General Strategy:	Prepare Remedial Optimization Work Plan to evaluate alternative remedies including completion of an ISEB pilot study, and prepare Focused Feasibility Study, Proposed Plan, and ROD; use MAROS or GTS software to optimize groundwater monitoring; conduct LUC/IC monitoring and reporting and FYR.

Current Site Conditions

The ROD for the SD052-02 (Building 775 OU) was signed in March 2009, implementing installation of recovery wells to extract the groundwater from the Building 775 plume and discharge it to a sanitary sewer for off-site treatment at a wastewater treatment facility or for treatment on site and discharged to Three Mile Creek. The RAOs specified in the ROD consist of achieving the cleanup goal for TCE of 5 µg/L. SVI at this site will be addressed in the SD052-01 and SD052-02 SVI ROD, which is pending. OPS was conferred on April 2009. Pump and treat at SD052-02 is expected to reduce the levels of CVOC contamination in groundwater to levels below NYSDEC Groundwater Standards and achieve SC by FY25 (government projection).

The average depth to groundwater is about 60 ft. The water table exhibits a very low hydraulic gradient (0.005 ft/ft) across the site, with an even lower gradient (0.001 ft/ft) to the northeast between the Nosedock area and the northeast edge of Strategic Air Command (SAC) Hill. The contaminated aquifer is comprised of silty sands with an average thickness extending from 60 ft below ground surface (bgs) to 120 ft bgs where shale bedrock is encountered. Due to a relatively flat gradient, average groundwater velocities at this site are slow and have been estimated at approximately 10 ft/year. Higher velocities may exist in discontinuous seams of coarse sand and gravel. Contamination is not found in the bedrock.

Comprehensive Technical Approach

We will achieve RC within the POP by evaluating and implementing alternative remedies to reduce the CVOC contamination below the RAOs. Performance monitoring will focus on ensuring protection of human health and the environment and providing useful information regarding the treatment system overall effectiveness. **In order to achieve the PPO of RC, the Bhate Team will:**

- 1) Complete Pilot Study followed by Focused Feasibility Study:** A Work Plan in UFP-QAPP format will be prepared to install two injection wells at the downgradient end of the plume. These injection wells will be used to assess enhanced reductive dechlorination in the deep aquifer plume. Biotraps® will be installed in the shallow portion of the plume to evaluate ERD treatment within that highly aerobic aquifer. Soil samples will be collected during installation of the injection wells for laboratory analysis to assess the natural oxidant demand in the more shallow aquifer to evaluate ISCO treatment in that aquifer zone. Together this data will be presented in a Focused Feasibility Study and may lead to an additional pilot test within the shallow aquifer. Bhate will request that the existing extraction system be shut-off, compliant with the existing ROD.

Rationale: The current remedy has achieved asymptotic conditions. In situ treatment of the plume is more appropriate to achieve the RAOs within the POP.

- 2) Prepare Proposed Plan and Decision Document with Selected Remedy:** Prepare a Proposed Plan for public review of the revised remedy selection. The ROD will then be amended or an ESD will be prepared as necessary.
- 3) Implement the selected remedy:** The selected remedy will be documented on a Remedial Action Work Plan and then implemented. The implementation will be documented in a Remedial Action Implementation Report.
- 4) Conduct Performance Monitoring to Evaluate Remedy Optimization and Achieve RC:**
 - Annual LUC/IC inspections will continue throughout the POP. The confirmation of the LUC/ICs protectiveness will be achieved through on-site inspections and LUC/IC confirmation forms signed by the owner/occupant of the property.
 - Quarterly performance monitoring sampling will be performed to evaluate the remedy. The quarterly data will be presented in an annual report
 - RC will be achieved when the levels of CVOC contamination in groundwater are below NYSDEC Groundwater Standards as documented in the appropriate Annual LTM Report.
 - The FYR will be completed to ensure ROD compliance and protection of human health and the environment.

Rationale: Bhate will monitor implementation of the remedy while maintaining compliance with CERCLA requirements of LUCs and FYR.

Deliverables

LTM and Remedial Optimization Work Plans, Focused Feasibility Study, Proposed Plan, ROD Amendment/ESD, RACR, RAIR, Annual LTM Report, , and FYR

Why the Selected PPO is the Optimal Solution

A cost benefit analysis indicates that full remediation of the VOC plume at SDF052-02 would reduce the current AF LCCs by 28%. Projected site closure status is estimated at FY31 under SQ based on trend analysis at MW 775VMW-5. Implementation of our RC strategy will reduce the site closure status from FY31 to FY22. The selected remedy provides the AF with a limited LCC towards achieving SC by reducing the out year operations by 9 years. Proposing SC is a risk to the AF given the short POP, required planning document, notice to proceed date in April 2016, and need for 18 months to complete a rebound analysis, system and well decommissioning, and reporting to achieve SC that results in less than 3 years to treat the groundwater.

Technical Approach Risks and Mitigations

The potential risk with achieving RC is that rebounding may occur with any remedial alternative selected. Bhate will mitigate this by incorporating hot spot treatment via DPT injections as a contingent action at recalcitrant locations.

Achieving the PPO IAW Applicable Agreements & Schedule

Our approach will meet the existing agreements and schedule by continuing LUC/IC inspections, FYRs, and modification of CERCLA documents, as appropriate and required.

Business Case Analysis

RC will be achieved within the POP and significantly advance the site towards achieving SC in 2022. Proposed approach results in 28% decrease in LCCs versus SQ and a projected SC date of 12/2022. Post-POP LCC activities include the following at a cost of \$68K:

FY2021-FY2022: Annual LUC/IC maintenance and inspections for a total of \$13K post-POP LCC.

FY2021: Rebound sampling at a cost of \$20K

FY2022: RACR and well/system abandonment at a cost of \$35K

Performance Model

RC will be achieved within the POP so a performance model is not required. Our PPO exceeds the mass removal performance metric stipulated in the PWS.

Site # 19	ST006 (Building 101)
Projected Closure Date:	2020
Performance Objective:	Site Closeout
General Strategy:	Perform SVE treatment system O&M, soil vapor/air/groundwater monitoring, LUC/IC monitoring and FYRs until TCE is remediated; then evaluate rebound and revise risk assessment; prepare Explanation of Significant Differences (ESD) to remove ROD restrictions; prepare Remedial Action Completion Report (RACR) and then remove/abandon SVE system and monitoring wells. Achieve SC through SC Report.

Current Site Conditions

The 2012-approved ROD RAOs restrict exposure to contamination and selected LUC/ICs in the form of limiting future use to restricted land use and re-evaluation for SVI if new construction is proposed in the designated restricted area. Based upon the 2013 Site Closure Evaluation, potential for unacceptable risk due to TCE exists for indoor air. To remediate this unacceptable risk, an SVE system was installed in October 2013. The sub-slab vapor screening level is 70 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Sub-slab TCE concentrations continue to exceed the screening level in one monitoring point but show stabilizing trends. The ROD and previous risk assessment is based upon future use being restricted. An existing SVE system is in place to remediate sub-slab vapors. The risk assessment was completed during the Remedial Investigation (RI), prior to the interim remedial action.

Comprehensive Technical Approach

SC will be achieved by optimizing existing systems to reduce the COCs to unrestricted use. **To achieve the PPO of SC, the Bhate Team will:**

1) Continue Annual LUC/IC Inspections, Quarterly SVE O&M, Monitoring and Confirmation Sampling, and FYRs: We will continue to perform the required inspections until deed modification removes groundwater use and non-residential use restrictions. O&M of the existing SVE system and monitoring will be continued as established.

Rationale: Our proposed actions ensure compliance with the ROD and O&M Plan.

2) Continue O&M of System followed by Rebound Analysis: The Bhate Team will continue O&M of the system until TCE is below the screening level for 2 quarters. Rebound will then be evaluated once sampling results show that TCE concentrations are below residential sub-slab screening levels, understanding that the evaluation period could be as long as three heating seasons. Site closure will be requested if TCE concentrations remain below the residential sub-slab screening levels during the rebound evaluation.

Rationale: The purpose of the system is to eliminate the potential SVI risks and to achieve site closure with unrestricted use at the site.

3) Revise Risk Assessment: If necessary, soil samples will be collected to confirm that soil vapor removal has achieved an acceptable risk for residential reuse. Sufficient soil samples will be collected and analyzed for VOCs, Semi-volatile Organic Compounds (SVOCs), and Target Analyte List (TAL) metals to complete a risk assessment compliant with the USEPA Risk Assessment Guidance for Superfund (RAGS) guidance. The data quality objectives (DQOs), including number of soil samples, locations, and depths, will be established during scoping sessions with the BCT. Validated data will be used to complete a revised risk assessment based upon residential reuse. The risk assessment will be presented in the Annual LUC/IC Report under “New Information of Significance” with the recommendation to issue an ESD or Note to File under CERCLA to remove the LUC/IC restriction for the site.

Rationale: The previous risk assessment and current ROD are based on restricted reuse and requires updating to document that the site meets the criteria for unrestricted land use.

4) Achieve Decision Document (DD): The ESD will document the new soil sample results and the revised risk assessment that supports unrestricted reuse.

Rationale: The ESD will formalize the decision of unrestricted use and No Further Action (NFA).

5) Achieve SC: A formal RACR will be prepared to document the SVI activities, confirmation sampling, and risk assessment. The RACR will request removal of the restrictions IAW the ROD. Upon approval of the RACR, the existing treatment system and any monitoring wells will be properly decommissioned per the NYSDEC Groundwater Monitoring Well Decommissioning Policy (Commissioner Policy-43). An SC Report will be prepared to achieve SC.

Rationale: The existing SVE system coupled with the revised risk assessment will remediate the site to achieve SC upon decommissioning of the wells and system.

Deliverables

LTM Work Plan, Annual LTM Report, Risk Assessment Work Plan, ESD, FYR, RACR, and SC/Well and System Decommissioning Report

Why the Selected PPO is the Optimal Solution

Building 101 is currently an aircraft hangar that conducts commercial jet aircraft maintenance and repair, with hazardous waste storage and petroleum, oils, and lubricants (POL)/fuels aboveground storage tanks (ASTs). An aqueous film-forming foam (AFFF) system is operational and in use. Given the current tenants use of multiple similar chemicals, achieving SC for the known site operated by the AF will eliminate future liability for potential comingled releases by the current tenants. Existing remedial actions will allow for SC early on in the POP at low cost to the AF.

Technical Approach Risks and Mitigations

The primary risk to achieving SC within the POP is that additional active remediation is necessary. Mitigation of this risk will be accomplished by partnering with the AF, NYSDEC, and USEPA early on to determine the DQOs for documenting SC and re-assessing the site for unrestricted reuse. The DQOs will be achieved as soon as possible after award so that additional active remediation can be coordinated with the existing tenant and implemented in sufficient time to achieve SC. A secondary risk is that an ESD is not acceptable and a ROD Amendment is required. Our Integrated Master Schedule (IMS) mitigates this risk by including contingency time, should this occur.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements and schedule by continuing to operate the SVE

system, completing LUC/IC inspections and FYRs, and continued sampling.

Business Case Analysis

If rebound does not occur, SC will be achieved by FY18 as projected in Attachment 1b of the PWS. However, our schedule conservatively provides for additional time.

Performance Model

We will achieve SC within the POP such that a performance model is not required.

Site # 20, 21, and 22	SS017 (Lot 69 Former Hazardous Waste Storage Area), DP022 (Building 222), SS025 (T-9 Storage Area)
Projected Closure Date:	2019
Performance Objective:	Site Closeout
General Strategy:	Collect current site data to document that the sites meet the criteria for unrestricted land use; prepare ESD to remove ROD restrictions; continue LUC monitoring (and FYR if necessary) until NFA determination is achieved; abandon monitoring wells. Achieve SC through SC Reports.

Current Site Conditions

Site SS017: A ROD was signed on March 17, 2005, based on restricted future usage. Based on metals detections in groundwater being associated with suspended solids and consistent with background levels, the groundwater restriction under the ROD was removed in 2013. Based on the RI data, only one sample location represents a “hot spot” that may require remediation. The risk assessment didn’t assess unrestricted reuse for the Polycyclic Aromatic Hydrocarbon (PAH) and PCB detections.

Site DP022: A ROD was signed on September 27, 2001, based on restricted future usage. The groundwater restriction under the ROD was removed in 2013. The risk assessment performed as part of the RI used the maximum detected concentration because less than 10 soil samples were collected. The risk assessment was completed prior to the removal action and didn’t consider unrestricted reuse.

Site SS025: A ROD was signed on September 27, 2001, based on restricted future usage. The groundwater restriction under the ROD was removed in 2013. A removal action was completed in 1998 based upon public comment on the Proposed Plan (PP). The risk assessment performed as part of the RI was completed prior to the removal action and didn’t consider unrestricted reuse.

All sites: Groundwater usage is no longer restricted and soil levels are likely consistent with unrestricted use, but requires a revised risk assessment to confirm. Upon confirmation of unrestricted use for soil, current subsurface soil relocation restrictions due to PCB contamination at SS017 and SS025 and encapsulation of contamination for DP022 can be removed through ROD amendments.

Comprehensive Technical Approach

We will achieve SC by collecting and assessing more recent site data to document that the site meets unrestricted use criteria. **To achieve SC, the Bhate Team will:**

1) Continue LUC/IC Inspections and FYRs at Site DP022-Building 22 per the ROD: Annual LUC/IC inspections will be completed and presented in an Annual Report. If SC is not yet

approved, the next FYR will include a review of this site.

Rationale: Our proposed actions will ensure compliance with the ROD, FFA, and CERCLA.

2) Collect soil samples to evaluate the sites for unrestricted reuse. A Work Plan in Uniform Federal Policy (UFP)-Quality Assurance Project Plan (QAPP) format will be prepared to collect soil data (last sampling completed in 1994) to evaluate current detections of containments identified from historical data. The DQOs, including number of soil sample locations and depths, will be established during scoping sessions with the BCT. Bhate is currently working with the AF to determine if hand augers can be completed within the building located at DP022 or if other drilling techniques may be required to access the previously excavated area. Bhate is also awaiting word from the NYSDOH to determine if sampling can stop at groundwater given that the groundwater use restriction has been removed. Validated data will be used to complete a revised risk assessment or exposure assessment for Sites SS025, DP022, and SS017 based upon residential reuse. The risk assessment or exposure assessment will be presented in the Annual LUC/IC Report under “New Information of Significance” with the recommendation to issue an ESD or Note to File under CERCLA to remove the LUC/IC restriction for the site.

Rationale: Previous soil data indicates that a revised risk assessment will achieve unrestricted reuse.

3) Achieve DD and SC: The ESD will document the new soil samples and the revised risk assessment or exposure assessment that supports unrestricted reuse. Completion for the ESD or Note to File will also achieve SC for these sites.

Rationale: The ESD formalizes the decision of unrestricted use.

Deliverables

Exposure Assessment Work Plan, Annual LTM Reports, ESD, FYR, and SC Report (if necessary)

Why the Selected PPO is the Optimal Solution

This PPO is in the best interest of the AF because it eliminates future liability at the same cost as continuing annual LUC/IC inspections and FYRs. Previous data indicates that a revised exposure assessment will demonstrate unrestricted reuse of the site is protective of human health and the environment.

Technical Approach Risks and Mitigations

The primary risk to achieving SC is that the additional soil sampling detects PAHs, metals, and/or PCBs at concentrations that create an unacceptable risk to potential future residents. Our mitigation is inclusion of contingency time in the schedule to implement a removal action to excavate the contaminated soil and achieve SC within the POP. A secondary risk is that the ESD is not acceptable to the USEPA and a ROD Amendment must be prepared. Our IMS mitigates this risk by inclusion of contingency time to complete a ROD Amendment.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will comply with the existing ROD by continuing LUCs/ICs and FYR until approval to remove the restrictions is obtained. We will exceed the existing agreements and schedule by achieving SC in the POP.

Business Case Analysis

SC will be achieved within the POP such that no post-POP LCC activities or costs are required.

Performance Model

No performance model is required with the proposed approach.

Site # 23	CSS681 (Apron 1 Area LCP-E9)
Projected Closure Date:	2020
Performance Objective:	Site Closeout
General Strategy:	Submit CAP to delineate plume, amend CAP to excavate free product and contaminated soils, install biosparge system to treat plume; perform monthly O&M and quarterly performance monitoring/reporting, perform rebound analysis, submit spill closure report, decommission monitoring wells, submit SC Report.

Current Site Conditions

In 2014, the vertical and horizontal extent of soil impacts around the former lateral control pit (LCP) was delineated. However, the extent of the associated groundwater plume has not been delineated.

Comprehensive Technical Approach

The goal of SC is to reduce residual contamination to below the NYSDEC Groundwater Standards through excavation of smear zone soils followed by biosparging. **In order to achieve the PPO of SC, the Bhate Team will:**

1) Delineate Residual Groundwater Plume: A minimum of 3 monitoring wells will be installed to delineate and assess residual groundwater contamination and flow. Monitoring wells will be placed downgradient, upgradient, and in the center of the known contamination. A CAP in UFP-QAPP format will be prepared to identify the well locations and present the sampling plan.

Rationale: Groundwater data to date is based upon grab samples that are not representative of the COCs.

2) Implement Remedial Action to Eliminate Free Product: The CAP prepared for the delineation of the groundwater plume will also include the excavation plan to remove the known contaminated soil. Contingent actions will also be presented in the revised UFP-QAPP to eliminate future work plans and mitigate the risk of achieving SC within the POP. Contingent actions include:

- **Complete ISCO injections:** If the amount of residual soil or groundwater impacts is limited, then ISCO injections will be completed to treat the remaining contamination.
- **Install biosparge system to treat residual groundwater contamination:** If the amount of residual contamination is large, then a horizontal biosparge well will be placed onto the excavation floor and connected to the biosparge system. The horizontal biosparge well and additional vertical wells will be placed to ensure that an effective zone of remediation is established.

Rationale: Based on the Apron 1 site soils being fine to medium sands interlaced with silt and clay, the most effective and low risk approach to achieving SC is excavation of contaminated soils and free product, if present. The use of ISCO or a biosparge system will allow for remediation of the groundwater and/or soil contamination to below the cleanup standards.

3) Treat the dissolved phase plume: Performance groundwater monitoring will be completed

quarterly to monitor contaminant reduction. The treatment may be optimized based upon this monitoring.

Rationale: Performance monitoring will allow for early identification of rebounding or changes in concentration that require further treatment or optimization of the remedy.

4) Achieve SC:

- **Complete Rebound Analysis:** After the cleanup levels have been achieved, groundwater sampling will be completed quarterly for a minimum of 1 year (4 sampling events) to verify that contaminants do not rebound.

Rationale: Sufficient data is required to support NFA.

- **Prepare Spill Closure Report:** This report will document the rebound sampling to support NFA at the spill site.

Rationale: Report will provide sufficient documentation for the NYSDEC to grant closure of the spill.

- **Properly decommission existing monitoring wells:** IAW NYSDEC Groundwater Monitoring Well Decommissioning Policy (Commissioner Policy-43) and prepare a SC Report to achieve SC.

Rationale: Removal of the existing monitoring wells will eliminate future costs to the AF.

Deliverables

CAP, CCR, Annual Performance Monitoring Reports, Spill Closure Report, SC Report, Well and System Decommissioning Report, and non-CERCLA FYR (if necessary).

Why the Selected PPO is the Optimal Solution

The performance objective of SC eliminates AF future liabilities and ultimately provides the lowest LCC versus LTM, O&M, and LUCs/ICs for an indefinite time frame.

Technical Approach Risks and Mitigations

The primary risk is that the removal of contaminated soil does not provide sufficient reduction of the groundwater plume, which is not fully defined. We will mitigate this risk by including both contingencies for ISCO and biosparge into our CAP.

Achieving the PPO IAW Applicable Agreements and Schedule

Our approach will meet the existing agreements by achieving SC per the NYSDEC Corrective Action Program requirements. If the area to be disturbed is greater than 1 acre, then a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and all NYSDEC requirements and best management practices (BMPs) will be included in the planning documents.

Business Case Analysis

SC will be achieved by FY20, which is IAW Attachment 1B of the PWS.

Performance Model

No performance model is required as SC will be achieved within the POP.

Site # 24	CSS682 (Building 785 Pipeline)
Projected Closure Date:	2020
Performance Objective:	Site Closeout
General Strategy:	Complete additional in-situ treatment, if necessary; continue performance monitoring until cleanup goals are achieved; monitor for another year to verify no rebound; prepare/submit a spill closure report, decommission monitoring wells, prepare SC Report to achieve SC.

Current Site Conditions

Contaminated soil was excavated to the extent possible, but some residual petroleum-related (VOC/SVOC) contamination was left due to existing utilities. Klozur[®] CR was injected in 2015, but the results from the injection are unknown. However, the maximum extent of potential contamination is known. Groundwater grab samples also have VOCs that exceed the NYSDEC groundwater standards.

Comprehensive Technical Approach

The goal of SC is to reduce the residual contamination to below the groundwater standards in 6 NYCRR Part 703. **In order to achieve the PPO of SC, the Bhate Team will:**

1) Implement a follow-on ISCO injection, if necessary: Based upon the performance monitoring to be completed in the fall of 2016, additional injections may be required to achieve the groundwater standards. If polishing is needed, sulfate injections may be used to allow biodegradation. If reduction in the COCs is less than 50% of the baseline results, then evaluation of the initial injections will be completed, which may include a pilot study and/or additional soil/groundwater sampling prior to follow-on injections.

Rationale: The Bhate Team will build off of the lessons learned and successes of the initial ISCO injections to optimize treatment and achieve SC.

2) Conduct Monitoring to Achieve SC: A minimum of 4 groundwater sampling events will be completed to document that the remediation successfully achieved the cleanup levels. Given that no monitoring wells exist, a minimum of four new monitoring wells will be installed. Post-remediation soil samples will be collected in both the saturated and unsaturated zones to verify treatment has reduced the residual soil contamination below the appropriate NYSDEC Policy CP-51 Soil Cleanup Guidance. The results will be presented in the Spill Closure Report. Upon approval of the Spill Closure Report, the monitoring wells will be properly decommissioned per the NYSDEC Groundwater Monitoring Well Decommissioning Policy (Commissioner Policy-43). A SC Report will be prepared to achieve SC.

