

UPF CONSTRUCTION ENVIRONMENTAL CONTROL PLAN



THE NATION'S
URANIUM
PROCESSING
FACILITY

April 2020 | Revision 1

RC-UPF DMC

04/15/20 21:55

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Name: 

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UPF CONSTRUCTION ENVIRONMENTAL CONTROL PLAN

April 2020

Prepared by the Uranium Processing Facility Project Team
of Consolidated Nuclear Security, LLC
Management & Operating Contractor
for the
Y-12 National Security Complex and Pantex Plant
under Contract No. DE NA0001942
with the U.S. Department of Energy
National Nuclear Security Administration

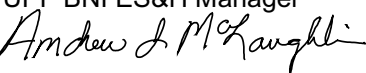
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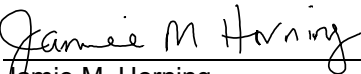
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Implements Quality Requirements			
<input checked="" type="checkbox"/> None	<input type="checkbox"/> BNI	<input type="checkbox"/> CNS	<input type="checkbox"/> BNI & CNS

REVISION LOG

Revision 1	<input checked="" type="checkbox"/> Major intent <input type="checkbox"/> Minor intent <input type="checkbox"/> Non-intent
<ul style="list-style-type: none"> • A Periodic Review was completed during this revision and was documented on UCN-23306. • These changes are in response to Condition Report 25774-000-GCA-GAM-02081, <i>Revise PL-SH-801768-A009, Construction Environmental Compliance Plan (CECP)</i>. • An evaluation determination has been performed confirming that this Command Media implements no quality requirements as tracked in the Programmatic Requirements Management System (PRMS). • Other changes include: <ul style="list-style-type: none"> ◦ Updated format to match current template. ◦ Editorial changes. • This revision is a complete rewrite. Because of the extent of changes, revision bars are not shown. 	
Revision 0	<input checked="" type="checkbox"/> Major intent <input type="checkbox"/> Minor intent <input type="checkbox"/> Non-intent
Initial Issue	

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ACRONYMS, ABBREVIATIONS, AND INITIALISMS

ARAP	Aquatic Resource Alteration Permit
BMP	Best Management Practices
BNI	Bechtel National, Inc.
CAA	Clean Air Act of 1970 (40 CFR 50-80; DOE O 5400.1 and 5400.5)
CECP	Construction Environmental Control Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund) (40 CFR 300, DOE O 5400.4)
CGP	Construction General Permit
CNS	Consolidated Nuclear Security, LLC
CSB	Construction Support Building
DOE	U.S. Department of Energy
EIS/A	Environmental Impact Statement/Assessment
EPSC	Erosion Prevention and Sediment Control
ES&H	Environmental Safety and Health
ETTP	East Tennessee Technology Park
HEUMF	Highly Enriched Uranium Materials Facility
HMIS	Hazardous Materials Information System
MEB	Mechanical/Electrical Equipment Building
MPB	Main Process Building
MPFF	Multi-Purpose Fabrication Facility
NEPA	National Environmental Policy Act of 1969 (40 CFR 1500-1508; DOE O 5400.1C)
NOC	Notice of Coverage
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPO	National Nuclear Security Administration Production Office
ORR	Oak Ridge Reservation
PSB	Personnel and Support Building
PSF	Process Support Facility
PSS	Plant Shift Superintendent
RADCON	Radiological Control (program)
SAB	Salvage and Accountability Building
SME	Subject Matter Expert
SPCC	Spill Prevention Control and Countermeasure
STR	Subcontract Technical Representative
SWPPP	Storm Water Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
UPF	Uranium Processing Facility
Y-12	Y-12 National Security Complex

1.0 INTRODUCTION

This Construction Environmental Control Plan (CECP) describes the environmental management program for Bechtel National, Inc. (BNI) regarding the Uranium Processing Facility (UPF) Project. This plan applies to all UPF Project-assigned personal and subcontractors.

The objectives of the CECP are to:

- Define specific requirements for ensuring environmental compliance with federal, state, and local regulations; permit/consent conditions; and all applicable UPF environmental documents, procedures, protocol, and requirements.
- Specify the responsibilities, roles, and actions required by all parties (e.g., customer, BNI, and subcontractors) during Project execution to maintain environmental compliance and to address potential emergency situations.
- Provide the necessary protocol for communication, documentation, and review of environmental compliance activities.