Rationale: Sufficient data is required to support NFA. Removal of the existing monitoring wells will eliminate all future costs to the AF.

Deliverables

CAP Amendment (if required), Annual Performance Monitoring Report(s), Spill Closure Report, SC/Well Decommissioning Report, and Non-CERCLA FYR

Why the Selected PPO is the Optimal Solution

Given that active remediation commenced in FY15, any additional active remediation would be low cost such that SC within the POP provides the lowest LCC.

Technical Approach Risks and Mitigations

The primary risk to achieving SC is that ISCO is not effective at treating the residual contamination in the unsaturated soil. To mitigate this risk, Bhate will complete a bench scale test, additional sampling, and a pilot test, if necessary to optimize the injection. A secondary risk is the requirement for additional well placement and/or soil sampling to support closure due to existing utilities. We will partner with the NYSDEC to select representative locations if additional samples are required considering existing utility locations.

Achieving the PPO IAW Applicable Agreements & Schedule

Our approach will meet the existing agreements by achieving site closeout per the NYSDEC Corrective Action Program regulations.

Business Case Analysis

SC will be achieved within the POP such that no business case is required.

Performance Model

No performance model is required as SC will be achieved within the POP.

APPENDIX C
PERFORMANCE AND PAYMENT MILESTONES

OPENING PHASE PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE

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Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
	Environmental Services for Eastern Region Base Realignment and Closure (BRAC) Bases - Griffiss AFB									Fri 7/2/21
	Project Management Plan (PMP)	\$ 98,049								Tue 10/27/20
GPMP.001	AF Approval of Final PMP-2016		\$ 22,479	\$ -	\$ -	\$ -	\$ -	23%	23%	9/9/2016
GPMP.007	AF Approval of Final Annual Well Inventory/Maintenance Report-2016		\$ 29,411	\$ -	\$ -	\$ -	\$ -	30%	53%	3/17/2017
GPMP.002	AF Approval of Final PMP-2017		\$ -	\$ 10,216	\$ -	\$ -	\$ -	10%	63%	9/21/2017
GPMP.008	AF Approval of Final Annual Well Inventory/Maintenance Report-2017		\$ -	\$ 3,268	\$ -	\$ -	\$ -	3%	67%	2/27/2018
GPMP.003	AF Approval of Final PMP-2018		\$ -	\$ -	\$ 3,268	\$ -	\$ -	3%	70%	10/3/2018
GPMP.009	AF Approval of Final Annual Well Inventory/Maintenance Report-2018		\$ -	\$ -	\$ 3,268	\$ -	\$ -	3%	73%	2/12/2019
GPMP.004	AF Approval of Final PMP-2019		\$ -	\$ -	\$ -	\$ 3,268	\$ -	3%	77%	10/15/2019
GPMP.010	AF Approval of Final Annual Well Inventory/Maintenance Report-2019		\$ -	\$ -	\$ -	\$ 3,268	\$ -	3%	80%	2/27/2020
GPMP.005	AF Approval of Final PMP-2020		\$ -	\$ -	\$ -	\$ -	\$ 9,804	10%	90%	10/26/2020
GPMP.011	AF Approval of Final Annual Well Inventory/Maintenance Report-2020		\$ -	\$ -	\$ -	\$ -	\$ 9,799	10%	100%	2/25/2021
	Landfill RC: LF001	\$ 97,530								Wed 2/17/21
GLF001.001	AF Approval of Draft LTM Work Plan		\$ 5,852	\$ -	\$ -	\$ -	\$ -	6%	6%	9/1/2016
GLF001.008	AF Approval of Draft Optimization Plan		\$ 10,923	\$ -	\$ -	\$ -	\$ -	11%	17%	9/12/2016
GLF001.012	AF Approval of RC Memorandum - Achieve RC		\$ 19,506	\$ -	\$ -	\$ -	\$ -	20%	37%	11/10/2016
GLF001.009	AF Approval of Final Optimization Plan		\$ 2,731	\$ -	\$ -	\$ -	\$ -	3%	40%	11/14/2016
GLF001.002	Regulator Approval of Final LTM Work Plan		\$ 5,852	\$ -	\$ -	\$ -	\$ -	6%	46%	12/6/2016
GLF001.003	AF Approval of Final Annual LTM Report at Landfills for 2016		\$ 8,290	\$ -	\$ -	\$ -	\$ -	8%	55%	12/19/2016
GLF001.004	AF Approval of Final Annual LTM Report at Landfills for 2017		\$ -	\$ 9,265	\$ -	\$ -	\$ -	9%	64%	12/25/2017
GLF001.005	AF Approval of Final Annual LTM Report at Landfills for 2018		\$ -	\$ -	\$ 8,778	\$ -	\$ -	9%	73%	10/18/2018
GLF001.006	AF Approval of Final Annual LTM Report at Landfills for 2019		\$ -	\$ -	\$ -	\$ 8,778	\$ -	9%	82%	12/30/2019
GLF001.007	AF Approval of Final Annual LTM Report at Landfills for 2020		\$ -	\$ -	\$ -	\$ -	\$ 7,802	8%	90%	8/17/2020
GLF001.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 9,753	10%	100%	12/11/2020
	Landfill RC: LF002	\$ 69,339								Wed 2/17/21
GLF002.001	AF Approval of Draft LTM Work Plan		\$ 4,438	\$ -	\$ -	\$ -	\$ -	6%	6%	9/1/2016
GLF002.008	AF Approval of Draft Optimization Plan		\$ 7,728	\$ -	\$ -	\$ -	\$ -	11%	18%	9/12/2016
GLF002.012	AF Approval of RC Memorandum- Achieve RC		\$ 13,868	\$ -	\$ -	\$ -	\$ -	20%	38%	11/10/2016
GLF002.009	AF Approval of Final Optimization Plan		\$ 1,932	\$ -	\$ -	\$ -	\$ -	3%	40%	11/14/2016
GLF002.002	Regulator Approval of Final LTM Work Plan		\$ 1,109	\$ -	\$ -	\$ -	\$ -	2%	42%	12/6/2016
GLF002.003	AF Approval of Final Annual LTM Report at Landfills for 2016		\$ 1,358	\$ -	\$ -	\$ -	\$ -	2%	44%	12/19/2016
GLF002.004	AF Approval of Final Annual LTM Report at Landfills for 2017		\$ -	\$ 10,401	\$ -	\$ -	\$ -	15%	59%	12/25/2017
GLF002.005	AF Approval of Final Annual LTM Report at Landfills for 2018		\$ -	\$ -	\$ 10,430	\$ -	\$ -	15%	74%	10/18/2018
GLF002.006	AF Approval of Final Annual LTM Report at Landfills for 2019		\$ -	\$ -	\$ -	\$ 4,507	\$ -	6%	80%	12/30/2019
GLF002.007	AF Approval of Final Annual LTM Report at Landfills for 2020		\$ -	\$ -	\$ -	\$ -	\$ 4,507	6%	87%	8/17/2020
GLF002.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 9,061	13%	100%	12/11/2020
	Landfill RC: LF003	\$ 51,902								Wed 2/17/21
GLF003.001	AF Approval of Draft LTM Work Plan		\$ 8,304	\$ -	\$ -	\$ -	\$ -	16%	16%	9/1/2016
GLF003.008	AF Approval of Draft Optimization Plan		\$ 7,266	\$ -	\$ -	\$ -	\$ -	14%	30%	9/12/2016
GLF003.012	AF Approval of RC Memorandum - Achieve RC		\$ 10,380	\$ -	\$ -	\$ -	\$ -	20%	50%	11/10/2016
GLF003.009	AF Approval of Final Optimization Plan		\$ 1,817	\$ -	\$ -	\$ -	\$ -	4%	53%	11/14/2016
GLF003.002	Regulator Approval of Final LTM Work Plan		\$ 2,076	\$ -	\$ -	\$ -	\$ -	4%	57%	12/6/2016
GLF003.006	AF Approval of Final Annual LTM Report at Landfills for 2019		\$ -	\$ -	\$ -	\$ 7,353	\$ -	14%	72%	12/30/2019
GLF003.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 14,706	28%	100%	12/11/2020
	Landfill RC: LF007	\$ 50,313								Wed 2/17/21
GLF007.001	AF Approval of Draft LTM Work Plan		\$ 4,025	\$ -	\$ -	\$ -	\$ -	8%	8%	9/1/2016
GLF007.008	AF Approval of Draft Optimization Plan		\$ 4,025	\$ -	\$ -	\$ -	\$ -	8%	16%	9/12/2016
GLF007.012	AF Approval of RC Memorandum - Achieve RC		\$ 10,063	\$ -	\$ -	\$ -	\$ -	20%	36%	11/10/2016
GLF007.009	AF Approval of Final Optimization Plan		\$ 1,006	\$ -	\$ -	\$ -	\$ -	2%	38%	11/14/2021

Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
GLF007.002	Regulator Approval of Final LTM Work Plan		\$ 1,006	\$ -	\$ -	\$ -	\$ -	2%	40%	12/6/2016
GLF007.006	AF Approval of Final Annual LTM Report at Landfills for 2019		\$ -	\$ -	\$ -	\$ 20,125	\$ -	40%	80%	12/30/2019
GLF007.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 10,063	20%	100%	12/11/2020
	Landfill RC: LF009	\$ 94,301								Wed 2/17/21
GLF009.001	AF Approval of Draft LTM Work Plan		\$ 9,053	\$ -	\$ -	\$ -	\$ -	10%	10%	9/1/2016
GLF009.008	AF Approval of Draft Optimization Plan		\$ 9,053	\$ -	\$ -	\$ -	\$ -	10%	19%	9/12/2016
GLF009.012	AF Approval of RC Memorandum- Achieve RC		\$ 18,861	\$ -	\$ -	\$ -	\$ -	20%	39%	11/10/2016
GLF009.009	AF Approval of Final Optimization Plan		\$ 2,263	\$ -	\$ -	\$ -	\$ -	2%	42%	11/14/2016
GLF009.002	Regulator Approval of Final LTM Work Plan		\$ 2,263	\$ -	\$ -	\$ -	\$ -	2%	44%	12/6/2016
GLF009.003	AF Approval of Final Annual LTM Report at Landfills for 2016		\$ 6,601	\$ -	\$ -	\$ -	\$ -	7%	51%	12/19/2016
GLF009.004	AF Approval of Final Annual LTM Report at Landfills for 2017		\$ -	\$ 8,487	\$ -	\$ -	\$ -	9%	60%	12/25/2017
GLF009.005	AF Approval of Final Annual LTM Report at Landfills for 2018		\$ -	\$ -	\$ 9,430	\$ -	\$ -	10%	70%	10/18/2018
GLF009.006	AF Approval of Final Annual LTM Report at Landfills for 2019		\$ -	\$ -	\$ -	\$ 9,430	\$ -	10%	80%	12/30/2019
GLF009.007	AF Approval of Final Annual LTM Report at Landfills for 2020		\$ -	\$ -	\$ -	\$ -	\$ 9,430	10%	90%	8/17/2020
GLF009.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 9,430	10%	100%	12/11/2020
	SC Site: ST006: Building 101	\$ 147,684								Tue 6/15/21
GST006.001	AF Approval of Draft 2016 LTM Work Plan Update		\$ 23,630	\$ -	\$ -	\$ -	\$ -	16%	16%	1/10/2017
GST006.003	AF Approval of Final Annual 2016 LTM Report		\$ 14,768	\$ -	\$ -	\$ -	\$ -	10%	26%	3/1/2017
GST006.002	AF and Regulator Approval of Final 2016 LTM Work Plan Update		\$ 5,907	\$ -	\$ -	\$ -	\$ -	4%	30%	6/9/2017
GST006.005	AF Approval of Draft RA Work Plan		\$ -	\$ -	\$ 44,896	\$ -	\$ -	30%	60%	10/29/2018
GST006.006	Regulator Approval of Final RA Work Plan		\$ -	\$ -	\$ 11,224	\$ -	\$ -	8%	68%	1/30/2019
GST006.007	AF Approval of Draft ESD		\$ -	\$ -	\$ -	\$ 7,089	\$ -	5%	73%	3/17/2020
GST006.008	Regulator Approval of Final ESD		\$ -	\$ -	\$ -	\$ -	\$ 1,772	1%	74%	10/12/2020
GST006.009	AF Approval of Draft RACR		\$ -	\$ -	\$ -	\$ -	\$ 7,089	5%	79%	12/16/2020
GST006.010	AF and Regulator Approval of Final RACR;AF Approval of ERPIMS Upload		\$ -	\$ -	\$ -	\$ -	\$ 1,772	1%	80%	3/19/2021
GST006.011	AF Approval of Final Site Closeout and Well & System Decommissioning Report; Distribute Report to Regulators - Achieve SC		\$ -	\$ -	\$ -	\$ -	\$ 29,537	20%	100%	6/14/2021
	SQ Site: SS008	\$ 11,005								Wed 10/14/20
GSS008.001	AF Approval of Final 2016 Annual LTM Report		\$ 2,201	\$ -	\$ -	\$ -	\$ -	20%	20%	12/20/2016
GSS008.002	AF Approval of Final 2017 Annual LTM Report		\$ -	\$ 2,201	\$ -	\$ -	\$ -	20%	40%	12/6/2017
GSS008.003	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 2,201	\$ -	\$ -	20%	60%	12/6/2018
GSS008.004	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 2,201	\$ -	20%	80%	12/6/2019
GSS008.005	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ		\$ -	\$ -	\$ -	\$ -	\$ 2,201	20%	100%	10/8/2020
	SQ Site: SS033	\$ 8,040								Wed 10/14/20
GSS033.001	AF Approval of Final 2016 Annual LTM Report		\$ 1,608	\$ -	\$ -	\$ -	\$ -	20%	20%	12/20/2016
GSS033.002	AF Approval of Final 2017 Annual LTM Report		\$ -	\$ 1,608	\$ -	\$ -	\$ -	20%	40%	12/6/2017
GSS033.003	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 1,608	\$ -	\$ -	20%	60%	12/6/2018
GSS033.004	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 1,608	\$ -	20%	80%	12/6/2019
GSS033.005	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ		\$ -	\$ -	\$ -	\$ -	\$ 1,608	20%	100%	10/8/2020
	SQ Site: SS044	\$ 9,590								Wed 10/14/20
GSS044.001	AF Approval of Final 2016 Annual LTM Report		\$ 1,918	\$ -	\$ -	\$ -	\$ -	20%	20%	12/20/2016
GSS044.002	AF Approval of Final 2017 Annual LTM Report		\$ -	\$ 1,918	\$ -	\$ -	\$ -	20%	40%	12/6/2017
GSS044.003	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 1,918	\$ -	\$ -	20%	60%	12/6/2018
GSS044.004	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 1,918	\$ -	20%	80%	12/6/2019
GSS044.005	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ		\$ -	\$ -	\$ -	\$ -	\$ 1,918	20%	100%	10/8/2020

Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
SQ Site: SS060		\$ 9,590								Wed 10/14/20
GSS060.001	AF Approval of Final 2016 Annual LTM Report		\$ 1,918	\$ -	\$ -	\$ -	\$ -	20%	20%	12/20/2016
GSS060.002	AF Approval of Final 2017 Annual LTM Report		\$ -	\$ 1,918	\$ -	\$ -	\$ -	20%	40%	12/6/2017
GSS060.003	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 1,918	\$ -	\$ -	20%	60%	12/6/2018
GSS060.004	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 1,918	\$ -	20%	80%	12/6/2019
GSS060.005	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ		\$ -	\$ -	\$ -	\$ -	\$ 1,918	20%	100%	10/8/2020
SQ Site: AOI66		\$ 9,590								Wed 10/14/20
GAOI66.001	AF Approval of Final 2016 Annual LTM Report		\$ 1,918	\$ -	\$ -	\$ -	\$ -	20%	20%	12/20/2016
GAOI66.002	AF Approval of Final 2017 Annual LTM Report		\$ -	\$ 1,918	\$ -	\$ -	\$ -	20%	40%	12/6/2017
GAOI66.003	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 1,918	\$ -	\$ -	20%	60%	12/6/2018
GAOI66.004	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 1,918	\$ -	20%	80%	12/6/2019
GAOI66.005	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ		\$ -	\$ -	\$ -	\$ -	\$ 1,918	20%	100%	10/8/2020
SC Site SS017		\$ 66,185								Thu 1/16/20
GSS017.001	AF Approval of Draft SI Work Plan		\$ 12,442	\$ -	\$ -	\$ -	\$ -	19%	19%	11/24/2016
GSS017.002	Regulator Approval of Final SI Work Plan		\$ 3,111	\$ -	\$ -	\$ -	\$ -	5%	23%	2/27/2017
GSS017.003	AF Approval of Final Annual LUC Report-2016		\$ -	\$ 9,928	\$ -	\$ -	\$ -	15%	38%	11/7/2017
GSS017.004	AF Approval of Final Annual LUC Report-2017		\$ -	\$ 9,928	\$ -	\$ -	\$ -	15%	54%	12/6/2017
GSS017.005	AF Approval of Final Annual LUC Report-2018		\$ -	\$ -	\$ 9,928	\$ -	\$ -	15%	69%	12/12/2018
GSS017.008	AF Approval of Draft SI Report		\$ -	\$ -	\$ -	\$ 6,089	\$ -	9%	78%	8/27/2019
GSS017.009	Regulator Approval of Final SI Report		\$ -	\$ -	\$ -	\$ 1,522	\$ -	2%	80%	11/28/2019
GSS017.007	Regulator Approval of Final ESD - Achieve SC		\$ -	\$ -	\$ -	\$ 13,237	\$ -	20%	100%	6/26/2020
SC Site DP022		\$ 66,185								Thu 1/16/20
GDP022.001	AF Approval of Draft SI Work Plan		\$ 13,766	\$ -	\$ -	\$ -	\$ -	21%	21%	11/24/2016
GDP022.002	Regulator Approval of Final SI Work Plan		\$ 3,442	\$ -	\$ -	\$ -	\$ -	5%	26%	2/27/2017
GDP022.003	AF Approval of Final Annual LUC Report-2016		\$ -	\$ 9,928	\$ -	\$ -	\$ -	15%	41%	11/7/2017
GDP022.004	AF Approval of Final Annual LUC Report-2017		\$ -	\$ 9,928	\$ -	\$ -	\$ -	15%	56%	12/6/2017
GDP022.005	AF Approval of Final Annual LUC Report-2018		\$ -	\$ -	\$ 6,618	\$ -	\$ -	10%	66%	12/12/2018
GDP022.008	AF Approval of Draft SI Report		\$ -	\$ -	\$ -	\$ 7,413	\$ -	11%	77%	8/27/2019
GDP022.009	Regulator Approval of Final SI Report		\$ -	\$ -	\$ -	\$ 1,853	\$ -	3%	80%	11/28/2019
GDP022.007	Regulator Approval of Final ESD - Achieve SC		\$ -	\$ -	\$ -	\$ 13,237	\$ -	20%	100%	6/26/2020
SC Site SS025		\$ 65,080								Thu 1/16/20
GSS025.001	AF Approval of Draft SI Work Plan		\$ 12,235	\$ -	\$ -	\$ -	\$ -	19%	19%	11/24/2016
GSS025.002	Regulator Approval of Final SI Work Plan		\$ 3,059	\$ -	\$ -	\$ -	\$ -	5%	24%	2/27/2017
GSS025.003	AF Approval of Final Annual LUC Report-2016		\$ -	\$ 9,762	\$ -	\$ -	\$ -	15%	39%	11/7/2017
GSS025.004	AF Approval of Final Annual LUC Report-2017		\$ -	\$ 9,762	\$ -	\$ -	\$ -	15%	54%	12/6/2017
GSS025.005	AF Approval of Final Annual LUC Report-2018		\$ -	\$ -	\$ 9,762	\$ -	\$ -	15%	69%	12/12/2018
GSS025.008	AF Approval of Draft SI Report		\$ -	\$ -	\$ -	\$ 5,987	\$ -	9%	78%	8/27/2019
GSS025.009	Regulator Approval of Final SI Report		\$ -	\$ -	\$ -	\$ 1,497	\$ -	2%	80%	11/28/2019
GSS025.007	Regulator Approval of Final ESD-Achieve SC		\$ -	\$ -	\$ -	\$ 13,016	\$ -	20%	100%	6/26/2020
OES Site SD052-01: Apron 2 Chlorinated Plume		\$ 223,590								Fri 7/2/21
GSD052-01.001	AF Approval of Draft Remedial Optimization Work Plan		\$ 35,774	\$ -	\$ -	\$ -	\$ -	16%	16%	11/14/2016
GSD052-01.003	AF Approval of Draft LTM Work Plan		\$ 35,774	\$ -	\$ -	\$ -	\$ -	16%	32%	10/3/2016
GSD052-01.004	Regulator Approval of Final LTM Work Plan		\$ 8,944	\$ -	\$ -	\$ -	\$ -	4%	36%	12/5/2016
GSD052-01.002	Regulator Approval of Final Remedial Optimization Work Plan		\$ 8,944	\$ -	\$ -	\$ -	\$ -	4%	40%	2/15/2017
GSD052-01.005	AF Approval of Final Annual LTM Report-2016		\$ 14,086	\$ -	\$ -	\$ -	\$ -	6%	46%	4/12/2017
GSD052-01.006	AF Approval of Final Annual LTM Report-2017		\$ -	\$ 39,575	\$ -	\$ -	\$ -	18%	64%	4/2/2018
GSD052-01.007	AF Approval of Final Annual LTM Report-2018		\$ -	\$ -	\$ 8,944	\$ -	\$ -	4%	68%	3/21/2019
GSD052-01.012	AF Approval of Draft ESD		\$ -	\$ -	\$ 14,310	\$ -	\$ -	6%	74%	4/18/2019
GSD052-01.013	Regulator Approval of Final ESD		\$ -	\$ -	\$ -	\$ 3,577	\$ -	2%	76%	7/8/2019
GSD052-01.008	AF Approval of Final Annual LTM Report-2019		\$ -	\$ -	\$ -	\$ 4,472	\$ -	2%	78%	3/10/2020
GSD052-01.009	AF Approval of Final Annual Report-2020		\$ -	\$ -	\$ -	\$ -	\$ 4,472	2%	80%	2/26/2021
GSD052-01.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 44,718	20%	100%	4/23/2021

Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
	RC Site SD052-02: Bldg. 775, Pump house 3 - Chlorinated Plume	\$ 224,441								Tue 3/9/21
GSD052-02.016	AF Approval of Draft LTM Work Plan		\$ 7,182	\$ -	\$ -	\$ -	\$ -	3%	3%	10/3/2016
GSD052-02.001	AF Approval of Draft Remedial Optimization Work Plan		\$ 28,728	\$ -	\$ -	\$ -	\$ -	13%	16%	11/14/2016
GSD052-02.017	Regulator Approval of Final LTM Work Plan		\$ 1,796	\$ -	\$ -	\$ -	\$ -	1%	17%	12/5/2016
GSD052-02.002	Regulator Approval of Final Remedial Optimization Work Plan		\$ 7,182	\$ -	\$ -	\$ -	\$ -	3%	20%	1/19/2017
GSD052-02.011	AF Approval of Final Annual LTM Report-2016		\$ 11,222	\$ -	\$ -	\$ -	\$ -	5%	25%	4/12/2017
GSD052-02.007	AF Approval of Final O&M Report for Q1 2017 and ERPIMS Upload		\$ 11,222	\$ -	\$ -	\$ -	\$ -	5%	30%	5/18/2017
GSD052-02.008	AF Approval of Final O&M Report for Q2 2017 and ERPIMS Upload		\$ -	\$ 11,222	\$ -	\$ -	\$ -	5%	35%	8/17/2017
GSD052-02.018	AF Approval of Final O&M Report for Q3 2017 and ERPIMS Upload		\$ -	\$ 11,222	\$ -	\$ -	\$ -	5%	40%	11/16/2017
GSD052-02.003	AF Approval of Draft FFS		\$ -	\$ 35,910	\$ -	\$ -	\$ -	16%	56%	3/14/2018
GSD052-02.012	AF Approval of Draft Final LTM Report-2017		\$ -	\$ 4,489	\$ -	\$ -	\$ -	2%	58%	4/2/2018
GSD052-02.004	Regulator Approval of Final FFS		\$ -	\$ 8,978	\$ -	\$ -	\$ -	4%	62%	6/5/2018
GSD052-02.005	AF Approval of Draft Proposed Plan		\$ -	\$ -	\$ 7,182	\$ -	\$ -	3%	65%	8/30/2018
GSD052-02.013	AF Approval of Final Annual LTM Report-2018		\$ -	\$ -	\$ 11,222	\$ -	\$ -	5%	70%	2/28/2019
GSD052-02.006	Regulator Approval of Final Proposed Plan		\$ -	\$ -	\$ 1,796	\$ -	\$ -	1%	71%	3/25/2019
GSD052-02.009	AF Approval of Draft ESD		\$ -	\$ -	\$ 4,489	\$ -	\$ -	2%	73%	5/31/2019
GSD052-02.010	Regulator Approval of Final ESD		\$ -	\$ -	\$ -	\$ 4,489	\$ -	2%	75%	7/29/2019
GSD052-02.014	AF Approval of Final Annual LTM Report-2019		\$ -	\$ -	\$ -	\$ 11,222	\$ -	5%	80%	3/10/2020
GSD052-02.015	AF Approval of Final Annual LTM Report-Achieve RC		\$ -	\$ -	\$ -	\$ -	\$ 44,888	20%	100%	2/19/2021
	OES Site SD052-04: Landfill 6 Chlorinated Plume	\$ 222,578								Thu 4/22/21
GSD052-04.003	AF Approval of Draft LTM Work Plan		\$ 28,490	\$ -	\$ -	\$ -	\$ -	13%	13%	10/3/2016
GSD052-04.001	AF Approval of Draft Remedial Optimization Work Plan		\$ 28,490	\$ -	\$ -	\$ -	\$ -	13%	26%	11/14/2016
GSD052-04.004	Regulator Approval of Final LTM Work Plan		\$ 7,122	\$ -	\$ -	\$ -	\$ -	3%	29%	12/7/2016
GSD052-04.002	Regulator Approval of Final Remedial Optimization Work Plan		\$ 7,122	\$ -	\$ -	\$ -	\$ -	3%	32%	1/18/2017
GSD052-04.005	AF Approval of Final Annual LTM Report-2016		\$ 17,806	\$ -	\$ -	\$ -	\$ -	8%	40%	4/14/2017
GSD052-04.007	AF Approval of Final Annual LTM Report-2017		\$ -	\$ 33,387	\$ -	\$ -	\$ -	15%	55%	4/4/2018
GSD052-04.008	AF Approval of Final Annual LTM Report-2018		\$ -	\$ -	\$ 33,387	\$ -	\$ -	15%	70%	3/25/2019
GSD052-04.009	AF Approval of Final Annual LTM Report-2019		\$ -	\$ -	\$ -	\$ 17,806	\$ -	8%	78%	3/12/2020
GSD052-04.010	AF Approval of Final Annual Report-2020		\$ -	\$ -	\$ -	\$ -	\$ 4,452	2%	80%	1/5/2021
GSD052-04.011	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 44,516	20%	100%	3/8/2021
	OES Site SD052-05: Bldg. 817 Chlorinated Plume	\$ 228,611								Tue 4/6/21
GSD052-05.003	AF Approval of Draft LTM Work Plan		\$ 21,947	\$ -	\$ -	\$ -	\$ -	10%	10%	10/3/2016
GSD052-05.001	AF Approval of Draft Remedial Optimization Work Plan		\$ 36,578	\$ -	\$ -	\$ -	\$ -	16%	26%	11/14/2016
GSD052-05.004	Regulator Approval of Final LTM Work Plan		\$ 5,487	\$ -	\$ -	\$ -	\$ -	2%	28%	12/7/2016
GSD052-05.002	Regulator Approval of Final Remedial Optimization Work Plan		\$ 9,144	\$ -	\$ -	\$ -	\$ -	4%	32%	1/18/2017
GSD052-05.005	AF Approval of Final Annual LTM Report		\$ 27,433	\$ -	\$ -	\$ -	\$ -	12%	44%	4/14/2017
GSD052-05.006	AF Approval of Final Annual LTM Report		\$ -	\$ 32,920	\$ -	\$ -	\$ -	14%	58%	4/4/2018
GSD052-05.007	AF Approval of Final Annual LTM Report		\$ -	\$ -	\$ 24,690	\$ -	\$ -	11%	69%	3/25/2019
GSD052-05.008	AF Approval of Final Annual LTM Report		\$ -	\$ -	\$ -	\$ 16,460	\$ -	7%	76%	3/12/2020
GSD052-05.009	AF Approval of Final Annual Report		\$ -	\$ -	\$ -	\$ -	\$ 8,230	4%	80%	12/8/2020
GSD052-05.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 45,722	20%	100%	2/4/2021
	OES Site SD052-SVI	\$ 278,107								Tue 12/1/20
GSD052SVI.001	AF Approval of Draft Optimization Plan		\$ 31,148	\$ -	\$ -	\$ -	\$ -	11%	11%	12/16/2016
GSD052SVI.002	AF Approval of Final Optimization Plan		\$ 7,787	\$ -	\$ -	\$ -	\$ -	3%	14%	12/23/2016
GSD052SVI.003	AF Approval of Draft Construction Completion Report		\$ 35,598	\$ -	\$ -	\$ -	\$ -	13%	27%	3/16/2017
GSD052SVI.004	Regulator Approval of Final Construction Completion Report		\$ 8,899	\$ -	\$ -	\$ -	\$ -	3%	30%	5/11/2017
GSD052SVI.005	AF Approval of Draft LTM Work Plan		\$ 44,497	\$ -	\$ -	\$ -	\$ -	16%	46%	9/8/2016
GSD052SVI.006	Regulator Approval of Final LTM Work Plan		\$ 11,124	\$ -	\$ -	\$ -	\$ -	4%	50%	11/14/2016
GSD052SVI.007	AF Approval of Final O&M Report		\$ 27,811	\$ -	\$ -	\$ -	\$ -	10%	60%	3/16/2017

Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
GSD052SVI.008	AF Approval of Final O&M Report		\$ -	\$ 27,811	\$ -	\$ -	\$ -	10%	70%	7/13/2017
GSD052SVI.009	AF Approval of Final O&M Report		\$ -	\$ 27,811	\$ -	\$ -	\$ -	10%	80%	2/5/2018
GSD052SVI.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ 55,621	\$ -	\$ -	\$ -	20%	100%	5/2/2018
	OES: Site SS054 Bldg. 781. Pump house-Free Product on Groundwater (NYDEC Spill #9202658)	\$ 240,743								Tue 5/4/21
GSS054.001	AF Approval of Draft LTM Work Plan		\$ 38,519	\$ -	\$ -	\$ -	\$ -	16%	16%	9/1/2016
GSS054.008	AF Approval of Draft Optimization Plan		\$ 38,519	\$ -	\$ -	\$ -	\$ -	16%	32%	9/26/2016
GSS054.009	AF Approval of Final Optimization Plan		\$ 9,630	\$ -	\$ -	\$ -	\$ -	4%	36%	10/3/2016
GSS054.002	Regulator Approval of Final LTM Work Plan		\$ 9,630	\$ -	\$ -	\$ -	\$ -	4%	40%	11/7/2016
GSS054.003	AF Approval of Final 2016 Annual LTM and O&M Report		\$ 4,815	\$ -	\$ -	\$ -	\$ -	2%	42%	3/15/2017
GSS054.004	AF Approval of Final 2017 Annual LTM and O&M Report		\$ -	\$ 33,704	\$ -	\$ -	\$ -	14%	56%	3/20/2018
GSS054.005	AF Approval of Final 2018 Annual LTM and O&M Report		\$ -	\$ -	\$ 19,259	\$ -	\$ -	8%	64%	3/13/2019
GSS054.006	AF Approval of Final 2019 Annual LTM and O&M Report		\$ -	\$ -	\$ -	\$ 19,259	\$ -	8%	72%	3/19/2020
GSS054.007	AF Approval of Final 2020 Annual LTM and O&M Report		\$ -	\$ -	\$ -	\$ -	\$ 19,259	8%	80%	1/26/2021
GSS054.010	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 48,149	20%	100%	2/23/2021
	OES Site SS062: AOC 9 Weapons Storage Area Landfill Chlorinated Plume	\$ 184,455								Wed 4/28/21
GSS062.001	AF Approval of Draft Remedial Optimization Work Plan		\$ 23,610	\$ -	\$ -	\$ -	\$ -	13%	13%	9/12/2016
GSS062.005	AF Approval of Draft LTM Work Plan		\$ 23,610	\$ -	\$ -	\$ -	\$ -	13%	26%	9/1/2016
GSS062.006	Regulator Approval of Final LTM Work Plan		\$ 5,903	\$ -	\$ -	\$ -	\$ -	3%	29%	11/7/2016
GSS062.002	Regulator Approval of Final Remedial Optimization Work Plan		\$ 5,903	\$ -	\$ -	\$ -	\$ -	3%	32%	11/16/2016
GSS062.007	AF Approval of Final 2016 Annual LTM Report		\$ 18,446	\$ -	\$ -	\$ -	\$ -	10%	42%	3/15/2017
GSS062.008	AF Approval of Final Annual 2017 LTM Report		\$ -	\$ 27,668	\$ -	\$ -	\$ -	15%	57%	3/5/2018
GSS062.009	AF Approval of Final 2018 Annual LTM Report		\$ -	\$ -	\$ 27,668	\$ -	\$ -	15%	72%	2/21/2019
GSS062.010	AF Approval of Final 2019 Annual LTM Report		\$ -	\$ -	\$ -	\$ 7,378	\$ -	4%	76%	2/11/2020
GSS062.003	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 36,891	20%	96%	3/12/2021
GSS062.011	AF Approval of Final 2020 Annual LTM Report		\$ -	\$ -	\$ -	\$ -	\$ 7,378	4%	100%	1/15/2021
	SC: CSS681: Apron 1 Area LCP-E9 (NYSDEC Spill #1501553)	\$ 271,503								Mon 4/5/21
GTBD1.001	AF Approval of Draft Corrective Action Plan		\$ 52,129	\$ -	\$ -	\$ -	\$ -	19%	19%	9/12/2016
GTBD1.002	Regulator Approval of Final CAP		\$ 13,032	\$ -	\$ -	\$ -	\$ -	5%	24%	1/3/2017
GTBD1.003	AF Approval of Draft CCR		\$ -	\$ 78,193	\$ -	\$ -	\$ -	29%	53%	12/4/2017
GTBD1.004	Regulator Approval of Final CCR		\$ -	\$ 19,548	\$ -	\$ -	\$ -	7%	60%	3/27/2018
GTBD1.005	AF Approval of Final 2017 Annual Performance Monitoring Report		\$ -	\$ -	\$ 18,100	\$ -	\$ -	7%	67%	6/17/2019
GTBD1.006	AF Approval of Draft Spill Closure Report		\$ -	\$ -	\$ -	\$ 28,960	\$ -	11%	77%	5/7/2020
GTBD1.007	AF and Regulator Approval of Final Spill Closure Report; AF Approval of ERPIMS Upload		\$ -	\$ -	\$ -	\$ -	\$ 7,240	3%	80%	8/28/2020
GTBD1.008	AF Approval of Final Site Closeout and Well & System Decommissioning Report; Distribute Report to Regulators-Achieve SC		\$ -	\$ -	\$ -	\$ -	\$ 54,301	20%	100%	12/21/2020
	OES: SS067: Building 789 Type II Fuel system (NYSDEC Spill #9810713)	\$ 216,700								Tue 12/1/20
GSS067.001	AF Approval of Draft Corrective Action Plan		\$ 15,760	\$ -	\$ -	\$ -	\$ -	7%	7%	9/12/2016
GSS067.002	Regulator Approval of Final CAP		\$ 15,760	\$ -	\$ -	\$ -	\$ -	7%	15%	11/16/2016
GSS067.005	AF Approval of Final 2016 Annual Performance Monitoring Report		\$ 15,760	\$ -	\$ -	\$ -	\$ -	7%	22%	1/24/2017
GSS067.003	AF Approval of Draft CCR		\$ 15,760	\$ -	\$ -	\$ -	\$ -	7%	29%	6/22/2017
GSS067.004	Regulator Approval of Final CCR		\$ -	\$ 15,760	\$ -	\$ -	\$ -	7%	36%	9/13/2017
GSS067.010	AF Approval of Draft Optimization Plan		\$ -	\$ 15,760	\$ -	\$ -	\$ -	7%	44%	12/12/2017
GSS067.011	AF Approval of Final Optimization Plan		\$ -	\$ 15,760	\$ -	\$ -	\$ -	7%	51%	2/15/2018
GSS067.006	AF Approval of Final 2017 Annual Performance Monitoring Report		\$ -	\$ 15,760	\$ -	\$ -	\$ -	7%	58%	2/6/2018
GSS067.007	AF Approval of Final 2018 Annual Performance Monitoring Report		\$ -	\$ -	\$ 15,760	\$ -	\$ -	7%	65%	2/13/2019

Appendix C
Performance and Payment Milestones

Milestone Number	Task Name	SubCLIN Amount	Milestone Amount-Year 1	Milestone Amount-Year 2	Milestone Amount-Year 3	Milestone Amount-Year 4	Milestone Amount-Year 5	% of SubCLIN	Total %	Milestone Completion Date
GSS067.008	AF Approval of Final 2019 Annual Performance Monitoring Report		\$ -	\$ -	\$ -	\$ 15,760	\$ -	7%	73%	2/13/2020
GSS067.009	AF Approval of Final 2020 Annual Performance Monitoring Report		\$ -	\$ -	\$ -	\$ -	\$ 15,760	7%	80%	8/18/2020
GSS067.012	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES		\$ -	\$ -	\$ -	\$ -	\$ 43,340	20%	100%	10/1/2020
	SC: CSS682: Building 785 Pipeline (NYSDEC Spill #1408594)	\$ 48,568								Wed 11/25/20
GTBD.001	AF Approval of Draft Corrective Action Plan Amendment (if required)		\$ 10,361	\$ -	\$ -	\$ -	\$ -	21%	21%	2/9/2017
GTBD.002	Regulator Approval of Final Corrective Action Plan Amendment (if required)		\$ 2,590	\$ -	\$ -	\$ -	\$ -	5%	27%	6/2/2017
GTBD.003	AF Approval of Final 2017 Annual Performance Monitoring Report		\$ -	\$ 6,476	\$ -	\$ -	\$ -	13%	40%	4/16/2018
GTBD.004	AF Approval of Final 2018 Annual Performance Monitoring Report		\$ -	\$ -	\$ 6,476	\$ -	\$ -	13%	53%	4/19/2019
GTBD.005	AF Approval of Draft Spill Closure		\$ -	\$ -	\$ -	\$ 10,361	\$ -	21%	75%	4/8/2020
GTBD.006	AF and Regulator Approval of Final Spill Closure; AF Approval of ERPIMS Upload		\$ -	\$ -	\$ -	\$ -	\$ 2,590	5%	80%	7/30/2020
GTBD.007	AF Approval of Final Site Closeout and Well Decommissioning Report; Distribute Report to Regulators-Achieve SC		\$ -	\$ -	\$ -	\$ -	\$ 9,714	20%	100%	11/17/2020

APPENDIX D
CONTACT INFORMATION

OPENING PHASE PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE

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OPENING PHASE PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE

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OPENING PHASE PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE

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APPENDIX E
PROJECT SCHEDULE

OPENING PHASE PROJECT MANAGEMENT PLAN
FORMER GRIFFISS AIR FORCE BASE

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Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1086	2017	AF Approval of Final Annual LTM Report at Landfills for 2018	0 days	Thu 10/18/18	Thu 10/18/18	1083	\$9,430.00																					
1087	2017	Submit Final Annual Report to Regulators; AF Approval of ERPIMS	5 days	Fri 10/19/18	Thu 10/25/18	1086	\$0.00																					
1088		Annual Report - 2019	57 days	Fri 10/18/19	Mon 1/6/20		\$50,193.00																					
1089	2018	Prepare Working Copy of Annual Report	20 days	Fri 10/18/19	Thu 11/14/19	1041,1055	\$0.00																					
1090	2018	AF Review of Working Copy of Annual Report	22 days	Fri 11/15/19	Mon 12/16/19	1089	\$0.00																					
1091	2018	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 12/17/19	Mon 12/30/19	1090	\$0.00																					
1092	2018	AF Approval of Final Annual LTM Report at Landfills for 2019	0 days	Mon 12/30/19	Mon 12/30/19	1091	\$8,778.00																					
1093	2018	AF Approval of Final Annual LTM Report at Landfills for 2019	0 days	Mon 12/30/19	Mon 12/30/19	1091	\$4,507.00																					
1094	2018	AF Approval of Final Annual LTM Report at Landfills for 2019	0 days	Mon 12/30/19	Mon 12/30/19	1091	\$7,353.00																					
1095	2018	AF Approval of Final Annual LTM Report at Landfills for 2019	0 days	Mon 12/30/19	Mon 12/30/19	1091	\$20,125.00																					
1096	2018	AF Approval of Final Annual LTM Report at Landfills for 2019	0 days	Mon 12/30/19	Mon 12/30/19	1091	\$9,430.00																					
1097	2018	Submit Final Annual Report to Regulators; AF Approval of ERPIMS	5 days	Tue 12/31/19	Mon 1/6/20	1096,1092,1093	\$0.00																					
1098		Annual Report - 2020	59 days	Wed 6/3/20	Mon 8/24/20		\$21,739.00																					
1099	2019	Prepare Working Copy of Annual Report 2020	22 days	Wed 6/3/20	Thu 7/2/20	1061	\$0.00																					
1100	2019	AF Review of Working Copy of Annual Report	22 days	Fri 7/3/20	Mon 8/3/20	1099	\$0.00																					
1101	2019	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 8/4/20	Mon 8/17/20	1100	\$0.00																					
1102	2019	AF Approval of Final Annual LTM Report at Landfills for 2020	0 days	Mon 8/17/20	Mon 8/17/20	1101	\$7,802.00																					
1103	2019	AF Approval of Final Annual LTM Report at Landfills for 2020	0 days	Mon 8/17/20	Mon 8/17/20	1101	\$4,507.00																					
1104	2019	AF Approval of Final Annual LTM Report at Landfills for 2020	0 days	Mon 8/17/20	Mon 8/17/20	1101	\$9,430.00																					
1105	2019	Submit Final Annual Report to Regulators; AF Approval of ERPIMS	5 days	Tue 8/18/20	Mon 8/24/20	1104	\$0.00																					
1106		Optimization	1178 days	Wed 6/8/16	Fri 12/11/20		\$101,757.00																					
1107		Optimization Plan	114 days	Wed 6/8/16	Mon 11/14/16		\$48,744.00																					
1108	2015	Prepare Working Copy of Optimization Plan	27 days	Wed 6/8/16	Thu 7/14/16	894	\$0.00																					
1109	2015	Air Force Review of Working Copy	22 days	Fri 7/15/16	Mon 8/15/16	1108	\$0.00																					
1110	2015	Resolve AF Comments on Working Copy AF	5 days	Tue 8/16/16	Mon 8/22/16	1109	\$0.00																					
1111	2015	AF Review and Approval of RTCs	10 days	Tue 8/23/16	Mon 9/5/16	1110	\$0.00																					
1112	2015	Prepare Draft Optimization Plan	5 days	Tue 9/6/16	Mon 9/12/16	1111	\$0.00																					
1113	2015	AF Approval of Draft Optimization Plan	0 days	Mon 9/12/16	Mon 9/12/16	1112	\$10,923.00																					
1114	2015	AF Approval of Draft Optimization Plan	0 days	Mon 9/12/16	Mon 9/12/16	1112	\$7,728.00																					
1115	2015	AF Approval of Draft Optimization Plan	0 days	Mon 9/12/16	Mon 9/12/16	1112	\$7,266.00																					
1116	2015	AF Approval of Draft Optimization Plan	0 days	Mon 9/12/16	Mon 9/12/16	1112	\$4,025.00																					
1117	2015	AF Approval of Draft Optimization Plan	0 days	Mon 9/12/16	Mon 9/12/16	1112	\$9,053.00																					
1118	2015	Submit Draft Optimization Plan to Regulators	5 days	Tue 9/13/16	Mon 9/19/16	1117	\$0.00																					
1119	2015	Regulator Review of Draft Optimization Plan	30 days	Tue 9/20/16	Mon 10/31/16	1118	\$0.00																					
1120	2015	Resolve Regulator Comments on Draft Optimization Plan	5 days	Tue 11/1/16	Mon 11/7/16	1119	\$0.00																					
1121	2015	Prepare Final Optimization Plan	5 days	Tue 11/8/16	Mon 11/14/16	1120	\$0.00																					
1122	2015	AF Approval of Final Optimization Plan	0 days	Mon 11/14/16	Mon 11/14/16	1121	\$2,731.00																					
1123	2015	AF Approval of Final Optimization Plan	0 days	Mon 11/14/16	Mon 11/14/16	1121	\$1,932.00																					
1124	2015	AF Approval of Final Optimization Plan	0 days	Mon 11/14/16	Mon 11/14/16	1121	\$1,817.00																					
1125	2015	AF Approval of Final Optimization Plan	0 days	Mon 11/14/16	Mon 11/14/16	1121	\$1,006.00																					
1126	2015	AF Approval of Final Optimization Plan	0 days	Mon 11/14/16	Mon 11/14/16	1121	\$2,263.00																					
1127		OES Report	79 days	Tue 8/25/20	Fri 12/11/20		\$53,013.00																					
1128	2019	Prepare Working Copy of OES Report	22 days	Tue 8/25/20	Wed 9/23/20	1105	\$0.00																					
1129	2019	Air Force Review of Working Copy	22 days	Thu 9/24/20	Fri 10/23/20	1128	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1182		Q1 Soil Vapor Monitoring	55 days	Mon 7/31/17	Fri 10/13/17		\$0.00																					
1183	2021	Sampling	3 days	Mon 7/31/17	Wed 8/2/17	1154FS+22 days	\$0.00																					
1184	2021	Offsite Analysis of Groundwater Samples	15 days	Thu 8/3/17	Wed 8/23/17	1183	\$0.00																					
1185	2021	Data Validation	15 days	Thu 8/24/17	Wed 9/13/17	1184	\$0.00																					
1186	2021	ERPIMS Submittal	22 days	Thu 9/14/17	Fri 10/13/17	1185	\$0.00																					
1187	2021	Q2 Soil Vapor Monitoring	91 days	Fri 11/3/17	Fri 3/9/18		\$0.00																					
1188	2021	Sampling	3 days	Fri 11/3/17	Tue 11/7/17	1183FS+66 days	\$0.00																					
1189	2021	Offsite Analysis of Groundwater Samples	15 days	Fri 11/3/17	Thu 11/23/17	1183FS+66 days	\$0.00																					
1190	2021	Data Validation	15 days	Fri 11/24/17	Thu 12/14/17	1189	\$0.00																					
1191	2021	ERPIMS Submittal	22 days	Thu 2/8/18	Fri 3/9/18	1188FS+66 days	\$0.00																					
1192	2021	Contingent action	180 days	Fri 11/24/17	Thu 8/2/18	1189	\$0.00																					
1193		Q3 Soil Vapor Monitoring	91 days	Fri 8/3/18	Fri 12/7/18		\$0.00																					
1194	2022	Sampling	3 days	Fri 8/3/18	Tue 8/7/18	1188FS+60 days	\$0.00																					
1195	2022	Offsite Analysis of Groundwater Samples	15 days	Wed 8/8/18	Tue 8/28/18	1194	\$0.00																					
1196	2022	Data Validation	15 days	Wed 8/29/18	Tue 9/18/18	1195,1190	\$0.00																					
1197	2022	ERPIMS Submittal	22 days	Thu 11/8/18	Fri 12/7/18	1194FS+66 days	\$0.00																					
1198	2022	Q4 Soil Vapor Monitoring	91 days	Thu 11/8/18	Thu 3/14/19		\$0.00																					
1199	2022	Sampling	3 days	Thu 11/8/18	Mon 11/12/18	1194FS+66 days	\$0.00																					
1200	2022	Offsite Analysis of Groundwater Samples	15 days	Tue 11/13/18	Mon 12/3/18	1199	\$0.00																					
1201	2022	Data Validation	15 days	Tue 12/4/18	Mon 12/24/18	1200,1196	\$0.00																					
1202	2022	ERPIMS Submittal	22 days	Wed 2/13/19	Thu 3/14/19	1199FS+66 days	\$0.00																					
1203		Risk Assessment (RA) Work Plan (in UFP-QAPP format)	129 days	Fri 8/3/18	Wed 1/30/19		\$56,120.00																					
1204	2022	Prepare Working Copy of RA Work Plan	30 days	Fri 8/3/18	Thu 9/13/18	1194SS	\$0.00																					
1205	2022	AF Review of Working Copy of RA Work Plan	22 days	Fri 9/14/18	Mon 10/15/18	1204	\$0.00																					
1206	2022	Resolve AF Comments on Working Copy of RA Work Plan	10 days	Tue 10/16/18	Mon 10/29/18	1205	\$0.00																					
1207	2022	AF Approval of Draft RA Work Plan	0 days	Mon 10/29/18	Mon 10/29/18	1206	\$44,896.00																					
1208	2022	Submit Draft RA Work Plan to Regulators	5 days	Tue 10/30/18	Mon 11/5/18	1207	\$0.00																					
1209	2022	Regulator Review of Draft RA Work Plan	30 days	Tue 11/6/18	Mon 12/17/18	1208	\$0.00																					
1210	2022	RTC Regulator Comments on Draft RA Work Plan	5 days	Tue 12/18/18	Mon 12/24/18	1209	\$0.00																					
1211	2022	Prepare Final RA Work Plan	5 days	Tue 12/25/18	Mon 12/31/18	1210	\$0.00																					
1212	2022	Regulator Approval of Final RA Work Plan	0 days	Wed 1/30/19	Wed 1/30/19	1211FS+22 days	\$11,224.00																					
1213	2022	Complete Soil Sampling and Risk Assessment	254 days	Tue 1/1/19	Fri 12/20/19		\$0.00																					
1214	2022	Mobilization, Dig Permit and Sampling	30 days	Tue 1/1/19	Mon 2/11/19	1211SS+5 days	\$0.00																					
1215	2022	Laboratory Analysis	15 days	Thu 1/31/19	Wed 2/20/19	1214SS+22 days	\$0.00																					
1216	2022	Data Validation	15 days	Thu 2/21/19	Wed 3/13/19	1215	\$0.00																					
1217	2022	ERPIMS Submittal	1 day	Fri 5/24/19	Fri 5/24/19	1215FS+66 days	\$0.00																					
1218	2022	Prepare Risk Assessment	22 days	Thu 3/14/19	Fri 4/12/19	1216	\$0.00																					
1219	2022	Implement Contingent Action	180 days	Mon 4/15/19	Fri 12/20/19	1218	\$0.00																					
1220		Explanation of Significant Difference (ESD)	211 days	Mon 12/23/19	Mon 10/12/20		\$8,861.00																					
1221	2023	Prepare Working Copy of ESD	30 days	Mon 12/23/19	Fri 1/31/20	1219	\$0.00																					
1222	2023	AF Review of Working Copy of ESD	22 days	Mon 2/3/20	Tue 3/3/20	1221	\$0.00																					
1223	2023	Resolve AF Comments on Working Copy of ESD	10 days	Wed 3/4/20	Tue 3/17/20	1222	\$0.00																					
1224	2023	AF Approval of Draft ESD	0 days	Tue 3/17/20	Tue 3/17/20	1223	\$7,089.00																					
1225	2023	Submit Draft Annual Report to ESD	5 days	Wed 3/18/20	Tue 3/24/20	1224	\$0.00																					
1226	2023	Regulator Review of Draft ESD	30 days	Wed 3/25/20	Tue 5/5/20	1225	\$0.00																					
1227	2023	RTC Regulator Comments on Draft ESD	5 days	Wed 5/6/20	Tue 5/12/20	1226	\$0.00																					
1228	2023	Prepare Final ESD	5 days	Wed 5/13/20	Tue 5/19/20	1227	\$0.00																					
1229	2023	Contingency Time	60 days	Wed 5/20/20	Tue 8/11/20	1228	\$0.00																					
1230	2023	Regulator Approval of Final ESD	0 days	Mon 10/12/20	Mon 10/12/20	1229FS+44 days	\$1,772.00																					
1231		Remedial Action Completion Report (RACR)	114 days	Tue 10/13/20	Fri 3/19/21		\$8,861.00																					
1232	2024	Prepare Working Copy of RACR	20 days	Tue 10/13/20	Mon 11/9/20	1226,1230	\$0.00																					
1233	2024	AF Review of Working Copy of RACR	22 days	Tue 11/10/20	Wed 12/9/20	1232	\$0.00																					
1234	2024	Resolve AF Comments on Working Copy of RACR	5 days	Thu 12/10/20	Wed 12/16/20	1233	\$0.00																					
1235	2024	AF Approval of Draft RACR	0 days	Wed 12/16/20	Wed 12/16/20	1234	\$7,089.00																					
1236	2024	Submit Draft RACR to Regulators	5 days	Thu 12/17/20	Wed 12/23/20	1235	\$0.00																					
1237	2024	Regulator Review of Draft RACR	30 days	Thu 12/24/20	Wed 2/3/21	1236	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1289	2007	AF Approval of Final 2018 Annual LTM Report	0 days	Thu 12/6/18	Thu 12/6/18	1284	\$1,918.00																					
1290	2007	Submit Final to Regulators	5 days	Fri 12/7/18	Thu 12/13/18	1289	\$0.00																					
1291	2008	2019 Annual LUC/IC Inspection	3 days	Thu 9/5/19	Mon 9/9/19		\$0.00																					
1292	2008	Regulatory and AF Notice of Inspections	1 day	Thu 9/5/19	Thu 9/5/19	1278FS+260 day	\$0.00																					
1293	2008	Site Inspection and Deed Notice Verification	2 days	Fri 9/6/19	Mon 9/9/19	1292	\$0.00																					
1294	2008	2019 Annual LTM Report	69 days	Tue 9/10/19	Fri 12/13/19		\$9,563.00																					
1295	2008	Prepare Working Copy	22 days	Tue 9/10/19	Wed 10/9/19	1293	\$0.00																					
1296	2008	Air Force Review of Working Copy	22 days	Thu 10/10/19	Fri 11/8/19	1295	\$0.00																					
1297	2008	Resolve AF Comments on Working Copy AF	5 days	Mon 11/11/19	Fri 11/15/19	1296	\$0.00																					
1298	2008	AF Review and Approval of RTCs	15 days	Mon 11/18/19	Fri 12/6/19	1297	\$0.00																					
1299	2008	AF Approval of Final 2019 Annual LTM Report	0 days	Fri 12/6/19	Fri 12/6/19	1298	\$2,201.00																					
1300	2008	AF Approval of Final 2019 Annual LTM Report	0 days	Fri 12/6/19	Fri 12/6/19	1298	\$1,608.00																					
1301	2008	AF Approval of Final 2019 Annual LTM Report	0 days	Fri 12/6/19	Fri 12/6/19	1298	\$1,918.00																					
1302	2008	AF Approval of Final 2019 Annual LTM Report	0 days	Fri 12/6/19	Fri 12/6/19	1298	\$1,918.00																					
1303	2008	AF Approval of Final 2019 Annual LTM Report	0 days	Fri 12/6/19	Fri 12/6/19	1298	\$1,918.00																					
1304	2008	Submit Final to Regulators	5 days	Mon 12/9/19	Fri 12/13/19	1303	\$0.00																					
1305	2009	2020 Annual LUC/IC Inspection	3 days	Fri 8/7/20	Tue 8/11/20		\$0.00																					
1306	2009	Regulatory and AF Notice of Inspections	1 day	Fri 8/7/20	Fri 8/7/20	1292FS+240 day	\$0.00																					
1307	2009	Site Inspection and Deed Notice Verification	2 days	Mon 8/10/20	Tue 8/11/20	1306	\$0.00																					
1308	2009	2020 Annual LTM Report	45 days	Wed 8/12/20	Tue 10/13/20		\$9,563.00																					
1309	2009	Prepare Working Copy	10 days	Wed 8/12/20	Tue 8/25/20	1307	\$0.00																					
1310	2009	Air Force Review of Working Copy	22 days	Wed 8/26/20	Thu 9/24/20	1309	\$0.00																					
1311	2009	Resolve AF Comments on Working Copy AF	5 days	Fri 9/25/20	Thu 10/1/20	1310	\$0.00																					
1312	2009	AF Review and Approval of RTCs	5 days	Fri 10/2/20	Thu 10/8/20	1311	\$0.00																					
1313	2009	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ	0 days	Thu 10/8/20	Thu 10/8/20	1312	\$2,201.00																					
1314	2009	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ	0 days	Thu 10/8/20	Thu 10/8/20	1312	\$1,608.00																					
1315	2009	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ	0 days	Thu 10/8/20	Thu 10/8/20	1312	\$1,918.00																					
1316	2009	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ	0 days	Thu 10/8/20	Thu 10/8/20	1312	\$1,918.00																					