Each subcontractor involved in construction activities will be provided a copy of the Project's CECP and will be required to comply with its contents. Periodic reviews of the CECP will be performed to ensure its adequacy.

2.0 GENERAL PROJECT INFORMATION

2.1 Site Description

The UPF Project involves the design, construction, and commissioning of buildings and equipment needed for Uranium Processing Operations at the Y-12 National Security Complex (Y-12) site. The UPF complex includes three main buildings: a Main Process Building (MPB), a Salvage and Accountability Building (SAB), and a Mechanical/Electrical Equipment Building (MEB). It also consists of various support facilities. These support facilities include the Process Support Facility (PSF), Gas Tank Pad, Gas Cylinder Canopy, Fire Tank Pump Building, and Standby Diesel Generators. These facilities will be located on a previously developed brownfield portion of Y-12 west of the Highly Enriched Uranium Materials Facility (HEUMF) in a 32-acre area.

Other UPF satellite support and infrastructure areas include the concrete batch plant, Security Portal 19, the MEB Storage Facility, various construction laydown areas located at Y-12, and West Borrow Area (sometimes referred to as the West Soil Spoils Area).

In addition to satellite facilities at Y-12, there are other facilities at the East Tennessee Technology Park (ETTP), also referred to as K-31. These ETTP facilities include the Multi-Purpose Fabrication Facilities (MPFFs), associated laydown yards, office trailers, and warehouse facilities (i.e., 1065E [currently] and 1065C [planned for the future]).

Figures 1, 2, and 3 depict the location of these areas.

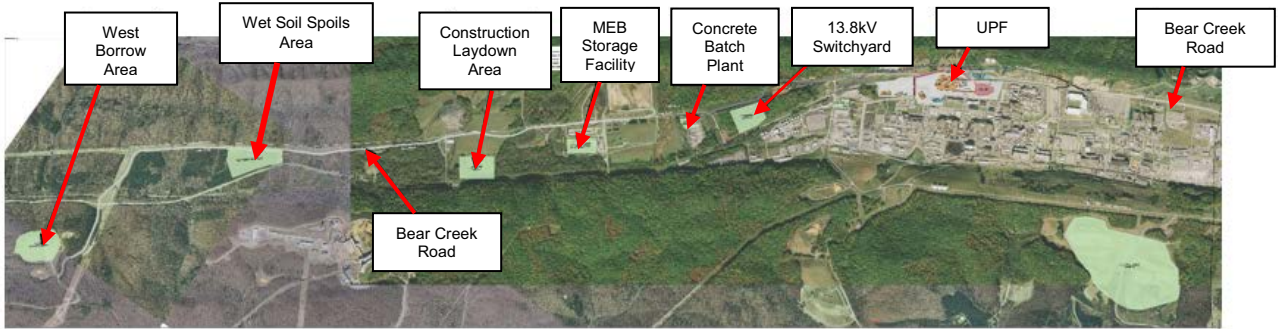


Figure 1. UPF Project facilities.



Figure 2. UPF site structures.

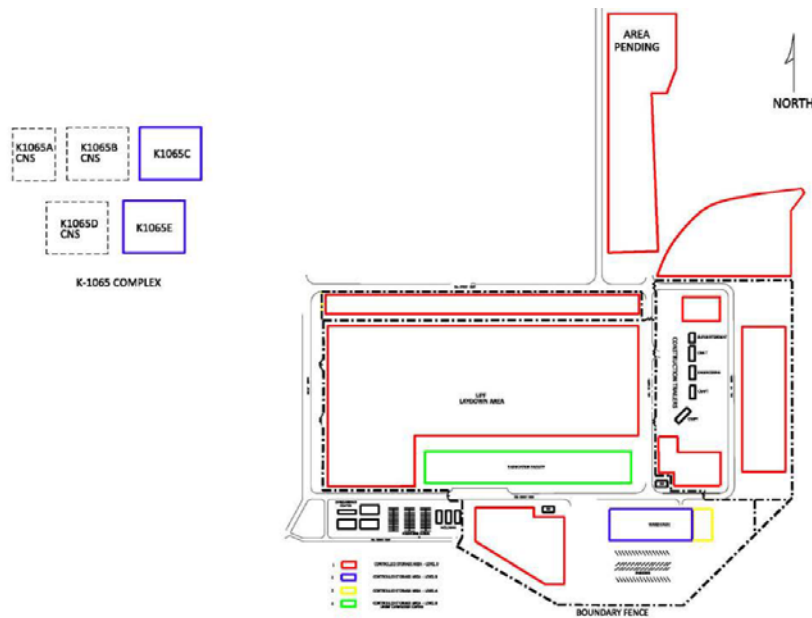


Figure 3. K-31 and K-1065 facilities at ETP.