1317	2009	AF Approval of Final 2020 Annual LTM Report; Distribute Report to Regulators-Achieve SQ	0 days	Thu 10/8/20	Thu 10/8/20	1312	\$1,918.00																					
1318	2009	Submit Final to Regulators	3 days	Fri 10/9/20	Tue 10/13/20	1317	\$0.00																					
1319		SC Sites SS017, DP022 and SS025	1058 days	Wed 6/8/16	Fri 6/26/20		\$197,450.00																					
1320		Supplemental Investigation	907 days	Wed 6/8/16	Thu 11/28/19		\$72,416.00																					
1321		Supplemental Investigation (SI) Work Plan (in UFP-QAPP format)	189 days	Wed 6/8/16	Mon 2/27/17		\$48,055.00																					
1322	2020	Prepare Working Copy of SI Work Plan	90 days	Wed 6/8/16	Tue 10/11/16	894	\$0.00																					
1323	2020	AF Review of Working Copy of SI Work Plan	22 days	Wed 10/12/16	Thu 11/10/16	1322	\$0.00																					
1324	2020	RTC AF Comments on Working Copy of SI Work Plan	10 days	Fri 11/11/16	Thu 11/24/16	1323	\$0.00																					
1325	2020	AF Approval of Draft SI Work Plan	0 days	Thu 11/24/16	Thu 11/24/16	1324	\$12,235.00																					
1326	2020	AF Approval of Draft SI Work Plan	0 days	Thu 11/24/16	Thu 11/24/16	1324	\$13,766.00																					
1327	2020	AF Approval of Draft SI Work Plan	0 days	Thu 11/24/16	Thu 11/24/16	1324	\$12,442.00																					
1328	2020	Submit Draft SI Work Plan to Regulators	5 days	Fri 11/25/16	Thu 12/1/16	1327,1325,1326	\$0.00																					
1329	2020	Regulator Review of Draft SI Work Plan	30 days	Fri 12/2/16	Thu 1/12/17	1328	\$0.00																					
1330	2020	RTC Regulator Comments on Draft SI Work Plan	5 days	Fri 1/13/17	Thu 1/19/17	1329	\$0.00																					
1331	2020	Prepare Final SI Work Plan	5 days	Fri 1/20/17	Thu 1/26/17	1330	\$0.00																					
1332	2020	Regulator Approval of Final SI Work Plan	0 days	Mon 2/27/17	Mon 2/27/17	1331FS+22 days	\$3,059.00																					
1333	2020	Regulator Approval of Final SI Work Plan	0 days	Mon 2/27/17	Mon 2/27/17	1332SS	\$3,442.00																					
1334	2020	Regulator Approval of Final SI Work Plan	0 days	Mon 2/27/17	Mon 2/27/17	1333SS	\$3,111.00																					
1335		Complete Soil Sampling and Risk Assessment (if necessary)	494 days	Tue 4/18/17	Fri 3/8/19		\$0.00																					
1336	2020	Mobilization, Dig Permit and Sampling	30 days	Tue 4/18/17	Mon 5/29/17	1334FS+35 days	\$0.00																					
1337	2020	Laboratory Analysis	22 days	Thu 5/18/17	Fri 6/16/17	1336SS+22 days	\$0.00																					
1338	2020	Data Validation	15 days	Mon 6/19/17	Fri 7/7/17	1337	\$0.00																					
1339		ERPIMS Submittal	1 day	Tue 9/19/17	Tue 9/19/17	1337FS+66 days	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1340		Prepare Risk Assessment (if necessary)	35 days	Mon 7/10/17	Fri 8/25/17	1338	\$0.00																					
1341		Implement Contingent Action of Excavation	400 days	Mon 8/28/17	Fri 3/8/19	1340	\$0.00																					
1342		SI Report	189 days	Mon 3/11/19	Fri 11/28/19		\$24,361.00																					
1343	2023	Prepare Working Copy of SI Report	90 days	Mon 3/11/19	Fri 7/12/19	1341	\$0.00																					
1344	2023	AF Review of Working Copy of SI Report	22 days	Mon 7/15/19	Tue 8/13/19	1343	\$0.00																					
1345	2023	RTC AF Comments on Working Copy of SI Report	10 days	Wed 8/14/19	Tue 8/27/19	1344	\$0.00																					
1346	2023	AF Approval of Draft SI Report	0 days	Tue 8/27/19	Tue 8/27/19	1345	\$5,987.00																					
1347	2023	AF Approval of Draft SI Report	0 days	Tue 8/27/19	Tue 8/27/19	1345	\$7,413.00																					
1348	2023	AF Approval of Draft SI Report	0 days	Tue 8/27/19	Tue 8/27/19	1345	\$6,089.00																					
1349	2023	Submit Draft SI Report to Regulators	5 days	Wed 8/28/19	Tue 9/3/19	1346,1347,1348	\$0.00																					
1350	2023	Regulator Review of Draft SI Report	30 days	Wed 9/4/19	Tue 10/15/19	1349	\$0.00																					
1351	2023	RTC Regulator Comments on Draft SI Report	5 days	Wed 10/16/19	Tue 10/22/19	1350	\$0.00																					
1352	2023	Prepare Final SI Report	5 days	Wed 10/23/19	Tue 10/29/19	1351	\$0.00																					
1353	2023	Regulator Approval of Final SI Report	0 days	Thu 11/28/19	Thu 11/28/19	1352FS+22 days	\$1,497.00																					
1354	2023	Regulator Approval of Final SI Report	0 days	Thu 11/28/19	Thu 11/28/19	1353SS	\$1,853.00																					
1355	2023	Regulator Approval of Final SI Report	0 days	Thu 11/28/19	Thu 11/28/19	1354SS	\$1,522.00																					
1356		LTM	582 days	Tue 9/27/16	Wed 12/19/18		\$85,544.00																					
1357		LUC Inspections	525 days	Tue 9/27/16	Mon 10/1/18		\$0.00																					
1358		LUC Inspections-Annual	5 days	Tue 9/27/16	Mon 10/3/16	1334SS-110 day	\$0.00																					
1359		LUC Inspection-Annual (Contingency)	5 days	Tue 9/19/17	Mon 9/25/17	1358FS+250 day	\$0.00																					
1360		LUC Inspections - Annual (Contingency)	5 days	Tue 9/25/18	Mon 10/1/18	1359FS+260 day	\$0.00																					
1361		LTM Reporting	343 days	Mon 8/28/17	Wed 12/19/18		\$85,544.00																					
1362		Annual Report - Year 2016	57 days	Mon 8/28/17	Tue 11/14/17		\$29,618.00																					
1363	2021	Prepare Working Copy of Annual Report	20 days	Mon 8/28/17	Fri 9/22/17	1358,1340	\$0.00																					
1364	2021	AF Review of Working Copy of Annual Report	22 days	Mon 9/25/17	Tue 10/24/17	1363	\$0.00																					
1365	2021	RTC AF Comments on Working Copy of Annual Report	10 days	Wed 10/25/17	Tue 11/7/17	1364	\$0.00																					
1366	2021	AF Approval of Final Annual LUC Report-2016	0 days	Tue 11/7/17	Tue 11/7/17	1365	\$9,762.00																					
1367	2021	AF Approval of Final Annual LUC Report-2016	0 days	Tue 11/7/17	Tue 11/7/17	1365	\$9,928.00																					
1368	2021	AF Approval of Final Annual LUC Report-2016	0 days	Tue 11/7/17	Tue 11/7/17	1365	\$9,928.00																					
1369	2021	Submit Final Annual LUC Report to Regulators	5 days	Wed 11/8/17	Tue 11/14/17	1368,1366,1367	\$0.00																					
1370	2021	Annual Report - Year 2017	57 days	Tue 9/26/17	Wed 12/13/17		\$29,618.00																					
1371	2021	Prepare Working Copy of Annual Report	20 days	Tue 9/26/17	Mon 10/23/17	1359	\$0.00																					
1372	2021	AF Review of Working Copy of Annual Report	22 days	Tue 10/24/17	Wed 11/22/17	1371	\$0.00																					
1373	2021	RTC AF Comments on Working Copy of Annual Report	10 days	Thu 11/23/17	Wed 12/6/17	1372	\$0.00																					
1374	2021	AF Approval of Final Annual LUC Report-2017	0 days	Wed 12/6/17	Wed 12/6/17	1373	\$9,762.00																					
1375	2021	AF Approval of Final Annual LUC Report-2017	0 days	Wed 12/6/17	Wed 12/6/17	1373	\$9,928.00																					
1376	2021	AF Approval of Final Annual LUC Report-2017	0 days	Wed 12/6/17	Wed 12/6/17	1373	\$9,928.00																					
1377	2021	Submit Final Annual LUC Report to Regulators	5 days	Thu 12/7/17	Wed 12/13/17	1376	\$0.00																					
1378		Annual Report - Year 2018	57 days	Tue 10/2/18	Wed 12/19/18		\$26,308.00																					
1379	2022	Prepare Working Copy of Annual Report	20 days	Tue 10/2/18	Mon 10/29/18	1360	\$0.00																					
1380	2022	AF Review of Working Copy of Annual Report	22 days	Tue 10/30/18	Wed 11/28/18	1379	\$0.00																					
1381	2022	RTC AF Comments on Working Copy of Annual Report	10 days	Thu 11/29/18	Wed 12/12/18	1380	\$0.00																					
1382	2022	AF Approval of Final Annual LUC Report-2018	0 days	Wed 12/12/18	Wed 12/12/18	1381	\$9,762.00																					
1383	2022	AF Approval of Final Annual LUC Report-2018	0 days	Wed 12/12/18	Wed 12/12/18	1381	\$6,618.00																					
1384	2022	AF Approval of Final Annual LUC Report-2018	0 days	Wed 12/12/18	Wed 12/12/18	1381	\$9,928.00																					
1385	2022	Submit Final Annual LUC Report to Regulators	5 days	Thu 12/13/18	Wed 12/19/18	1384	\$0.00																					
1386		Decision Document	151 days	Fri 11/29/19	Fri 6/26/20		\$39,490.00																					
1387		Explanation of Significant Difference (ESD)	151 days	Fri 11/29/19	Fri 6/26/20		\$39,490.00																					
1388	2023	Prepare Working Copy of ESD	30 days	Fri 11/29/19	Thu 1/9/20	1355	\$0.00																					
1389	2023	AF Review of Working Copy of ESD	22 days	Fri 1/10/20	Mon 2/10/20	1388	\$0.00																					
1390	2023	RTC AF Comments on Working Copy of ESD	10 days	Tue 2/11/20	Mon 2/24/20	1389	\$0.00																					
1391	2023	AF Approval of Draft ESD	0 days	Mon 2/24/20	Mon 2/24/20	1390	\$0.00																					
1392	2023	AF Approval of Draft ESD	0 days	Mon 2/24/20	Mon 2/24/20	1390	\$0.00																					
1393	2023	AF Approval of Draft ESD	0 days	Mon 2/24/20	Mon 2/24/20	1390	\$0.00																					
1394	2023	Submit Draft Annual Report to ESD	5 days	Tue 2/25/20	Mon 3/2/20	1393	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021			
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1444	2010	LUC Inspections	1055 days	Tue 10/4/16	Mon 10/19/20		\$0.00																								
1445	2010	Annual LUC Inspection-2016	5 days	Tue 10/4/16	Mon 10/10/16	1443SS-45 days	\$0.00																								
1446	2011	Annual LUC Inspection-2017	5 days	Tue 9/26/17	Mon 10/2/17	1445FS+250 day	\$0.00																								
1447	2012	Annual LUC Inspection-2018	5 days	Tue 10/2/18	Mon 10/8/18	1446FS+260 day	\$0.00																								
1448	2013	Annual LUC Inspection-2019	5 days	Tue 10/8/19	Mon 10/14/19	1447FS+260 day	\$0.00																								
1449	2014	Annual LUC Inspection-2020	5 days	Tue 10/13/20	Mon 10/19/20	1448FS+260 day	\$0.00																								
1450	2010	Annual Groundwater Sampling and Well Inspections Year 2016	57 days	Tue 12/13/16	Wed 3/1/17		\$0.00																								
1451	2010	Groundwater gaging and Well inspection	2 days	Tue 12/13/16	Ved 12/14/16	1443FS+5 days	\$0.00																								
1452	2010	Sampling	3 days	Thu 12/15/16	Mon 12/19/16	1451	\$0.00																								
1453	2010	Offsite Analysis of Groundwater Samples	15 days	Tue 12/20/16	Mon 1/9/17	1452	\$0.00																								
1454	2010	Data Validation	15 days	Tue 1/10/17	Mon 1/30/17	1453	\$0.00																								
1455	2010	ERPIMS Submittal	22 days	Tue 1/31/17	Wed 3/1/17	1454	\$0.00																								
1456	2011	Annual Groundwater Sampling and Well Inspections Year 2017	93 days	Fri 12/1/17	Tue 4/10/18		\$0.00																								
1457	2011	Groundwater gaging and Well inspection	2 days	Fri 12/1/17	Mon 12/4/17	1458SS-2 days	\$0.00																								
1458	2011	Sampling	3 days	Tue 12/5/17	Thu 12/7/17	1452FS+250 day	\$0.00																								
1459	2011	Offsite Analysis of Groundwater Samples	15 days	Fri 12/8/17	Thu 12/28/17	1458	\$0.00																								
1460	2011	Data Validation	15 days	Fri 12/29/17	Thu 1/18/18	1459	\$0.00																								
1461	2011	ERPIMS Submittal	22 days	Mon 3/12/18	Tue 4/10/18	1458FS+66 days	\$0.00																								
1462	2012	Annual Groundwater Sampling and Well Inspections Year 2018	93 days	Wed 11/21/18	Fri 3/29/19		\$0.00																								
1463	2012	Groundwater gaging and Well inspection	2 days	Ved 11/21/18	Thu 11/22/18	1464SS-2 days	\$0.00																								
1464	2012	Sampling	3 days	Fri 11/23/18	Tue 11/27/18	1458FS+250 day	\$0.00																								
1465	2012	Offsite Analysis of Groundwater Samples	15 days	Ved 11/28/18	Tue 12/18/18	1464	\$0.00																								
1466	2012	Data Validation	15 days	Ved 12/19/18	Tue 1/8/19	1465	\$0.00																								
1467	2012	ERPIMS Submittal	22 days	Thu 2/28/19	Fri 3/29/19	1464FS+66 days	\$0.00																								
1468	2013	Annual Groundwater Sampling and Well Inspections Year 2019	93 days	Mon 11/11/19	Wed 3/18/20		\$0.00																								
1469	2013	Groundwater gaging and Well inspection	2 days	Mon 11/11/19	Tue 11/12/19	1470SS-2 days	\$0.00																								
1470	2013	Sampling	3 days	Ved 11/13/19	Fri 11/15/19	1464FS+250 day	\$0.00																								
1471	2013	Offsite Analysis of Groundwater Samples	15 days	Mon 11/18/19	Fri 12/6/19	1470	\$0.00																								
1472	2013	Data Validation	15 days	Mon 12/9/19	Fri 12/27/19	1471	\$0.00																								
1473	2013	ERPIMS Submittal	22 days	Tue 2/18/20	Wed 3/18/20	1470FS+66 days	\$0.00																								
1474	2014	Annual Groundwater Sampling and Well Inspections Year 2020	93 days	Thu 10/29/20	Mon 3/8/21		\$0.00																								
1475	2014	Groundwater gaging and Well inspection	2 days	Thu 10/29/20	Fri 10/30/20	1476SS-2 days	\$0.00																								
1476	2014	Sampling	3 days	Mon 11/2/20	Wed 11/4/20	1470FS+250 day	\$0.00																								
1477	2014	Offsite Analysis of Groundwater Samples	15 days	Thu 11/5/20	Ved 11/25/20	1476	\$0.00																								
1478	2014	Data Validation	15 days	Thu 11/26/20	Ved 12/16/20	1477	\$0.00																								
1479	2014	ERPIMS Submittal	22 days	Fri 2/5/21	Mon 3/8/21	1476FS+66 days	\$0.00																								
1480		LTM Reporting	1069 days	Tue 1/31/17	Fri 3/5/21		\$71,549.00																								
1481	2010	Annual Report - Year 2016	57 days	Tue 1/31/17	Wed 4/19/17		\$14,086.00																								
1482	2010	Prepare Working Copy of Annual Report	20 days	Tue 1/31/17	Mon 2/27/17	1454	\$0.00																								
1483	2010	AF Review of Working Copy of Annual Report	22 days	Tue 2/28/17	Wed 3/29/17	1482	\$0.00																								
1484	2010	Resolve AF Comments on Working Copy of Annual Report	10 days	Thu 3/30/17	Wed 4/12/17	1483	\$0.00																								
1485	2010	AF Approval of Final Annual LTM Report-2016	0 days	Wed 4/12/17	Wed 4/12/17	1484	\$14,086.00																								
1486	2010	Submit Final Annual Report to Regulators; AF Approval of ERPIMS Upload	5 days	Thu 4/13/17	Wed 4/19/17	1485	\$0.00																								
1487	2011	Annual Report - Year 2017	57 days	Fri 1/19/18	Mon 4/9/18		\$39,575.00																								
1488	2011	Prepare Working Copy of Annual Report	20 days	Fri 1/19/18	Thu 2/15/18	1460	\$0.00																								
1489	2011	AF Review of Working Copy of Annual Report	22 days	Fri 2/16/18	Mon 3/19/18	1488	\$0.00																								
1490	2011	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 3/20/18	Mon 4/2/18	1489	\$0.00																								
1491	2011	AF Approval of Final Annual LTM Report-2017	0 days	Mon 4/2/18	Mon 4/2/18	1490	\$39,575.00																								
1492	2011	Submit Final Annual Report to Regulators; AF Approval of ERPIMS Upload	5 days	Tue 4/3/18	Mon 4/9/18	1491	\$0.00																								
1493	2012	Annual Report - Year 2018	57 days	Wed 1/9/19	Thu 3/28/19		\$8,944.00																								