2.2 Main UPF Facilities/Structures and Subprojects

2.2.1 Salvage and Accountability Building

The SAB will contain the following processes: waste preparation, decontamination, nondestructive analysis, clean and contaminated shops, chemical recovery, calcination and leaching, electronics and calibration maintenance, filter room, and personnel-related rooms. The SAB will be constructed using standards that are commensurate with the radioactive hazard and security requirements for the materials and processes to be contained within the building.

The SAB subproject also includes the construction of several other buildings and structures, including the Personnel and Support Building (PSB), the standby diesel generator pad, the Central Alarm Station, and a truck bay/loading dock.

2.2.2 Other Support Structures/Facilities

Other support structures/facilities for the UPF Project include the following:

- Construction Support Building (CSB)
- Firewater Tank and Fire Tank Pump Building
- Standby Diesel Generators
- Yard (utility bridge and tie-ins).

2.2.3 Personnel and Support Building

The PSB includes the following areas:

- Personnel Access
- Personnel Monitoring Station
- Material Access Non-special nuclear material
- Truck Bay/Loading Dock.

2.2.4 Main Process Building Subproject

The MPB subproject consists of the following:

- Construction of the MPB slab and building structure
- Procurement and installation of equipment that will be housed in the building
- Creation of system interconnections with the MEB and SAB
- Construction of the connector to the HEUMF, including the final tie-in/penetration to the HEUMF building structure.

The entire MPB will be constructed in accordance with the nuclear safety standards required for a material access area.

The MPB scope includes the following:

- Utility bridges and associated bulk commodities connecting the MEB and SAB with the MPB
- Utility gases and demineralized water from the PSF and Gas Tank Pad
- Completion of underground conduit and the connecting cable for power from the MEB to MPB

- Establishment of a connection from the MPB to HEUMF
- Relocation of Perimeter Intrusion Detection and Assessment Systems
- Installation of a gas cylinder canopy.

2.2.5 Process Support Facility Subproject

This subproject will consist of the construction of the PSF, installation of equipment in the PSF, and installation of process gas storage tanks near the PSF. Utility services will be run to the connection points (e.g., primary buildings).

2.2.6 Mechanical/Electrical Equipment Building Subproject

The MEB is situated directly east of the SAB and houses the mechanical and electrical equipment required for the UPF. The two-story, commercial-grade building is a steel-sided structure built on a concrete slab and has approximately 33,000 sq. ft on each level. The entire structure sits on a portion of the mass concrete fill.

2.2.7 Multi-Purpose Fabrication Facility

The MPFF is specified to provide the following:

1. 100,000 sq. ft. fabrication facility with 20,000 sq. ft. of office space and an adjacent 8 acres of laydown area for outdoor material storage in immediate proximity to the fabrication facility
2. 150,000 sq. ft. of warehouse space
3. 8 to 12 acres of laydown area for outdoor storage.

The MPFF is located at the former K-25 site (now referred to as ETTP or K-31 area).

2.2.8 The West Borrow Area

Development of the West Borrow Area and construction of the sediment basin, installation of access road culverts, and construction of the perimeter drainage ditches has been completed. The area was formerly a borrow pit and provides approximately 18 acres of UPF-related excavated soil placement space. In the past, clay soil was removed and used on the Oak Ridge Reservation (ORR). Excess soil/material not suitable (e.g., too wet) to take to the West Borrow Area will instead be taken to the Wet Soil Spoils Area.

2.2.9 Wet Soil Spoils Area

The Wet Soil Spoils Area is an approximately 17-acre property used to disposition wet/saturated soils encountered during UPF-related excavation activities. Soils unsuitable for use as fill from the UPF site will be trucked to the Wet Soil Spoils Area. The soil will be placed as directed by applicable construction specifications and then stabilized. After placement activities are completed for this area (or portion thereof), the area(s) shall be graded and contoured to promote drainage off of the fill area. Side slopes shall be graded to a 2.5H:1V or flatter slope. The area will then be stabilized with seed and mulch.

2.2.10 Portal 19

CNS manages Portal 19. BNI no longer has responsibility for any of its functions (e.g., pump and haul sewer permit).

2.3 Project Milestone Schedule

Figure 4 describes a generalized listing of the major UPF Project construction milestones. This schedule is subject to extensive modification.

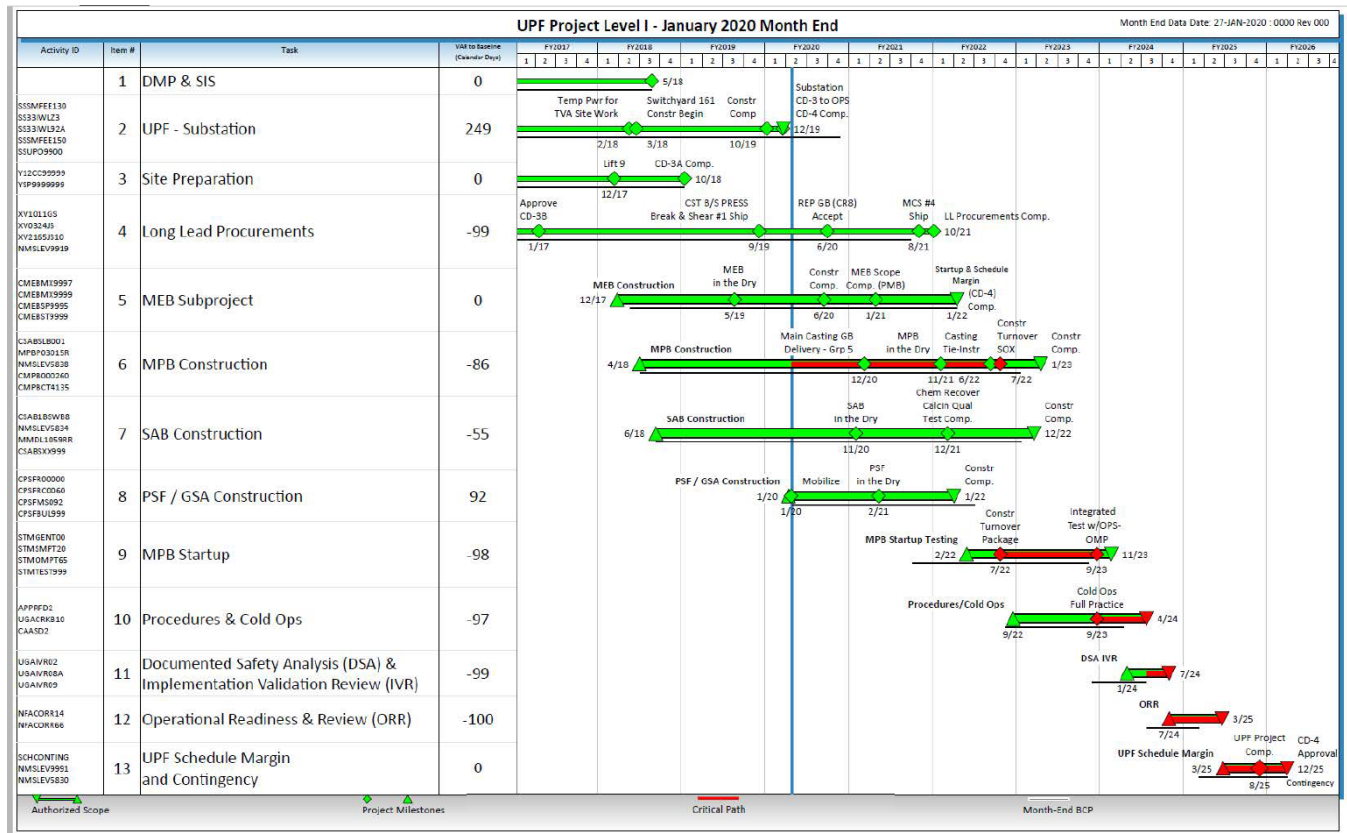


Figure 4. UPF milestone schedule.