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1644	2015	Resolve AF Comments on Working Copy of Annual Report	10 days	Thu 3/30/17	Wed 4/12/17	1643	\$0.00																					
1645	2015	AF Approval of Final Annual LTM Report-2016	0 days	Wed 4/12/17	Wed 4/12/17	1644	\$11,222.00																					
1646	2015	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Thu 4/13/17	Wed 4/19/17	1645	\$0.00																					
1647		Annual Report - Year 2017	57 days	Fri 1/19/18	Mon 4/9/18		\$4,489.00																					
1648	2016	Prepare Working Copy of Annual Report	20 days	Fri 1/19/18	Thu 2/15/18	1619	\$0.00																					
1649	2016	AF Review of Working Copy of Annual Report	22 days	Fri 2/16/18	Mon 3/19/18	1648	\$0.00																					
1650	2016	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 3/20/18	Mon 4/2/18	1649	\$0.00																					
1651	2016	AF Approval of Draft Final LTM Report-2017	0 days	Mon 4/2/18	Mon 4/2/18	1650	\$4,489.00																					
1652	2016	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Tue 4/3/18	Mon 4/9/18	1651	\$0.00																					
1653		Annual Report - Year 2018	57 days	Wed 12/19/18	Thu 3/7/19		\$11,222.00																					
1654	2017	Prepare Working Copy of Annual Report	20 days	Wed 12/19/18	Tue 1/15/19	1624	\$0.00																					
1655	2017	AF Review of Working Copy of Annual Report	22 days	Wed 1/16/19	Thu 2/14/19	1654	\$0.00																					
1656	2017	Resolve AF Comments on Working Copy of Annual Report	10 days	Fri 2/15/19	Thu 2/28/19	1655	\$0.00																					
1657	2017	AF Approval of Final Annual LTM Report-2018	0 days	Thu 2/28/19	Thu 2/28/19	1656	\$11,222.00																					
1658	2017	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Fri 3/1/19	Thu 3/7/19	1657	\$0.00																					
1659		Annual Report - Year 2019	57 days	Mon 12/30/19	Tue 3/17/20		\$11,222.00																					
1660	2018	Prepare Working Copy of Annual Report	20 days	Mon 12/30/19	Fri 1/24/20	1631,1639	\$0.00																					
1661	2018	AF Review of Working Copy of Annual Report	22 days	Mon 1/27/20	Tue 2/25/20	1660	\$0.00																					
1662	2018	Resolve AF Comments on Working Copy of Annual Report	10 days	Wed 2/26/20	Tue 3/10/20	1661	\$0.00																					
1663	2018	AF Approval of Final Annual LTM Report-2019	0 days	Tue 3/10/20	Tue 3/10/20	1662	\$11,222.00																					
1664	2018	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Wed 3/11/20	Tue 3/17/20	1663	\$0.00																					
1665		Annual Report - Year 2020	50 days	Thu 12/17/20	Wed 2/24/21		\$44,888.00																					
1666	2019	Prepare Working Copy of Annual Report	20 days	Thu 12/17/20	Wed 1/13/21	1637	\$0.00																					
1667	2019	AF Review of Working Copy of Annual Report	22 days	Thu 1/14/21	Fri 2/12/21	1666	\$0.00																					
1668	2019	Resolve AF Comments on Working Copy of Annual Report	5 days	Mon 2/15/21	Fri 2/19/21	1667	\$0.00																					
1669	2019	AF Approval of Final Annual LTM Report-Achieve RC	0 days	Fri 2/19/21	Fri 2/19/21	1668	\$44,888.00																					
1670	2019	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	3 days	Mon 2/22/21	Wed 2/24/21	1669	\$0.00																					
1671		OES Site SD052-04: Landfill 6 Chlorinated Plume	1217 days	Fri 7/8/16	Mon 3/8/21		\$222,578.00																					
1672		Optimization	101 days	Wed 8/31/16	Wed 1/18/17		\$35,612.00																					
1673	2010	Remedial Optimization Work Plan	101 days	Wed 8/31/16	Wed 1/18/17		\$35,612.00																					
1674	2010	Prepare Working Copy of Remedial Optimization Work Plan	22 days	Wed 8/31/16	Thu 9/29/16	894FS+60 days	\$0.00																					
1675	2010	AF Review of Working Copy of Remedial Optimization Work Plan	22 days	Fri 9/30/16	Mon 10/31/16	1674	\$0.00																					
1676	2010	Resolve AF Comments on Working Copy of Remedial Optimization Work Plan	10 days	Tue 11/1/16	Mon 11/14/16	1675	\$0.00																					
1677	2010	AF Approval of Draft Remedial Optimization Work Plan	0 days	Mon 11/14/16	Mon 11/14/16	1676	\$28,490.00																					
1678	2010	Submit Draft Remedial Optimization Work Plan to Regulators	5 days	Tue 11/15/16	Mon 11/21/16	1677	\$0.00																					
1679	2010	Regulator Review of Remedial Optimization Work Plan	32 days	Tue 11/22/16	Wed 1/4/17	1678	\$0.00																					
1680	2010	RTC Regulator Comments on Draft Remedial Optimization Work Plan	5 days	Thu 1/5/17	Wed 1/11/17	1679	\$0.00																					
1681	2010	Prepare Final Remedial Optimization Work Plan	5 days	Thu 1/12/17	Wed 1/18/17	1680	\$0.00																					
1682	2010	Regulator Approval of Final Remedial Optimization Work Plan	0 days	Wed 1/18/17	Wed 1/18/17	1681	\$7,122.00																					
1683	2010	Remedial Optimization Field Implementation	1078 days	Thu 1/19/17	Mon 3/8/21		\$44,516.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1684	2010	Mobilize and Obtain UIC and Dig Permits	22 days	Thu 1/19/17	Fri 2/17/17	1682	\$0.00																					
1685	2010	Perform ISEB Injections	10 days	Thu 1/26/17	Wed 2/8/17	1681SS+10 days	\$0.00																					
1686	2014	OES Report	74 days	Ved 11/25/20	Mon 3/8/21		\$44,516.00																					
1687	2014	Prepare Working Copy of OES Report	22 days	Ved 11/25/20	Thu 12/24/20	1737FS+22 days	\$0.00																					
1688	2014	Air Force Review of Working Copy	22 days	Fri 12/25/20	Mon 1/25/21	1687	\$0.00																					
1689	2014	Resolve AF Comments on Working Copy AF	15 days	Tue 1/26/21	Mon 2/15/21	1688	\$0.00																					
1690	2014	AF Review and Approval of RTCs	15 days	Tue 2/16/21	Mon 3/8/21	1689	\$0.00																					
1691	2014	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES	0 days	Mon 3/8/21	Mon 3/8/21	1690	\$44,516.00																					
1692		RA-O	1179 days	Fri 7/8/16	Wed 1/13/21		\$142,450.00																					
1693	2010	LTM Work Plan	109 days	Fri 7/8/16	Wed 12/7/16		\$35,612.00																					
1694	2010	Prepare Working Copy of LTM Work Plan	30 days	Fri 7/8/16	Thu 8/18/16	894FS+22 days	\$0.00																					
1695	2010	AF Review of Working Copy of LTM Work Plan	22 days	Fri 8/19/16	Mon 9/19/16	1694	\$0.00																					
1696	2010	Resolve AF Comments on Working Copy of LTM Work Plan	10 days	Tue 9/20/16	Mon 10/3/16	1695	\$0.00																					
1697	2010	AF Approval of Draft LTM Work Plan	0 days	Mon 10/3/16	Mon 10/3/16	1696	\$28,490.00																					
1698	2010	Submit Draft LTM Work Plan to Regulators	5 days	Tue 10/4/16	Mon 10/10/16	1697	\$0.00																					
1699	2010	Regulator Review of Draft LTM Work Plan	32 days	Tue 10/11/16	Ved 11/23/16	1698	\$0.00																					
1700	2010	RTC Regulator Comments on Draft LTM Work Plan	5 days	Thu 11/24/16	Ved 11/30/16	1699	\$0.00																					
1701	2010	Prepare Final LTM Work Plan	5 days	Thu 12/1/16	Wed 12/7/16	1700	\$0.00																					
1702	2010	Regulator Approval of Final LTM Work Plan	0 days	Wed 12/7/16	Wed 12/7/16	1701	\$7,122.00																					
1703		LUC Inspections	1055 days	Thu 12/8/16	Ved 12/23/20		\$0.00																					
1704	2010	Annual LUC Inspection-2016	5 days	Thu 12/8/16	Ved 12/14/16	1702	\$0.00																					
1705	2011	Annual LUC Inspection-2017	5 days	Thu 11/30/17	Wed 12/6/17	1704FS+250 day	\$0.00																					
1706	2012	Annual LUC Inspection-2018	5 days	Thu 12/6/18	Ved 12/12/18	1705FS+260 day	\$0.00																					
1707	2013	Annual LUC Inspection-2019	5 days	Thu 12/12/19	Ved 12/18/19	1706FS+260 day	\$0.00																					
1708	2014	Annual LUC Inspection-2020	5 days	Thu 12/17/20	Ved 12/23/20	1707FS+260 day	\$0.00																					
1709		Annual Groundwater Sampling and Well Inspections Year 1	57 days	Thu 12/15/16	Fri 3/3/17		\$0.00																					
1710	2010	Groundwater gaging and Well inspection	2 days	Thu 12/15/16	Fri 12/16/16	1702FS+5 days	\$0.00																					
1711	2010	Sampling	3 days	Mon 12/19/16	Ved 12/21/16	1710	\$0.00																					
1712	2010	Offsite Analysis of Groundwater Samples	15 days	Thu 12/22/16	Wed 1/11/17	1711	\$0.00																					
1713	2010	Data Validation	15 days	Thu 1/12/17	Wed 2/1/17	1712	\$0.00																					
1714	2010	ERPIMS Submittal	22 days	Thu 2/2/17	Fri 3/3/17	1713	\$0.00																					
1715		Annual Groundwater Sampling and Well Inspections Year 2	93 days	Tue 12/5/17	Thu 4/12/18		\$0.00																					
1716	2011	Groundwater gaging and Well inspection	2 days	Tue 12/5/17	Wed 12/6/17	1717SS-2 days	\$0.00																					
1717	2011	Sampling	3 days	Thu 12/7/17	Mon 12/11/17	1685FS+22 days	\$0.00																					
1718	2011	Offsite Analysis of Groundwater Samples	15 days	Tue 12/12/17	Mon 1/1/18	1717	\$0.00																					
1719	2011	Data Validation	15 days	Tue 1/2/18	Mon 1/22/18	1718	\$0.00																					
1720	2011	ERPIMS Submittal	22 days	Wed 3/14/18	Thu 4/12/18	1717FS+66 days	\$0.00																					
1721		Annual Groundwater Sampling and Well Inspections Year 3	93 days	Fri 11/23/18	Tue 4/2/19		\$0.00																					
1722	2012	Groundwater gaging and Well inspection	2 days	Fri 11/23/18	Mon 11/26/18	1723SS-2 days	\$0.00																					
1723	2012	Sampling	3 days	Tue 11/27/18	Thu 11/29/18	1717FS+250 day	\$0.00																					
1724	2012	Offsite Analysis of Groundwater Samples	15 days	Fri 11/30/18	Thu 12/20/18	1723	\$0.00																					
1725	2012	Data Validation	15 days	Fri 12/21/18	Thu 1/10/19	1724	\$0.00																					
1726	2012	ERPIMS Submittal	22 days	Mon 3/4/19	Tue 4/2/19	1723FS+66 days	\$0.00																					
1727		Annual Groundwater Sampling and Well Inspections Year 4	93 days	Wed 11/13/19	Fri 3/20/20		\$0.00																					
1728	2013	Groundwater gaging and Well inspection	2 days	Ved 11/13/19	Thu 11/14/19	1729SS-2 days	\$0.00																					
1729	2013	Sampling	3 days	Fri 11/15/19	Tue 11/19/19	1723FS+250 day	\$0.00																					
1730	2013	Offsite Analysis of Groundwater Samples	15 days	Ved 11/20/19	Tue 12/10/19	1729	\$0.00																					
1731	2013	Data Validation	15 days	Ved 12/11/19	Tue 12/31/19	1730	\$0.00																					
1732	2013	ERPIMS Submittal	22 days	Thu 2/20/20	Fri 3/20/20	1729FS+66 days	\$0.00																					
1733		Annual Groundwater Sampling and Well Inspections Year 5	93 days	Mon 9/7/20	Wed 1/13/21		\$0.00																					
1734	2014	Groundwater gaging and Well inspection	2 days	Mon 9/7/20	Tue 9/8/20	1735SS-2 days	\$0.00																					
1735	2014	Sampling	3 days	Wed 9/9/20	Fri 9/11/20	1729FS+210 day	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1736	2014	Offsite Analysis of Groundwater Samples	15 days	Mon 9/14/20	Fri 10/2/20	1735	\$0.00																					
1737	2014	Data Validation	15 days	Mon 10/5/20	Fri 10/23/20	1736	\$0.00																					
1738	2014	ERPIMS Submittal	22 days	Tue 12/15/20	Wed 1/13/21	1735FS+66 days	\$0.00																					
1739		Implement Contingent Action	150 days	Fri 1/11/19	Thu 8/8/19	1725	\$0.00																					
1740		Annual Report - Year 2016	57 days	Thu 2/2/17	Fri 4/21/17		\$17,806.00																					
1741	2010	Prepare Working Copy of Annual Report	20 days	Thu 2/2/17	Wed 3/1/17	1713	\$0.00																					
1742	2010	AF Review of Working Copy of Annual Report	22 days	Thu 3/2/17	Fri 3/31/17	1741	\$0.00																					
1743	2010	Resolve AF Comments on Working Copy of Annual Report	10 days	Mon 4/3/17	Fri 4/14/17	1742	\$0.00																					
1744	2010	AF Approval of Final Annual LTM Report-2016	0 days	Fri 4/14/17	Fri 4/14/17	1743	\$17,806.00																					
1745	2010	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Mon 4/17/17	Fri 4/21/17	1744	\$0.00																					
1746		Annual Report - Year 2017	57 days	Tue 1/23/18	Wed 4/11/18		\$33,387.00																					
1747	2011	Prepare Working Copy of Annual Report	20 days	Tue 1/23/18	Mon 2/19/18	1719	\$0.00																					
1748	2011	AF Review of Working Copy of Annual Report	22 days	Tue 2/20/18	Wed 3/21/18	1747	\$0.00																					
1749	2011	Resolve AF Comments on Working Copy of Annual Report	10 days	Thu 3/22/18	Wed 4/4/18	1748	\$0.00																					
1750	2011	AF Approval of Final Annual LTM Report-2017	0 days	Wed 4/4/18	Wed 4/4/18	1749	\$33,387.00																					
1751	2011	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Thu 4/5/18	Wed 4/11/18	1750	\$0.00																					
1752		Annual Report - Year 2018	57 days	Fri 1/11/19	Mon 4/1/19		\$33,387.00																					
1753	2012	Prepare Working Copy of Annual Report	20 days	Fri 1/11/19	Thu 2/7/19	1725	\$0.00																					
1754	2012	AF Review of Working Copy of Annual Report	22 days	Fri 2/8/19	Mon 3/11/19	1753	\$0.00																					
1755	2012	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 3/12/19	Mon 3/25/19	1754	\$0.00																					
1756	2012	AF Approval of Final Annual LTM Report-2018	0 days	Mon 3/25/19	Mon 3/25/19	1755	\$33,387.00																					
1757	2012	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Tue 3/26/19	Mon 4/1/19	1756	\$0.00																					
1758		Annual Report - Year 2019	57 days	Wed 1/1/20	Thu 3/19/20		\$17,806.00																					
1759	2013	Prepare Working Copy of Annual Report	20 days	Wed 1/1/20	Tue 1/28/20	1731,1739	\$0.00																					
1760	2013	AF Review of Working Copy of Annual Report	22 days	Wed 1/29/20	Thu 2/27/20	1759	\$0.00																					
1761	2013	Resolve AF Comments on Working Copy of Annual Report	10 days	Fri 2/28/20	Thu 3/12/20	1760	\$0.00																					
1762	2013	AF Approval of Final Annual LTM Report-2019	0 days	Thu 3/12/20	Thu 3/12/20	1761	\$17,806.00																					
1763	2013	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Fri 3/13/20	Thu 3/19/20	1762	\$0.00																					
1764		Annual Report - Year 2020	57 days	Mon 10/26/20	Tue 1/12/21		\$4,452.00																					
1765	2014	Prepare Working Copy of Annual Report	20 days	Mon 10/26/20	Fri 11/20/20	1737	\$0.00																					
1766	2014	AF Review of Working Copy of Annual Report	22 days	Mon 11/23/20	Tue 12/22/20	1765	\$0.00																					
1767	2014	Resolve AF Comments on Working Copy of Annual Report	10 days	Wed 12/23/20	Tue 1/5/21	1766	\$0.00																					
1768	2014	AF Approval of Final Annual Report-2020	0 days	Tue 1/5/21	Tue 1/5/21	1767	\$4,452.00																					
1769	2014	Submit Final Annual LTM Report to Regulators; AF Approval of ERPIMS Upload	5 days	Wed 1/6/21	Tue 1/12/21	1768	\$0.00																					
1770		OES Site SD052-05: Bldg. 817 Chlorinated Plume	1195 days	Fri 7/8/16	Thu 2/4/21		\$228,611.00																					
1771		Optimization	1157 days	Wed 8/31/16	Thu 2/4/21		\$91,444.00																					
1772	2010	Remedial Optimization Work Plan	101 days	Wed 8/31/16	Wed 1/18/17		\$45,722.00																					
1773	2010	Prepare Working Copy of Remedial Optimization Work Plan	22 days	Wed 8/31/16	Thu 9/29/16	894FS+60 days	\$0.00																					
1774	2010	AF Review of Working Copy of Remedial Optimization Work Plan	22 days	Fri 9/30/16	Mon 10/31/16	1773	\$0.00																					
1775	2010	Resolve AF Comments on Working Copy of Remedial Optimization Work Plan	10 days	Tue 11/1/16	Mon 11/14/16	1774	\$0.00																					
1776	2010	AF Approval of Draft Remedial Optimization Work Plan	0 days	Mon 11/14/16	Mon 11/14/16	1775	\$36,578.00																					
1777	2010	Submit Draft Remedial Optimization Work Plan to Regulators	5 days	Tue 11/15/16	Mon 11/21/16	1776	\$0.00																					
1778	2010	Regulator Review of Remedial Optimization Work Plan	32 days	Tue 11/22/16	Wed 1/4/17	1777	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1878	2010	AF Approval of Draft Optimization Plan	0 days	Fri 12/16/16	Fri 12/16/16	1877	\$31,148.00																					
1879	2010	Submit Draft Optimization Plan to Regulators	5 days	Mon 12/19/16	Fri 12/23/16	1878	\$0.00																					
1880	2010	Regulator Review of Draft Optimization Plan	32 days	Mon 12/26/16	Tue 2/7/17	1879	\$0.00																					
1881	2010	Resolve Regulator Comments on Draft Optimization Plan	5 days	Wed 2/8/17	Tue 2/14/17	1880	\$0.00																					
1882	2010	Prepare Final Optimization Plan	5 days	Mon 12/19/16	Fri 12/23/16	1877	\$0.00																					
1883	2010	AF Approval of Final Optimization Plan	0 days	Fri 12/23/16	Fri 12/23/16	1882	\$7,787.00																					
1884		Remedial Optimization Field Implementation	42 days	Mon 12/26/16	Tue 2/21/17		\$0.00																					
1885	2010	Mobilize and Obtain Dig Permits	22 days	Mon 12/26/16	Tue 1/24/17	1883	\$0.00																					
1886	2010	Install Passive Air Inlet Wells	20 days	Wed 1/25/17	Tue 2/21/17	1885	\$0.00																					
1887		OES Report	74 days	Fri 1/19/18	Wed 5/2/18		\$55,621.00																					
1888	2012	Prepare Working Copy of OES Report	22 days	Fri 1/19/18	Mon 2/19/18	1903FS+180 day	\$0.00																					
1889	2012	Air Force Review of Working Copy	22 days	Tue 2/20/18	Wed 3/21/18	1888	\$0.00																					
1890	2012	Resolve AF Comments on Working Copy AF	15 days	Thu 3/22/18	Wed 4/11/18	1889	\$0.00																					
1891	2012	AF Review and Approval of RTCs	15 days	Thu 4/12/18	Wed 5/2/18	1890	\$0.00																					
1892	2012	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES	0 days	Wed 5/2/18	Wed 5/2/18	1891	\$55,621.00																					
1893		Remedial Action -Construction (RA-C)	77 days	Wed 1/25/17	Thu 5/11/17		\$44,497.00																					
1894		Construction Completion Report (CCR)	77 days	Wed 1/25/17	Thu 5/11/17		\$44,497.00																					
1895	2010	Prepare Working Copy of Construction Completion Report	10 days	Wed 1/25/17	Tue 2/7/17	1885	\$0.00																					
1896	2010	AF Review of Working Copy of Construction Completion Report	22 days	Wed 2/8/17	Thu 3/9/17	1895	\$0.00																					
1897	2010	Resolve AF Comments on Working Copy of Construction Completion Report	5 days	Fri 3/10/17	Thu 3/16/17	1896	\$0.00																					
1898	2010	AF Approval of Draft Construction Completion Report	0 days	Thu 3/16/17	Thu 3/16/17	1897	\$35,598.00																					
1899	2010	Submit Draft Construction Completion Report to Regulators	2 days	Fri 3/17/17	Mon 3/20/17	1898	\$0.00																					
1900	2010	Regulator Review of Draft Construction Completion Report	32 days	Tue 3/21/17	Wed 5/3/17	1899	\$0.00																					
1901	2010	RTC Regulator Comments on Construction Completion Report	3 days	Thu 5/4/17	Mon 5/8/17	1900	\$0.00																					
1902	2010	Prepare Final Construction Completion Report	3 days	Tue 5/9/17	Thu 5/11/17	1901	\$0.00																					
1903	2010	Regulator Approval of Final Construction Completion Report	0 days	Thu 5/11/17	Thu 5/11/17	1902	\$8,899.00																					
1904		LTM	1164 days	Wed 6/15/16	Mon 11/30/20		\$55,621.00																					
1905		LTM Work Plan	109 days	Wed 6/15/16	Mon 11/14/16		\$55,621.00																					
1906	2010	Prepare Working Copy of LTM Work Plan	30 days	Wed 6/15/16	Tue 7/26/16	1894FS+5 days	\$0.00																					
1907	2010	AF Review of Working Copy of LTM Work Plan	22 days	Wed 7/27/16	Thu 8/25/16	1906	\$0.00																					
1908	2010	Resolve AF Comments on Working Copy of LTM Work Plan	10 days	Fri 8/26/16	Thu 9/8/16	1907	\$0.00																					
1909	2010	AF Approval of Draft LTM Work Plan	0 days	Thu 9/8/16	Thu 9/8/16	1908	\$44,497.00																					
1910	2010	Submit Draft LTM Work Plan to Regulators	5 days	Fri 9/9/16	Thu 9/15/16	1909	\$0.00																					
1911	2010	Regulator Review of Draft LTM Work Plan	32 days	Fri 9/16/16	Mon 10/31/16	1910	\$0.00																					
1912	2010	RTC Regulator Comments on Draft LTM Work Plan	5 days	Tue 11/1/16	Mon 11/7/16	1911	\$0.00																					
1913	2010	Prepare Final LTM Work Plan	5 days	Tue 11/8/16	Mon 11/14/16	1912	\$0.00																					
1914	2010	Regulator Approval of Final LTM Work Plan	0 days	Mon 11/14/16	Mon 11/14/16	1913	\$11,124.00																					
1915		LUC Inspections	1055 days	Tue 11/15/16	Mon 11/30/20		\$0.00																					
1916	2010	Annual LUC Inspection-2016	5 days	Tue 11/15/16	Mon 11/21/16	1914	\$0.00																					
1917	2011	Annual LUC Inspection-2017	5 days	Tue 11/7/17	Mon 11/13/17	1916FS+250 day	\$0.00																					
1918	2012	Annual LUC Inspection-2018	5 days	Tue 11/13/18	Mon 11/19/18	1917FS+260 day	\$0.00																					
1919	2013	Annual LUC Inspection-2019	5 days	Tue 11/19/19	Mon 11/25/19	1918FS+260 day	\$0.00																					
1920	2014	Annual LUC Inspection-2020	5 days	Tue 11/24/20	Mon 11/30/20	1919FS+260 day	\$0.00																					
1921		Implement Contingent Action	250 days	Tue 2/6/18	Mon 1/21/19	1958	\$0.00																					
1922		RA-O	325 days	Tue 11/15/16	Mon 2/12/18		\$83,433.00																					
1923		Semi-Annual O&M Sampling and Reporting	325 days	Tue 11/15/16	Mon 2/12/18		\$83,433.00																					
1924		Semi-Annual O&M Event	93 days	Tue 11/15/16	Thu 3/23/17		\$27,811.00																					
1925	2010	Semi-Annual O&M Sampling	1 day	Tue 11/15/16	Tue 11/15/16	1914SS	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1926	2010	Offsite Analysis of Air Samples	15 days	Ved 11/16/16	Tue 12/6/16	1925	\$0.00																					
1927	2010	Data Validation	15 days	Wed 12/7/16	Tue 12/27/16	1926	\$0.00																					
1928	2010	ERPIMS Submittal	22 days	Ved 12/28/16	Thu 1/26/17	1927	\$0.00																					
1929	2010	Prepare Working Copy of O&M Report	10 days	Ved 12/28/16	Tue 1/10/17	1927	\$0.00																					
1930	2010	Air Force Review of Working Copy	22 days	Wed 1/11/17	Thu 2/9/17	1929	\$0.00																					
1931	2010	Resolve AF Comments on Working Copy AF	5 days	Fri 2/10/17	Thu 2/16/17	1930	\$0.00																					
1932	2010	AF Review and Approval of RTCs	15 days	Fri 2/17/17	Thu 3/9/17	1931	\$0.00																					
1933	2010	Prepare Final O&M Report	5 days	Fri 3/10/17	Thu 3/16/17	1932	\$0.00																					
1934	2010	AF Approval of Final O&M Report	0 days	Thu 3/16/17	Thu 3/16/17	1933	\$27,811.00																					
1935	2010	Submit Final O&M Report to Regulators; AF Approval of ERPIMS Upload	5 days	Fri 3/17/17	Thu 3/23/17	1934	\$0.00																					
1936	2010	Semi-Annual O&M Event	122 days	Wed 1/25/17	Thu 7/13/17		\$27,811.00																					
1937	2010	Semi-Annual O&M Sampling	1 day	Wed 1/25/17	Wed 1/25/17	1925FS+50 days	\$0.00																					
1938	2010	Sample Analysis	22 days	Thu 1/26/17	Fri 2/24/17	1937	\$0.00																					
1939	2010	Offsite Analysis of Air Samples	15 days	Mon 2/27/17	Fri 3/17/17	1938	\$0.00																					
1940	2010	Data Validation	15 days	Mon 3/20/17	Fri 4/7/17	1939	\$0.00																					
1941	2010	ERPIMS Submittal	22 days	Mon 4/10/17	Tue 5/9/17	1940	\$0.00																					
1942	2010	Prepare Working Copy of O&M Report	22 days	Mon 4/10/17	Tue 5/9/17	1940	\$0.00																					
1943	2010	Air Force Review of Working Copy	22 days	Wed 5/10/17	Thu 6/8/17	1942	\$0.00																					
1944	2010	Resolve AF Comments on Working Copy AF	5 days	Fri 6/9/17	Thu 6/15/17	1943	\$0.00																					
1945	2010	AF Review and Approval of RTCs	15 days	Fri 6/16/17	Thu 7/6/17	1944	\$0.00																					
1946	2010	Prepare Final O&M Report	5 days	Fri 7/7/17	Thu 7/13/17	1945	\$0.00																					
1947	2010	AF Approval of Final O&M Report	0 days	Thu 7/13/17	Thu 7/13/17	1946	\$27,811.00																					
1948	2011	Semi-Annual O&M Event	93 days	Thu 10/5/17	Mon 2/12/18		\$27,811.00																					
1949	2011	Semi-Annual O&M Sampling	1 day	Thu 10/5/17	Thu 10/5/17	1937FS+180 day	\$0.00																					
1950	2011	Offsite Analysis of Air Samples	15 days	Fri 10/6/17	Thu 10/26/17	1949	\$0.00																					
1951	2011	Data Validation	15 days	Fri 10/27/17	Thu 11/16/17	1950	\$0.00																					
1952	2011	ERPIMS Submittal	22 days	Fri 11/17/17	Mon 12/18/17	1951	\$0.00																					
1953	2011	Prepare Working Copy of O&M Report	10 days	Fri 11/17/17	Thu 11/30/17	1951	\$0.00																					
1954	2011	Air Force Review of Working Copy	22 days	Fri 12/1/17	Mon 1/1/18	1953	\$0.00																					
1955	2011	Resolve AF Comments on Working Copy AF	5 days	Tue 1/2/18	Mon 1/8/18	1954	\$0.00																					
1956	2011	AF Review and Approval of RTCs	15 days	Tue 1/9/18	Mon 1/29/18	1955	\$0.00																					
1957	2011	Prepare Final O&M Report	5 days	Tue 1/30/18	Mon 2/5/18	1956	\$0.00																					
1958	2011	AF Approval of Final O&M Report	0 days	Mon 2/5/18	Mon 2/5/18	1957	\$27,811.00																					
1959	2011	Submit Final O&M Report to Regulators; AF Approval of ERPIMS Upload	5 days	Tue 2/6/18	Mon 2/12/18	1958	\$0.00																					
1960		OES: Site S5054 Bldg. 781. Pump house-Free Product on Groundwater (NYDEC Spill #9202658)	1279 days	Wed 6/8/16	Mon 5/3/21		\$240,743.00																					
1961		RA-O	1117 days	Wed 6/8/16	Thu 9/17/20		\$48,149.00																					
1962		LTM Work Plan	109 days	Wed 6/8/16	Mon 11/7/16		\$48,149.00																					
1963	2010	Prepare Working Copy of LTM Work Plan	30 days	Wed 6/8/16	Tue 7/19/16	894	\$0.00																					
1964	2010	AF Review of Working Copy of LTM Work Plan	22 days	Wed 7/20/16	Thu 8/18/16	1963	\$0.00																					
1965	2010	Resolve AF Comments on Working Copy of LTM Work Plan	10 days	Fri 8/19/16	Thu 9/1/16	1964	\$0.00																					
1966	2010	AF Approval of Draft LTM Work Plan	0 days	Thu 9/1/16	Thu 9/1/16	1965	\$38,519.00																					
1967	2010	Submit Draft LTM Work Plan to Regulators	5 days	Fri 9/2/16	Thu 9/8/16	1966	\$0.00																					
1968	2010	Regulator Review of Draft LTM Work Plan	32 days	Fri 9/9/16	Mon 10/24/16	1967	\$0.00																					
1969	2010	RTC Regulator Comments on Draft LTM Work Plan	5 days	Tue 10/25/16	Mon 10/31/16	1968	\$0.00																					
1970	2010	Prepare Final LTM Work Plan	5 days	Tue 11/1/16	Mon 11/7/16	1969	\$0.00																					
1971	2010	Regulator Approval of Final LTM Work Plan	0 days	Mon 11/7/16	Mon 11/7/16	1970	\$9,630.00																					
1972		LUC Inspections	1038 days	Tue 9/27/16	Thu 9/17/20		\$0.00																					
1973	2010	Annual LUC Inspection-2016	5 days	Tue 9/27/16	Mon 10/3/16	1971SS-30 days	\$0.00																					
1974	2011	Annual LUC Inspection-2017	5 days	Tue 9/19/17	Mon 9/25/17	1973FS+250 day	\$0.00																					
1975	2012	Annual LUC Inspection-2018	5 days	Fri 9/28/18	Thu 10/4/18	1974,1040SS	\$0.00																					
1976	2013	Annual LUC Inspection-2019	5 days	Fri 9/20/19	Thu 9/26/19	1975FS+250 day	\$0.00																					
1977	2014	Annual LUC Inspection-2020	5 days	Fri 9/11/20	Thu 9/17/20	1976FS+250 day	\$0.00																					
1978		Annual Groundwater Sampling and Well Inspections Year 2016	250 days	Tue 11/8/16	Mon 10/23/17		\$0.00																					
1979	2010	Groundwater gaging and Well inspection	2 days	Tue 11/15/16	Ved 11/16/16	1971FS+5 days	\$0.00																					