3.0 RESPONSIBILITIES

This section provides a description of the general responsibilities of project entities (e.g., customer, BNI, and subcontractors) and key individuals (e.g., Customer, Contractor, BNI Site Manager, BNI Environmental) responsible for environmental compliance of the UPF project.

It is important that each member of the project team understands that they are responsible for adhering to all applicable environmental requirements (e.g., laws, regulations, permits, consents, etc.). The BNI Site Manager has overall responsibility for the BNI Environmental Safety and Health (ES&H). The ES&H Department establishes a qualified group of ES&H professionals under the direction of the UPF ES&H Manager, to provide technical and functional oversight of activities that occur on the UPF Project.

NOTE: Refer to Appendix N of ICD-PM-801768-A011, Interface Control Document for CNS Organizations and the UPF Project, for details regarding CNS Environmental responsibilities.

3.1 Customer/Operator

Environmental permitting requirements for the UPF Project are described in PL-SH-801768-A001, *Environmental Permitting Plan for the Uranium Processing Facility*. The UPF Project is embedded within an active nuclear complex, which is listed as a Superfund Site. Solid Waste disposal is coordinated with the CNS Waste Management group for disposal as described in PL-SH-801768-A002, *Construction Waste Management Plan for the Uranium Processing Facility*.

A summary of permit statuses includes the following:

- Construction Air Permit and Title V Operating Permit jointly held by Consolidated Nuclear Security (CNS) and the National Nuclear Security Administration Production Office (NPO)
- Water Resources, Aquatic Resource Alteration Permit (ARAP), and Section 404 Permits are held by the NPO
- National Pollutant Discharge Elimination System (NPDES) Construction General Permits (CGP) for work at Y-12 and offsite at ETTP/K-31.

Y-12 has an Industrial Users Permit for discharging sanitary wastewater to the Oak Ridge Publicly Owned Treatment Works. No permit approval is required from Oak Ridge with respect to UPF discharge to the sanitary sewer. Y-12 has an internal procedure for review and approval of modifications to sanitary sewer systems, which must be completed prior to occupancy of each individual UPF facility that will discharge.

3.2 BNI Contractor

The UPF Project ES&H policy is to provide and maintain a safe and healthy working environment where hazards are identified, communicated, and mitigated to the fullest extent possible for its employees, visitors, and the general public.

PL-SH-801768-A007, *Bechtel National Inc. Uranium Processing Facility (UPF) Environment, Safety, and Health Plan*, establishes the UPF ES&H management system and is based on the Bechtel Nuclear, Security, and Environmental 2EP-M01E-J0001-01, *Environmental Management System Manual*, and Bechtel Core Processes.

Construction waste from the UPF Project will be managed and disposed of in accordance with PL-SH-801768-A002. The CNS Waste Management and Sustainability organizations will dispose of all construction waste. BNI will manage the pickup and disposal of waste by CNS. The UPF Environmental Compliance Program requirements are identified in PL-PJ-801768-A007, *Consolidated Nuclear Security Uranium Processing Facility Environment, Safety, and Health Plan*.

3.2.1 BNI Site Manager

The BNI Site Manager is responsible for managing the overall construction of the Project to ensure that it complies with all applicable environmental requirements.

UPF Construction Project Management is responsible and accountable for providing employees with a safe and healthy working environment. Each level of UPF Construction Project Management is responsible and accountable for communicating the importance of ES&H to personnel under their jurisdiction and shall hold their direct reports accountable for ensuring that the elements of PL-SH-801768-A007 are

implemented according to Project requirements. UPF Construction Project Management will ensure that necessary resources, processes, and procedures are in place to provide appropriate levels of protection to site workers, visitors, vendors, the general public, and the environment.

UPF Construction Project Management shall ensure that the workforce is aware of and understands the ES&H objectives and programs of the UPF Project. The BNI Site Manager (or designee) is responsible for notifying BNI Environmental of any changes in Project scope that may affect the natural environment, including, but not limited to, the following: storm water management, water quality, aquatic resources, air resource impacts, threatened and endangered species, or sensitive habitats.

The BNI Site Manager, or delegate, is also responsible for ensuring that the twice-weekly field inspections of construction for compliance with the CGP and Storm Water Pollution Prevention Plan (SWPPP) requirements are recorded.

3.2.2 Project Environmental Lead

The Project Environmental Lead provides environmental support regarding the development and implementation of, and enhancements to, the Project environmental compliance program.

Like all Project personnel, the Project Environmental Lead has the authority to stop work activities in the event of imminent danger to the safety and health of workers, the public, or the environment. Work activities may resume only after joint concurrence from the BNI Site Manager and ES&H Manager. The ES&H Manager and BNI Environmental personnel oversee the implementation and enforcement of the requirements of this CECP.

BNI Environmental personnel are responsible for the following:

- Storm water pollution prevention
- Coordinating waste management with CNS personnel
- Coordinating required environmental permits with CNS personnel
- Spill Prevention, Control, and Countermeasures (SPCC) and water pollution prevention measures
- Coordinating regulatory agency interface and support with CNS personnel
- Environmental compliance activities.

3.2.3 BNI Subcontracts Administrators

BNI Subcontract Administrators support for the UPF Project environmental compliance program.

Each subcontractor has a BNI Subcontractor Technical Representative (STR) who supports the cognizant Subcontracts Administrator and BNI Environmental personnel to ensure compliance with environmental and waste management project requirements.

3.2.4 BNI Commissioning/Startup Manager

The BNI Commissioning/Startup Manager, from an environmental perspective, will coordinate with BNI and CNS Environmental personnel regarding activities that may require permit review/revision, such as air and NPDES permits. In addition, they will

disclose hazardous materials and chemicals that are planned to be brought to the site and discuss with BNI Environmental possible substitute chemicals/materials that may be more environmentally-friendly. Finally, this BNI Manager will seek to minimize or reduce potential waste generated from commissioning and startup activities and coordinate all waste management with BNI environmental personnel.

3.3 BNI Subcontractors

BNI contractors and their lower-tier subcontractors are responsible for complying with all environmental and waste management requirements (i.e., local, state, and/or federal) applicable to their specific activities at the UPF Project site. Subcontractors will be provided a copy of this CECP and will be required to perform their work in accordance with all applicable permits, plans, and procedures/protocol.

BNI subcontractors are responsible for being fully cognizant of, and complying with, the commitments, procedures, restrictions, and guidance identified in this CECP and associated reference documents (refer to **Section 6.0, References**). BNI subcontractors are required to fully cooperate in implementing UPF Project-specific procedures and guidelines related to compliance with environmental and waste management requirements. BNI subcontractors will be held contractually responsible if they fail to comply.

BNI subcontractors must also be aware that they are accountable for any of their actions that result in environmental issues, including the following: non-routine regulatory agency inspections or investigations, Notices of Violation (NOV) or potential NOVs, and assessed fines or penalties. BNI subcontractors are required to immediately report these actions and/or any potential environmental concerns to the STR, who will, in turn, notify BNI Environmental.

Prior to beginning any site work, subcontractors must coordinate with, and submit written information (e.g., work packages, SDSs, notices for material to be brought onsite) to, the BNI STR, who will in turn inform BNI Environmental regarding planned site activities. This information must include the following:

- All planned activities at the site, including those that may involve the use or generation of hazardous substances and wastes
- All planned excavation and earthwork activities

NOTE: *Anytime that native soil (i.e., not fill material) is encountered as part of site work, the excavation activity should cease long enough for Radiological Control Program (RADCON) personnel to conduct periodic radiological screening of the excavated material.*

- Activities that may potentially violate the provisions of existing environmental permits or UPF environmental procedures/protocol
- Field operations that may potentially affect the environment (e.g., soil disturbance activities, storm water, chemical/fuel spills, water quality, air quality, environmental media contamination) in some manner.

Finally, prior to exiting the site, all BNI subcontractors must provide email notification to the BNI STR, who will in turn notify BNI Environmental. This notification must be given to provide ample time for BNI Environmental personnel to schedule and conduct field inspections of all associated subcontractor work areas to ensure compliance with all environmental requirements as they apply to the following:

- Waste handling
- Site housekeeping
- Erosion Prevention and Sediment Controls (EPSCs)
- Other similar issues.