Appendix E. Project Schedule

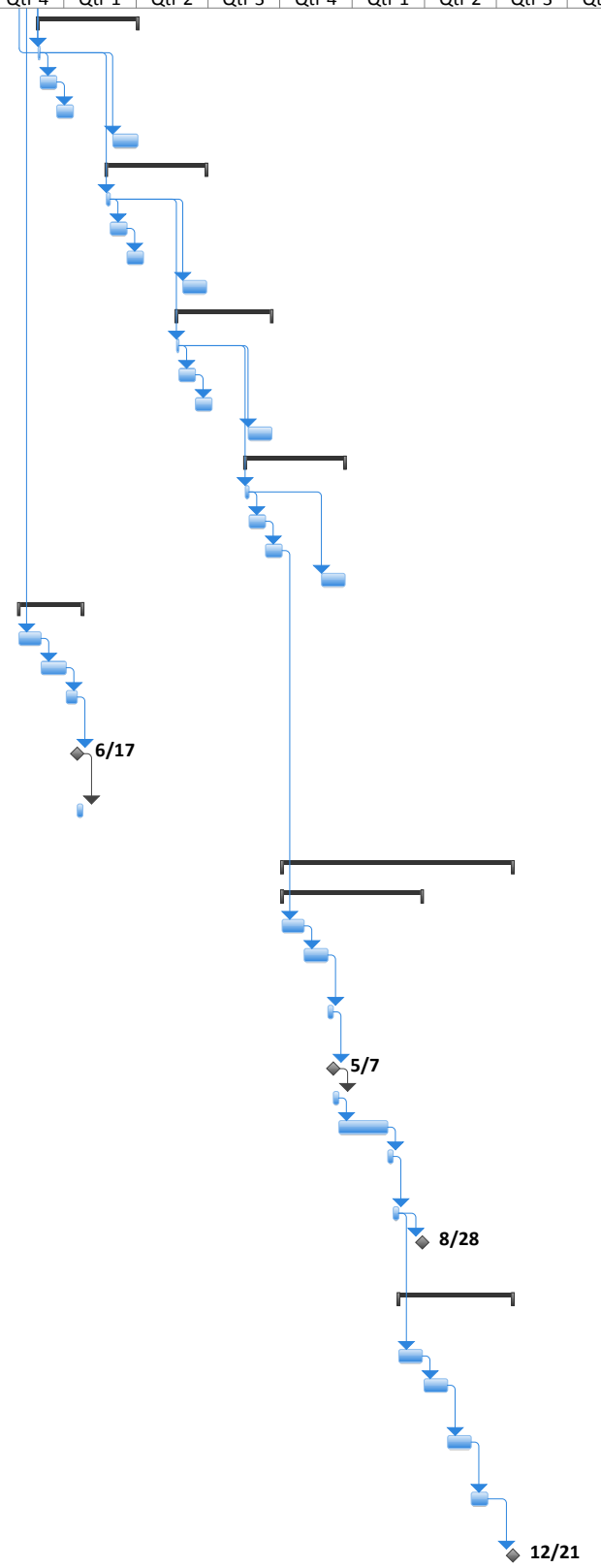
ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021			
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
2078		Optimization	1215 days	Wed 6/29/16	Tue 2/23/21		\$96,298.00																								
2079		Optimization Plan	106 days	Wed 6/29/16	Wed 11/23/16		\$48,149.00																								
2080	2010	Prepare Working Copy of Optimization Plan	22 days	Wed 6/29/16	Thu 7/28/16	894FS+15 days	\$0.00																								
2081	2010	Air Force Review of Working Copy	22 days	Fri 7/29/16	Mon 8/29/16	2080	\$0.00																								
2082	2010	Resolve AF Comments on Working Copy AF	5 days	Tue 8/30/16	Mon 9/5/16	2081	\$0.00																								
2083	2010	AF Review and Approval of RTCs	15 days	Tue 9/6/16	Mon 9/26/16	2082	\$0.00																								
2084	2010	AF Approval of Draft Optimization Plan	0 days	Mon 9/26/16	Mon 9/26/16	2083	\$38,519.00																								
2085	2010	Submit Draft Optimization Plan to Regulators	5 days	Tue 9/27/16	Mon 10/3/16	2084	\$0.00																								
2086	2010	Regulator Review of Draft Optimization Plan	32 days	Tue 10/4/16	Wed 11/16/16	2085	\$0.00																								
2087	2010	Resolve Regulator Comments on Draft Optimization Plan	5 days	Thu 11/17/16	Wed 11/23/16	2086	\$0.00																								
2088	2010	Prepare Final Optimization Plan	5 days	Tue 9/27/16	Mon 10/3/16	2083	\$0.00																								
2089	2010	AF Approval of Final Optimization Plan	0 days	Mon 10/3/16	Mon 10/3/16	2088	\$9,630.00																								
2090	2014	OES Report	72 days	Mon 11/16/20	Tue 2/23/21		\$48,149.00																								
2091	2014	Prepare Working Copy of OES Report	30 days	Mon 11/16/20	Fri 12/25/20	2045	\$0.00																								
2092	2014	Air Force Review of Working Copy	22 days	Mon 12/28/20	Tue 1/26/21	2091	\$0.00																								
2093	2014	Resolve AF Comments on Working Copy AF	5 days	Wed 1/27/21	Tue 2/2/21	2092	\$0.00																								
2094	2014	AF Review and Approval of RTCs	15 days	Wed 2/3/21	Tue 2/23/21	2093	\$0.00																								
2095	2014	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES	0 days	Tue 2/23/21	Tue 2/23/21	2094	\$48,149.00																								
2096		OES Site SS062: AOC 9 Weapons Storage Area Landfill Chlorinated Plume	1243 days	Wed 6/8/16	Fri 3/12/21		\$184,455.00																								
2097		Optimization	1228 days	Wed 6/29/16	Fri 3/12/21		\$66,404.00																								
2098	2010	Remedial Optimization Work Plan	101 days	Wed 6/29/16	Wed 11/16/16		\$29,513.00																								
2099	2010	Prepare Working Copy of Remedial Optimization Work Plan	22 days	Wed 6/29/16	Thu 7/28/16	894FS+15 days	\$0.00																								
2100	2010	AF Review of Working Copy of Remedial Optimization Work Plan	22 days	Fri 7/29/16	Mon 8/29/16	2099	\$0.00																								
2101	2010	Resolve AF Comments on Working Copy of Remedial Optimization Work Plan	10 days	Tue 8/30/16	Mon 9/12/16	2100	\$0.00																								
2102	2010	AF Approval of Draft Remedial Optimization Work Plan	0 days	Mon 9/12/16	Mon 9/12/16	2101	\$23,610.00																								
2103	2010	Submit Draft Remedial Optimization Work Plan to Regulators	5 days	Tue 9/13/16	Mon 9/19/16	2102	\$0.00																								
2104	2010	Regulator Review of Remedial Optimization Work Plan	32 days	Tue 9/20/16	Wed 11/2/16	2103	\$0.00																								
2105	2010	RTC Regulator Comments on Draft Remedial Optimization Work Plan	5 days	Thu 11/3/16	Wed 11/9/16	2104	\$0.00																								
2106	2010	Prepare Final Remedial Optimization Work Plan	5 days	Thu 11/10/16	Wed 11/16/16	2105	\$0.00																								
2107	2010	Regulator Approval of Final Remedial Optimization Work Plan	0 days	Wed 11/16/16	Wed 11/16/16	2106	\$5,903.00																								
2108	2010	Remedial Optimization Field Implementation	1127 days	Thu 11/17/16	Fri 3/12/21		\$36,891.00																								
2109	2010	Mobilize and Obtain UIC and Dig Permits	22 days	Thu 11/17/16	Fri 12/16/16	2107	\$0.00																								
2110	2010	Perform ISCO Injections	10 days	Thu 11/24/16	Wed 12/7/16	2106SS+10 days	\$0.00																								
2111	2014	OES Report	82 days	Thu 11/19/20	Fri 3/12/21		\$36,891.00																								
2112	2014	Prepare Working Copy of OES Report	30 days	Thu 11/19/20	Wed 12/30/20	2162FS+10 days	\$0.00																								
2113	2014	Air Force Review of Working Copy	22 days	Thu 12/31/20	Fri 1/29/21	2112	\$0.00																								
2114	2014	Resolve AF Comments on Working Copy AF	15 days	Mon 2/1/21	Fri 2/19/21	2113	\$0.00																								
2115	2014	AF Review and Approval of RTCs	15 days	Mon 2/22/21	Fri 3/12/21	2114	\$0.00																								
2116	2014	AF Approval of Final OES Report; Distribute Report to Regulators-Achieve OES	0 days	Fri 3/12/21	Fri 3/12/21	2115	\$36,891.00																								
2117		RA-O	1209 days	Wed 6/8/16	Mon 1/25/21		\$118,051.00																								
2118		LTM Work Plan	109 days	Wed 6/8/16	Mon 11/7/16		\$29,513.00																								
2119	2010	Prepare Working Copy of LTM Work Plan	30 days	Wed 6/8/16	Tue 7/19/16	894	\$0.00																								
2120	2010	AF Review of Working Copy of LTM Work Plan	22 days	Wed 7/20/16	Thu 8/18/16	2119	\$0.00																								
2121	2010	Resolve AF Comments on Working Copy of LTM Work Plan	10 days	Fri 8/19/16	Thu 9/1/16	2120	\$0.00																								
2122	2010	AF Approval of Draft LTM Work Plan	0 days	Thu 9/1/16	Thu 9/1/16	2121	\$23,610.00																								
2123	2010	Submit Draft LTM Work Plan to Regulators	5 days	Fri 9/2/16	Thu 9/8/16	2122	\$0.00																								

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
2227	2021	AF Review of Working Copy of CCR	22 days	Fri 10/20/17	Mon 11/20/17	2226	\$0.00																					
2228	2021	Resolve AF Comments on Working Copy of CCR	10 days	Tue 11/21/17	Mon 12/4/17	2227	\$0.00																					
2229	2021	AF Approval of Draft CCR	0 days	Mon 12/4/17	Mon 12/4/17	2228	\$78,193.00																					
2230	2021	Submit Draft Annual CCR to Regulators	5 days	Tue 12/5/17	Mon 12/11/17	2229	\$0.00																					
2231	2021	Regulator Review of Draft CCR	44 days	Tue 12/12/17	Fri 2/9/18	2230	\$0.00																					
2232	2021	RTC Regulator Comments on Draft CCR	5 days	Mon 2/12/18	Fri 2/16/18	2231	\$0.00																					
2233	2021	Prepare Final CCR	5 days	Mon 2/19/18	Fri 2/23/18	2232	\$0.00																					
2234	2021	Regulator Approval of Final CCR	0 days	Tue 3/27/18	Tue 3/27/18	2233FS+22 days	\$19,548.00																					
2235		RA-O	343 days	Thu 5/25/17	Mon 9/17/18		\$0.00																					
2236		Performance Groundwater Sampling and Well Inspections Year 1	343 days	Thu 5/25/17	Mon 9/17/18		\$0.00																					
2237	2021	Groundwater gaging and Well inspection	2 days	Mon 10/30/17	Tue 10/31/17	2220FS+66 days	\$0.00																					
2238	2021	Monthly O&M	250 days	Thu 5/25/17	Wed 5/9/18	2219	\$0.00																					
2239	2021	Q1 Groundwater Sampling	91 days	Wed 11/1/17	Wed 3/7/18		\$0.00																					
2240	2021	Sampling	3 days	Wed 11/1/17	Fri 11/3/17	2237	\$0.00																					
2241	2021	Offsite Analysis of Groundwater Samples	15 days	Mon 11/6/17	Fri 11/24/17	2240	\$0.00																					
2242	2021	Data Validation	15 days	Mon 11/27/17	Fri 12/15/17	2241	\$0.00																					
2243	2021	ERPIMS Submittal	22 days	Tue 2/6/18	Wed 3/7/18	2240FS+66 days	\$0.00																					
2244	2021	Q2 Groundwater Sampling	91 days	Tue 2/6/18	Tue 6/12/18		\$0.00																					
2245	2021	Sampling	3 days	Tue 2/6/18	Thu 2/8/18	2240FS+66 days	\$0.00																					
2246	2021	Offsite Analysis of Groundwater Samples	15 days	Fri 2/9/18	Thu 3/1/18	2245	\$0.00																					
2247	2021	Data Validation	15 days	Fri 3/2/18	Thu 3/22/18	2246	\$0.00																					
2248	2021	ERPIMS Submittal	22 days	Mon 5/14/18	Tue 6/12/18	2245FS+66 days	\$0.00																					
2249	2021	Q3 Groundwater Sampling	91 days	Mon 5/14/18	Mon 9/17/18		\$0.00																					
2250	2021	Sampling	3 days	Mon 5/14/18	Wed 5/16/18	2245FS+66 days	\$0.00																					
2251	2021	Offsite Analysis of Groundwater Samples	15 days	Thu 5/17/18	Wed 6/6/18	2250	\$0.00																					
2252	2021	Data Validation	15 days	Thu 6/7/18	Wed 6/27/18	2251	\$0.00																					
2253	2021	ERPIMS Submittal	22 days	Fri 8/17/18	Mon 9/17/18	2250FS+66 days	\$0.00																					
2254		Performance Groundwater Sampling and Well Inspections Year 2	294 days	Thu 5/10/18	Tue 6/25/19		\$0.00																					
2255	2022	Groundwater gaging and Well inspection	2 days	Thu 5/10/18	Fri 5/11/18	2258SS-2 days	\$0.00																					
2256	2022	Monthly O&M	250 days	Thu 5/24/18	Wed 5/8/19	2238FS+10 days	\$0.00																					
2257	2022	Q1 Groundwater Sampling	99 days	Mon 5/14/18	Thu 9/27/18		\$0.00																					
2258	2022	Sampling	3 days	Mon 5/14/18	Wed 5/16/18	2245FS+66 days	\$0.00																					
2259	2022	Offsite Analysis of Groundwater Samples	15 days	Fri 8/17/18	Thu 9/6/18	2250FS+66 days	\$0.00																					
2260	2022	Data Validation	15 days	Fri 9/7/18	Thu 9/27/18	2259	\$0.00																					
2261	2022	ERPIMS Submittal	22 days	Fri 8/17/18	Mon 9/17/18	2258FS+66 days	\$0.00																					
2262	2022	Q2 Groundwater Sampling	91 days	Fri 8/17/18	Fri 12/21/18		\$0.00																					
2263	2022	Sampling	3 days	Fri 8/17/18	Tue 8/21/18	2258FS+66 days	\$0.00																					
2264	2022	Offsite Analysis of Groundwater Samples	15 days	Wed 8/22/18	Tue 9/11/18	2263	\$0.00																					
2265	2022	Data Validation	15 days	Wed 9/12/18	Tue 10/2/18	2264	\$0.00																					
2266	2022	ERPIMS Submittal	22 days	Thu 11/22/18	Fri 12/21/18	2263FS+66 days	\$0.00																					
2267	2022	Q3 Groundwater Sampling	91 days	Thu 11/22/18	Thu 3/28/19		\$0.00																					
2268	2022	Sampling	3 days	Thu 11/22/18	Mon 11/26/18	2263FS+66 days	\$0.00																					
2269	2022	Offsite Analysis of Groundwater Samples	15 days	Tue 11/27/18	Mon 12/17/18	2268	\$0.00																					
2270	2022	Data Validation	15 days	Tue 12/18/18	Mon 1/7/19	2269	\$0.00																					
2271	2022	ERPIMS Submittal	22 days	Wed 2/27/19	Thu 3/28/19	2268FS+66 days	\$0.00																					
2272	2022	Q4 Groundwater Sampling	91 days	Tue 2/19/19	Tue 6/25/19		\$0.00																					
2273	2022	Sampling	3 days	Tue 2/19/19	Thu 2/21/19	2268FS+60 days	\$0.00																					
2274	2022	Offsite Analysis of Groundwater Samples	15 days	Fri 2/22/19	Thu 3/14/19	2273	\$0.00																					
2275	2022	Data Validation	15 days	Fri 3/15/19	Thu 4/4/19	2274	\$0.00																					
2276	2022	ERPIMS Submittal	22 days	Mon 5/27/19	Tue 6/25/19	2273FS+66 days	\$0.00																					
2277		Implement Contingent Action	130 days	Wed 10/3/18	Tue 4/2/19	2265	\$0.00																					
2278		LTM	296 days	Fri 4/5/19	Fri 5/22/20		\$0.00																					
2279		Rebound Groundwater Sampling and Well Inspections Year 1	296 days	Fri 4/5/19	Fri 5/22/20		\$0.00																					
2280	2022	Groundwater gaging and Well inspection	2 days	Thu 4/25/19	Fri 4/26/19	2283SS-2 days	\$0.00																					
2281	2022	System Shutdown	1 day	Fri 4/5/19	Fri 4/5/19	2275	\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
2282	2022	Q1 Groundwater Sampling	91 days	Mon 4/29/19	Mon 9/2/19		\$0.00																					
2283	2022	Sampling	3 days	Mon 4/29/19	Wed 5/1/19	2281FS+15 days	\$0.00																					
2284	2022	Offsite Analysis of Groundwater Samples	15 days	Thu 5/2/19	Wed 5/22/19	2283	\$0.00																					
2285	2022	Data Validation	15 days	Thu 5/23/19	Wed 6/12/19	2284	\$0.00																					
2286	2023	ERPIMS Submittal	22 days	Fri 8/2/19	Mon 9/2/19	2283FS+66 days	\$0.00																					
2287	2023	Q2 Groundwater Sampling	91 days	Thu 7/25/19	Thu 11/28/19		\$0.00																					
2288	2023	Sampling	3 days	Thu 7/25/19	Mon 7/29/19	2283FS+60 days	\$0.00																					
2289	2023	Offsite Analysis of Groundwater Samples	15 days	Tue 7/30/19	Mon 8/19/19	2288	\$0.00																					
2290	2023	Data Validation	15 days	Tue 8/20/19	Mon 9/9/19	2289	\$0.00																					
2291	2023	ERPIMS Submittal	22 days	Wed 10/30/19	Thu 11/28/19	2288FS+66 days	\$0.00																					
2292	2023	Q3 Groundwater Sampling	87 days	Tue 10/22/19	Wed 2/19/20		\$0.00																					
2293	2023	Sampling	3 days	Tue 10/22/19	Thu 10/24/19	2288FS+60 days	\$0.00																					
2294	2023	Offsite Analysis of Groundwater Samples	15 days	Fri 10/25/19	Thu 11/14/19	2293	\$0.00																					
2295	2023	Data Validation	15 days	Fri 11/15/19	Thu 12/5/19	2294	\$0.00																					
2296	2023	ERPIMS Submittal	22 days	Tue 1/21/20	Wed 2/19/20	2293FS+62 days	\$0.00																					
2297	2023	Q4 Groundwater Sampling	91 days	Fri 1/17/20	Fri 5/22/20		\$0.00																					
2298	2023	Sampling	3 days	Fri 1/17/20	Tue 1/21/20	2293FS+60 days	\$0.00																					
2299	2023	Offsite Analysis of Groundwater Samples	15 days	Wed 1/22/20	Tue 2/11/20	2298	\$0.00																					
2300	2023	Data Validation	15 days	Wed 2/12/20	Tue 3/3/20	2299	\$0.00																					
2301	2023	ERPIMS Submittal	22 days	Thu 4/23/20	Fri 5/22/20	2298FS+66 days	\$0.00																					
2302		Annual Performance Monitoring Report - Year 2017	57 days	Fri 4/5/19	Mon 6/24/19		\$18,100.00																					
2303	2022	Prepare Working Copy of Annual Report	20 days	Fri 4/5/19	Thu 5/2/19	2275	\$0.00																					
2304	2022	AF Review of Working Copy of Annual Report	22 days	Fri 5/3/19	Mon 6/3/19	2303	\$0.00																					
2305	2022	Resolve AF Comments on Working Copy of Annual Report	10 days	Tue 6/4/19	Mon 6/17/19	2304	\$0.00																					
2306	2022	AF Approval of Final 2017 Annual Performance Monitoring Report	0 days	Mon 6/17/19	Mon 6/17/19	2305	\$18,100.00																					
2307	2022	Submit Final Annual Report to Regulators; AF Approval of ERPIMS Upload	5 days	Tue 6/18/19	Mon 6/24/19	2306	\$0.00																					
2308		Site Closeout	209 days	Wed 3/4/20	Mon 12/21/20		\$90,501.00																					
2309	2023	Spill Closure Report	128 days	Wed 3/4/20	Fri 8/28/20		\$36,200.00																					
2310	2023	Prepare Working Copy of Spill Closure Report	20 days	Wed 3/4/20	Tue 3/31/20	2300	\$0.00																					
2311	2023	AF Review of Working Copy of Spill Closure Report	22 days	Wed 4/1/20	Thu 4/30/20	2310	\$0.00																					
2312	2023	Resolve AF Comments on Working Copy of Spill Closure Report	5 days	Fri 5/1/20	Thu 5/7/20	2311	\$0.00																					
2313	2023	AF Approval of Draft Spill Closure Report	0 days	Thu 5/7/20	Thu 5/7/20	2312	\$28,960.00																					
2314	2023	Submit Draft RACR to Regulators	5 days	Fri 5/8/20	Thu 5/14/20	2313	\$0.00																					
2315	2023	Regulator Review of Draft Spill Closure Report	44 days	Fri 5/15/20	Wed 7/15/20	2314	\$0.00																					
2316	2024	RTC Regulator Comments on Draft Spill Closure Report	5 days	Thu 7/16/20	Wed 7/22/20	2315	\$0.00																					
2317	2024	Prepare Final Spill Closure Report	5 days	Thu 7/23/20	Wed 7/29/20	2316	\$0.00																					
2318	2024	AF and Regulator Approval of Final Spill Closure Report; AF Approval of ERPIMS Upload	0 days	Fri 8/28/20	Fri 8/28/20	2317FS+22 days	\$7,240.00																					
2319	2024	Site Closeout and Well & System Decommissioning Report	103 days	Thu 7/30/20	Mon 12/21/20		\$54,301.00																					
2320	2024	Decommission Wells and System	22 days	Thu 7/30/20	Fri 8/28/20	2317	\$0.00																					
2321	2024	Prepare Working Copy of Site Closeout and Well & System Decommissioning Report	22 days	Mon 8/31/20	Tue 9/29/20	2320	\$0.00																					
2322	2024	AF Review of Working Copy of Site Closeout and Well & System Decommissioning Report	22 days	Wed 9/30/20	Thu 10/29/20	2321	\$0.00																					
2323	2024	Resolve AF Comments on Working Copy of Site Closeout and Well & System Report	15 days	Fri 10/30/20	Thu 11/19/20	2322	\$0.00																					
2324	2024	AF Approval of Final Site Closeout and Well & System Decommissioning Report; Distribute Report to Regulators-Achieve SC	0 days	Mon 12/21/20	Mon 12/21/20	2323FS+22 days	\$54,301.00																					
2325		OES: SS067: Building 789 Type II Fuel system (NYSDEC Spill #9810713)	1113 days	Tue 6/28/16	Thu 10/1/20		\$216,700.00																					
2326		Free Product Delineation and Remedial Action	195 days	Wed 6/29/16	Tue 3/28/17		\$31,520.00																					

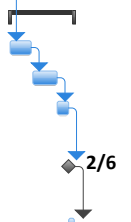
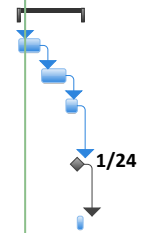


Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
2327	2010	Corrective Action Plan	101 days	Wed 6/29/16	Wed 11/16/16		\$31,520.00																					
2328	2010	Prepare Working Copy of CAP	22 days	Wed 6/29/16	Thu 7/28/16	894FS+15 days	\$0.00																					
2329	2010	AF Review of Working Copy	22 days	Fri 7/29/16	Mon 8/29/16	2328	\$0.00																					
2330	2010	Resolve AF Comments on Working Copy of CAP	10 days	Tue 8/30/16	Mon 9/12/16	2329	\$0.00																					
2331	2010	AF Approval of Draft Corrective Action Plan	0 days	Mon 9/12/16	Mon 9/12/16	2330	\$15,760.00																					
2332	2010	Submit Draft CAP to Regulators	5 days	Tue 9/13/16	Mon 9/19/16	2331	\$0.00																					
2333	2010	Regulator Review of CAP	32 days	Tue 9/20/16	Wed 11/2/16	2332	\$0.00																					
2334	2010	RTC Regulator Comments on Draft CAP	5 days	Thu 11/3/16	Wed 11/9/16	2333	\$0.00																					
2335	2010	Prepare Final CAP	5 days	Thu 11/10/16	Wed 11/16/16	2334	\$0.00																					
2336	2010	Regulator Approval of Final CAP	0 days	Wed 11/16/16	Wed 11/16/16	2335	\$15,760.00																					
2337	2010	Corrective Action Plan - Delineation	37 days	Thu 11/24/16	Fri 1/13/17		\$0.00																					
2338	2010	Mobilization and Permitting (Dig and UIC)	22 days	Thu 11/24/16	Fri 12/23/16	2335SS+10 days	\$0.00																					
2339	2010	Delineation of Free Product	10 days	Mon 12/26/16	Fri 1/6/17	2338	\$0.00																					
2340	2010	Install new monitoring wells (if needed)	5 days	Mon 1/9/17	Fri 1/13/17	2339	\$0.00																					
2341	2010	Corrective Action Plan - Implementation	52 days	Mon 1/16/17	Tue 3/28/17		\$0.00																					
2342	2010	Mobilization and Permitting (Dig and UIC)	22 days	Mon 1/16/17	Tue 2/14/17	2339FS+5 days	\$0.00																					
2343	2010	Full Scale Implementation	30 days	Wed 2/15/17	Tue 3/28/17	2342	\$0.00																					
2344	2010	RA-C	121 days	Wed 3/29/17	Wed 9/13/17		\$31,520.00																					
2345	2010	Construction Completion Report (CCR)	121 days	Wed 3/29/17	Wed 9/13/17		\$31,520.00																					
2346	2010	Prepare Working Copy of CCR	30 days	Wed 3/29/17	Tue 5/9/17	2343	\$0.00																					
2347	2010	AF Review of Working Copy of CCR	22 days	Wed 5/10/17	Thu 6/8/17	2346	\$0.00																					
2348	2010	Resolve AF Comments on Working Copy of CCR	10 days	Fri 6/9/17	Thu 6/22/17	2347	\$0.00																					
2349	2010	AF Approval of Draft CCR	0 days	Thu 6/22/17	Thu 6/22/17	2348	\$15,760.00																					
2350	2011	Submit Draft Annual CCR to Regulators	5 days	Fri 6/23/17	Thu 6/29/17	2349	\$0.00																					
2351	2011	Regulator Review of Draft CCR	44 days	Fri 6/30/17	Wed 8/30/17	2350	\$0.00																					
2352	2011	RTC Regulator Comments on Draft CCR	5 days	Thu 8/31/17	Wed 9/6/17	2351	\$0.00																					
2353	2011	Prepare Final CCR	5 days	Thu 9/7/17	Wed 9/13/17	2352	\$0.00																					
2354	2011	Regulator Approval of Final CCR	0 days	Wed 9/13/17	Wed 9/13/17	2353	\$15,760.00																					
2355		RA-O	1087 days	Tue 6/28/16	Wed 8/26/20		\$78,800.00																					
2356		Performance Groundwater Sampling and Well Inspections Year 2016	250 days	Tue 6/28/16	Mon 6/12/17		\$0.00																					
2357	2010	Groundwater gaging and Well inspection	2 days	Mon 9/26/16	Tue 9/27/16	2361SS-2 days	\$0.00																					
2358	2010	Monthly ORP and DO Measurements	250 days	Tue 6/28/16	Mon 6/12/17	894SS+15 days	\$0.00																					
2359	2010	Monthly O&M	250 days	Tue 6/28/16	Mon 6/12/17	2358SS	\$0.00																					
2360	2010	Q4-2016 Groundwater Sampling	91 days	Wed 9/28/16	Wed 2/1/17		\$0.00																					
2361	2010	Sampling	3 days	Wed 9/28/16	Fri 9/30/16	2358SS+66 days	\$0.00																					
2362	2010	Offsite Analysis of Groundwater Samples	15 days	Mon 10/3/16	Fri 10/21/16	2361	\$0.00																					
2363	2010	Data Validation	15 days	Mon 10/24/16	Fri 11/11/16	2362	\$0.00																					
2364	2010	ERPIMS Submittal	22 days	Tue 1/3/17	Wed 2/1/17	2361FS+66 days	\$0.00																					
2365	2010	Performance Groundwater Sampling and Well Inspections Year 2017	294 days	Fri 12/30/16	Wed 2/14/18		\$0.00																					
2366	2010	Groundwater gaging and Well inspection	2 days	Fri 12/30/16	Mon 1/2/17	2368SS-2 days	\$0.00																					
2367	2010	Q1 2017 Groundwater Sampling	91 days	Tue 1/3/17	Tue 5/9/17		\$0.00																					
2368	2010	Sampling	3 days	Tue 1/3/17	Thu 1/5/17	2361FS+66 days	\$0.00																					
2369	2010	Offsite Analysis of Groundwater Samples	15 days	Fri 1/6/17	Thu 1/26/17	2368	\$0.00																					
2370	2010	Data Validation	15 days	Fri 1/27/17	Thu 2/16/17	2369	\$0.00																					
2371	2010	ERPIMS Submittal	22 days	Mon 4/10/17	Tue 5/9/17	2368FS+66 days	\$0.00																					
2372	2010	Q2 2017 Groundwater Sampling	91 days	Mon 4/10/17	Mon 8/14/17		\$0.00																					
2373	2010	Sampling	3 days	Mon 4/10/17	Wed 4/12/17	2368FS+66 days	\$0.00																					
2374	2010	Offsite Analysis of Groundwater Samples	15 days	Thu 4/13/17	Wed 5/3/17	2373	\$0.00																					
2375	2010	Data Validation	15 days	Thu 5/4/17	Wed 5/24/17	2374	\$0.00																					
2376	2010	ERPIMS Submittal	22 days	Fri 7/14/17	Mon 8/14/17	2373FS+66 days	\$0.00																					
2377	2011	Q3 2017 Groundwater Sampling	91 days	Fri 7/14/17	Fri 11/17/17		\$0.00																					
2378	2011	Sampling	3 days	Fri 7/14/17	Tue 7/18/17	2373FS+66 days	\$0.00																					
2379	2011	Offsite Analysis of Groundwater Samples	15 days	Wed 7/19/17	Tue 8/8/17	2378	\$0.00																					
2380	2011	Data Validation	15 days	Wed 8/9/17	Tue 8/29/17	2379	\$0.00																					
2381	2011	ERPIMS Submittal	22 days	Thu 10/19/17	Fri 11/17/17	2378FS+66 days	\$0.00																					
2382	2011	Q4 2017 Groundwater Sampling	91 days	Wed 10/11/17	Wed 2/14/18		\$0.00																					

Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
2383	2011	Sampling	3 days	Ved 10/11/17	Fri 10/13/17	2378FS+60 days	\$0.00																					
2384	2011	Offsite Analysis of Groundwater Samples	15 days	Mon 10/16/17	Fri 11/3/17	2383	\$0.00																					
2385	2011	Data Validation	15 days	Mon 11/6/17	Fri 11/24/17	2384	\$0.00																					
2386	2011	ERPIMS Submittal	22 days	Tue 1/16/18	Wed 2/14/18	2383FS+66 days	\$0.00																					
2387	2011	Performance Groundwater Sampling and Well Inspections Year 2018	226 days	Thu 4/12/18	Thu 2/21/19		\$0.00																					
2388	2011	Groundwater gaging and Well inspection	2 days	Thu 4/12/18	Fri 4/13/18	2390SS-2 days	\$0.00																					
2389	2011	2018 Semi-Annual Groundwater Sampling	91 days	Mon 4/16/18	Mon 8/20/18		\$0.00																					
2390	2011	Sampling	3 days	Mon 4/16/18	Wed 4/18/18	2383FS+130 day	\$0.00																					
2391	2011	Offsite Analysis of Groundwater Samples	15 days	Thu 4/19/18	Wed 5/9/18	2390	\$0.00																					
2392	2011	Data Validation	15 days	Thu 5/10/18	Wed 5/30/18	2391	\$0.00																					
2393	2011	ERPIMS Submittal	22 days	Fri 7/20/18	Mon 8/20/18	2390FS+66 days	\$0.00																					
2394	2011	2018 Semi-Annual Groundwater Sampling	91 days	Thu 10/18/18	Thu 2/21/19		\$0.00																					
2395	2012	Sampling	3 days	Thu 10/18/18	Mon 10/22/18	2390FS+130 day	\$0.00																					
2396	2012	Offsite Analysis of Groundwater Samples	15 days	Tue 10/23/18	Mon 11/12/18	2395	\$0.00																					
2397	2012	Data Validation	15 days	Tue 11/13/18	Mon 12/3/18	2396	\$0.00																					
2398	2012	ERPIMS Submittal	22 days	Wed 1/23/19	Thu 2/21/19	2395FS+66 days	\$0.00																					
2399	2012	Performance Groundwater Sampling and Well Inspections Year 2019	226 days	Fri 4/12/19	Fri 2/21/20		\$0.00																					
2400	2012	Groundwater gaging and Well inspection	2 days	Fri 4/12/19	Mon 4/15/19	2402SS-2 days	\$0.00																					
2401	2012	2019 Semi-Annual Groundwater Sampling	91 days	Tue 4/16/19	Tue 8/20/19		\$0.00																					
2402	2012	Sampling	3 days	Tue 4/16/19	Thu 4/18/19	2395FS+125 day	\$0.00																					
2403	2012	Offsite Analysis of Groundwater Samples	15 days	Fri 4/19/19	Thu 5/9/19	2402	\$0.00																					
2404	2012	Data Validation	15 days	Fri 5/10/19	Thu 5/30/19	2403	\$0.00																					
2405	2012	ERPIMS Submittal	22 days	Mon 7/22/19	Tue 8/20/19	2402FS+66 days	\$0.00																					
2406	2013	2019 Semi-Annual Groundwater Sampling	91 days	Fri 10/18/19	Fri 2/21/20		\$0.00																					
2407	2013	Sampling	3 days	Fri 10/18/19	Tue 10/22/19	2402FS+130 day	\$0.00																					
2408	2013	Offsite Analysis of Groundwater Samples	15 days	Ved 10/23/19	Tue 11/12/19	2407	\$0.00																					
2409	2013	Data Validation	15 days	Ved 11/13/19	Tue 12/3/19	2408	\$0.00																					
2410	2013	ERPIMS Submittal	22 days	Thu 1/23/20	Fri 2/21/20	2407FS+66 days	\$0.00																					
2411	2013	Performance Groundwater Sampling and Well Inspections Year 2020	93 days	Mon 4/20/20	Wed 8/26/20		\$0.00																					
2412	2013	Groundwater gaging and Well inspection	2 days	Mon 4/20/20	Tue 4/21/20	2414SS-2 days	\$0.00																					
2413	2013	Annual Groundwater Sampling-2020	91 days	Wed 4/22/20	Wed 8/26/20		\$0.00																					
2414	2013	Sampling	3 days	Wed 4/22/20	Fri 4/24/20	2407FS+130 day	\$0.00																					
2415	2013	Offsite Analysis of Groundwater Samples	15 days	Mon 4/27/20	Fri 5/15/20	2414	\$0.00																					
2416	2013	Data Validation	15 days	Mon 5/18/20	Fri 6/5/20	2415	\$0.00																					
2417	2013	ERPIMS Submittal	22 days	Tue 7/28/20	Wed 8/26/20	2414FS+66 days	\$0.00																					
2418	2010	Annual Performance Monitoring Report - Year 2016	57 days	Mon 11/14/16	Tue 1/31/17		\$15,760.00																					
2419	2010	Prepare Working Copy of Annual Report	20 days	Mon 11/14/16	Fri 12/9/16	2363	\$0.00																					
2420	2010	AF Review of Working Copy of Annual Report	22 days	Mon 12/12/16	Tue 1/10/17	2419	\$0.00																					
2421	2010	Resolve AF Comments on Working Copy of Annual Report	10 days	Wed 1/11/17	Tue 1/24/17	2420	\$0.00																					
2422	2010	AF Approval of Final 2016 Annual Performance Monitoring Report	0 days	Tue 1/24/17	Tue 1/24/17	2421	\$15,760.00																					
2423	2010	Submit Final Annual Report to Regulators;AF Approval of ERPIMS	5 days	Wed 1/25/17	Tue 1/31/17	2422	\$0.00																					
2424	2011	Annual Performance Monitoring Report - Year 2017	57 days	Mon 11/27/17	Tue 2/13/18		\$15,760.00																					
2425	2011	Prepare Working Copy of Annual Report	20 days	Mon 11/27/17	Fri 12/22/17	2385	\$0.00																					
2426	2011	AF Review of Working Copy of Annual Report	22 days	Mon 12/25/17	Tue 1/23/18	2425	\$0.00																					
2427	2011	Resolve AF Comments on Working Copy of Annual Report	10 days	Wed 1/24/18	Tue 2/6/18	2426	\$0.00																					
2428	2011	AF Approval o Final 2017 Annual Performance Monitoring Report	0 days	Tue 2/6/18	Tue 2/6/18	2427	\$15,760.00																					
2429	2011	Submit Final Annual Report to Regulators;AF Approval of ERPIMS	5 days	Wed 2/7/18	Tue 2/13/18	2428	\$0.00																					
2430	2012	Annual Performance Monitoring Report - Year 2018	57 days	Tue 12/4/18	Wed 2/20/19		\$15,760.00																					
2431	2012	Prepare Working Copy of Annual Report	20 days	Tue 12/4/18	Mon 12/31/18	2397	\$0.00																					
2432	2012	AF Review of Working Copy of Annual Report	22 days	Tue 1/1/19	Wed 1/30/19	2431	\$0.00																					



Appendix E. Project Schedule

ID	CLIN	Description	Duration	Start	Finish	Predecessors	Milestone\$	2016				2017				2018				2019				2020				2021
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
2479	2020	RTC Regulator Comments on Draft CAP Amendment	5 days	Thu 4/20/17	Wed 4/26/17	2478	\$0.00																					
2480	2020	Prepare Final CAP Amendment	5 days	Thu 4/27/17	Wed 5/3/17	2479	\$0.00																					
2481	2020	Regulator Approval of Final Corrective Action Plan Amendment (if required)	0 days	Fri 6/2/17	Fri 6/2/17	2480FS+22 days	\$2,590.00																					
2482	2020	Remedial Optimization Field Implementation	32 days	Mon 6/19/17	Tue 8/1/17		\$0.00																					
2483	2020	Mobilization, Permitting (Dig and UIC)	22 days	Mon 6/19/17	Tue 7/18/17	2481SS+10 days	\$0.00																					
2484	2020	Follow-on ISCO Injection, if needed	10 days	Wed 7/19/17	Tue 8/1/17	2483,2481	\$0.00																					
2485	2020	RA-O	232 days	Mon 6/5/17	Tue 4/24/18		\$0.00																					
2486	2020	Performance Groundwater Sampling and Well Inspections Year 2017	232 days	Mon 6/5/17	Tue 4/24/18		\$0.00																					
2487	2020	Groundwater gaging and Well inspection	2 days	Mon 6/5/17	Tue 6/6/17	2481	\$0.00																					
2488	2021	Q1-2017 Groundwater Sampling	91 days	Wed 9/13/17	Wed 1/17/18		\$0.00																					
2489	2021	Sampling	3 days	Wed 9/13/17	Fri 9/15/17	2484FS+30 days	\$0.00																					
2490	2021	Offsite Analysis of Groundwater Samples	15 days	Mon 9/18/17	Fri 10/6/17	2489	\$0.00																					
2491	2021	Data Validation	15 days	Mon 10/9/17	Fri 10/27/17	2490	\$0.00																					
2492	2021	ERPIMS Submittal	22 days	Tue 12/19/17	Wed 1/17/18	2489FS+66 days	\$0.00																					
2493	2021	Q2-2017 Groundwater Sampling	91 days	Tue 12/19/17	Tue 4/24/18		\$0.00																					
2494	2021	Sampling	3 days	Tue 12/19/17	Thu 12/21/17	2489FS+66 days	\$0.00																					
2495	2021	Offsite Analysis of Groundwater Samples	15 days	Fri 12/22/17	Thu 1/11/18	2494	\$0.00																					
2496	2021	Data Validation	15 days	Fri 1/12/18	Thu 2/1/18	2495	\$0.00																					
2497	2021	ERPIMS Submittal	22 days	Mon 3/26/18	Tue 4/24/18	2494FS+66 days	\$0.00																					
2498	2021	Performance Groundwater Sampling and Well Inspections Year 2018	294 days	Wed 3/14/18	Mon 4/29/19		\$0.00																					
2499	2021	Groundwater gaging and Well inspection	2 days	Wed 3/14/18	Thu 3/15/18	2501SS-2 days	\$0.00																					
2500	2021	Q1 -2018 Groundwater Sampling	91 days	Fri 3/16/18	Fri 7/20/18		\$0.00																					
2501	2021	Sampling	3 days	Fri 3/16/18	Tue 3/20/18	2494FS+60 days	\$0.00																					
2502	2021	Offsite Analysis of Groundwater Samples	15 days	Wed 3/21/18	Tue 4/10/18	2501	\$0.00																					
2503	2021	Data Validation	15 days	Wed 4/11/18	Tue 5/1/18	2502	\$0.00																					
2504	2021	ERPIMS Submittal	22 days	Thu 6/21/18	Fri 7/20/18	2501FS+66 days	\$0.00																					
2505	2021	Q2-2018 Groundwater Sampling	91 days	Thu 6/21/18	Thu 10/25/18		\$0.00																					
2506	2021	Sampling	3 days	Thu 6/21/18	Mon 6/25/18	2501FS+66 days	\$0.00																					
2507	2021	Offsite Analysis of Groundwater Samples	15 days	Tue 6/26/18	Mon 7/16/18	2506	\$0.00																					
2508	2022	Data Validation	15 days	Tue 7/17/18	Mon 8/6/18	2507	\$0.00																					
2509	2022	ERPIMS Submittal	22 days	Wed 9/26/18	Thu 10/25/18	2506FS+66 days	\$0.00																					
2510	2022	Q3-2018 Groundwater Sampling	91 days	Wed 9/26/18	Wed 1/30/19		\$0.00																					
2511	2022	Sampling	3 days	Wed 9/26/18	Fri 9/28/18	2506FS+66 days	\$0.00																					
2512	2022	Offsite Analysis of Groundwater Samples	15 days	Mon 10/1/18	Fri 10/19/18	2511	\$0.00																					
2513	2022	Data Validation	15 days	Mon 10/22/18	Fri 11/9/18	2512	\$0.00																					
2514	2022	ERPIMS Submittal	22 days	Tue 1/1/19	Wed 1/30/19	2511FS+66 days	\$0.00																					
2515	2022	Q4-2018 Groundwater Sampling	91 days	Mon 12/24/18	Mon 4/29/19		\$0.00																					
2516	2022	Sampling	3 days	Mon 12/24/18	Wed 12/26/18	2511FS+60 days	\$0.00																					
2517	2022	Offsite Analysis of Groundwater Samples	15 days	Thu 12/27/18	Wed 1/16/19	2516	\$0.00																					
2518	2022	Data Validation	15 days	Thu 1/17/19	Wed 2/6/19	2517	\$0.00																					
2519	2022	ERPIMS Submittal	22 days	Fri 3/29/19	Mon 4/29/19	2516FS+66 days	\$0.00																					
2520	2022	Rebound Groundwater Sampling and Well Inspections Year 2019	280 days	Wed 3/27/19	Tue 4/21/20		\$0.00																					
2521	2022	Groundwater gaging and Well inspection	2 days	Wed 3/27/19	Thu 3/28/19	2523SS-2 days	\$0.00																					
2522	2022	Q1-2019 Groundwater Sampling	93 days	Fri 3/29/19	Tue 8/6/19		\$0.00																					
2523	2022	Sampling	5 days	Fri 3/29/19	Thu 4/4/19	2516FS+66 days	\$0.00																					
2524	2022	Offsite Analysis of Groundwater Samples	15 days	Fri 4/5/19	Thu 4/25/19	2523	\$0.00																					
2525	2022	Data Validation	15 days	Fri 4/26/19	Thu 5/16/19	2524	\$0.00																					
2526	2023	ERPIMS Submittal	22 days	Mon 7/8/19	Tue 8/6/19	2523FS+66 days	\$0.00																					
2527	2023	Q2-2019 Groundwater Sampling	93 days	Fri 6/28/19	Tue 11/5/19		\$0.00																					
2528	2023	Sampling	5 days	Fri 6/28/19	Thu 7/4/19	2523FS+60 days	\$0.00																					
2529	2023	Offsite Analysis of Groundwater Samples	15 days	Fri 7/5/19	Thu 7/25/19	2528	\$0.00																					
2530	2023	Data Validation	15 days	Fri 7/26/19	Thu 8/15/19	2529	\$0.00																					
2531	2023	ERPIMS Submittal	22 days	Mon 10/7/19	Tue 11/5/19	2528FS+66 days	\$0.00																					
2532	2023	Q3-2019 Groundwater Sampling	89 days	Fri 9/27/19	Wed 1/29/20		\$0.00																					