4.0 ENVIRONMENTAL MANAGEMENT CONTROLS

This section describes the environmental management controls that will be used on the UPF Project site to assist in meeting the overall environmental management objectives for the Project. The Environmental Triggers Checklist (refer to **Appendix A, *Environmental Triggers***) may be used to aid Project personnel or subcontractor personnel regarding when to contact BNI Environmental.

All BNI contractors and lower-tier subcontractors are responsible for obtaining copies, being familiar with, and successfully implementing the requirements of all applicable environmental compliance documents and Project-specific procedures referenced in this CECF.

The assigned BNI STR will be the point of contact for all subcontractors to obtain the various environmentally-related documents. BNI subcontractors are also responsible for ensuring that all site workers have the appropriate training and operational oversight to ensure full compliance with all UPF environmental requirements (e.g., field efforts, Project documentation, Project records, coordination with BNI STRs and BNI Environmental [as appropriate]).

These objectives will be achieved by various methods, including the following:

- Development of detailed Work Packages
- Environmental awareness training
- Environmental compliance review/coordination meetings
- Environmental compliance field inspections
- Review of associated environmental documentation developed during the course of site work.

4.1 Summary of Environmental Requirements for Construction

The following subsections summarize key environmental requirements relating to the UPF Project scope.

4.1.1 National Pollutant Discharge Elimination System and Water Pollution Prevention

Prior to starting any earthwork activities that will disturb one acre or more, a Notice of Intent (NOI) and an acceptable SWPPP or SWPPP modification (e.g., SWPPP redline) will be prepared. The appropriate parties (e.g., BNI Engineering and BNI Environmental) will review these documents. Once BNI approves, the NOI will be submitted to TDEC for their notification. Subcontractors must coordinate with their assigned STR before submitting any documents to TDEC.

Once the worksite(s) has been stabilized in accordance with the appropriate SWPPP and the latest version of the *TDEC Erosion and Sediment Control Handbook*, BNI Environmental will be notified and given the opportunity to conduct an overall

environmental compliance inspection of the work areas. Once BNI Environmental provides compliance approval, the subcontractor may send a Notice of Termination to TDEC. This step cannot occur until BNI Environmental work site compliance approval has been granted for the closeout of any outstanding environmental issues.

TDEC Level 1 certified personnel (subcontractors or direct hires) or other TDEC-approved personnel (e.g., Project engineers) will perform all required weekly SWPPP inspections and complete all appropriate inspection reports. EPSCs and water pollution prevention measures shall comply with the following:

- TDEC CGP
- Applicable UPF Project-related SWPPPs (i.e., depending upon the work area such as the off-site K-31 Area vs. the UPF project footprint)
- The latest version of the *TDEC Erosion and Sediment Control Handbook* regarding Best Management Practices (BMPs) and EPSCs
- UPF Project-specific procedures or specifications (e.g., CS-EC-801768-312000-A015, *Earthwork for General Yard*; CS-EC-801768-310500-A015, *Erosion and Sediment Control for General Yard*; Y17-95-64-822, *UPF Site Excavation and Backfill*; and CS-EC-801768-329200-A015, *Seeding for General Yard*)
- SPCC, in accordance with 40 CFR 112, *Oil Pollution Prevention*, and Y/SUB/02-001091, *Spill Prevention Control and Countermeasures Plan for the U.S. Department of Energy Y-12 National Security Complex*.

Excavation activities and the dewatering of excavations shall be coordinated with BNI Environmental prior to conducting these field activities. BMPs will be used to ensure that the site, wetlands, and/or surface water bodies are not adversely affected and that appropriate EPSCs are used.

NOTE 1: *If additional grading and earth moving activities not defined in the applicable SWPPP are required, revisions to the SWPPP (e.g., grading plan, "SWPPP redline," description of EPSC measures, etc.) or a Project-specific SWPPP will be required.*

An initial Site Assessment and twice-weekly inspections (i.e., in accordance with the CGP, *TDEC Erosion and Sediment Control Handbook*, and the appropriate SWPPP) shall be performed for all work sites and shall be documented on the appropriate TDEC forms. BNI subcontractors shall be responsible for conducting and documenting these inspections for all of their work areas. Areas of soil disturbance will be either temporarily or permanently stabilized in accordance with the *TDEC Erosion and Sediment Control Handbook* (e.g., within 14 days of no activity or within seven days if the slope is 35% or greater). Copies of fully signed storm water inspection forms shall be issued to BNI Environmental on a monthly basis (at minimum).

EPSC measures and required corrective actions shall be implemented in accordance with the CGP, the appropriate SWPPP, and *TDEC Erosion and Sediment Control Handbook*.

NOTE 2: *Unless hindered by rain events, EPSC corrective actions and/or required maintenance activities shall be completed before the next rain event or within a maximum of seven days of the inspection observation.*

All chemicals, oils, and oil-related substances (e.g., fuel) shall be inventoried, handled, and stored in appropriate containers (e.g., flammable storage lockers,

secondary containment for fuel-related products) under the supervision of the BNI Waste Coordinator in accordance with UPF-CP-211, *Fire Prevention and Protection*, and Y79-001, *Y-12 Fire Protection Program Manual*. In addition, all spills shall be addressed in an environmentally-responsible manner. Inventories of all chemicals, oils, and oil-related products will be distributed to the BNI Waste Coordinator before these items are brought to the work site. BNI ES&H must provide RECIDs and formal approval before any chemicals are brought onto the UPF Project site. Subcontractors must communicate with their BNI STR regarding plans to bring any chemicals to the UPF Project Site, the types of chemicals, the associated SDSs, and the expected quantities. The STR will, in turn, provide this information to BNI ES&H personnel. Subcontractors are also required to produce monthly Hazardous Materials Information System (HMIS) reports that provide detailed information regarding the chemicals used on the UPF Project site.

NOTE 3: *BNI produces quarterly HMIS reports regarding chemicals used on the UPF Project site.*

All site workers shall receive training regarding how to store and handle chemicals, oils, and oil-related products and how to address spills and/or leaks. Specifically, when refueling is being conducted, a spill/leak drip pan lined with absorbent pads shall be used. Also, extra absorbent pads will be readily available to handle drips and related leaks. Spill kits shall be readily available and properly staged in order to provide quick response in the event of a spill/leak.

When using heavy equipment, it will be visually inspected for leaks, loose fittings, and defective hydraulic hoses. Such fittings will be routinely and properly maintained to prevent malfunction. Operators and spotters must be informed of slow leaks, sudden leaks, or hose ruptures. If any of these situations are observed, the affected equipment must be immediately shutdown. Secondary containment under trucks for active concrete pump truck operations and other similar operations is required.

The Operations Center (formerly called the Plant Shift Superintendent [PSS]) shall be immediately contacted, as well as the BNI STR and BNI ES&H for any spill, regardless of the size. In the event of spills or leaks (and if safe to do so), BNI or subcontractor personnel shall take prudent measures to isolate, contain, and prevent or minimize the spread of the spilled material until Operations Center support arrives.

4.1.2 Aquatic Resources Alteration Permit

By ARAP permit agreement, wetlands established as part of the UPF Project are under a five-year monitoring program. This agreement also establishes that wetland #10 will be established upon completion of all soil disturbance activities at the Wet Soil Spoils Area. LPA-SH-801768-A004, *US Department of the Army USACE 404 Permit Number 2010-00366*, has been extended and will be used to construct wetland #10.

Additional ARAPs and Section 404 permits may be required if new Project scope affects aquatic resources (e.g., dewatering or adding water to a wetlands, wetlands disturbance activities, alteration of surface water bodies).

Any work that may affect a wetland and/or surface water body (e.g., dewatering and/or adding water directly or indirectly via storm water) shall be coordinated with BNI Environmental prior to the start of such activities. Schedule allowance and

coordination with CNS compliance personnel will be required if additional ARAP permits are necessary.

4.1.3 Air Permits

For compliance with the Clean Air Act of 1970 (40 CFR 50-80; DOE O 5400.1 and 5400.5) (CAA), the UPF Project Construction Air Permit is included in the CNS Title V permit renewal as an inactive facility. The Project will be maintained on the Title V permit as an inactive facility until operational readiness and startup of operations.

4.1.4 National Environmental Policy Act

An Environmental Impact Statements/Assessments (EIS/As) of National Environmental Policy Act of 1969 (40 CFR 1500-1508; DOE O 5400.1C [revision 199C]) (NEPA) Site-Wide; Supplement Analyses; and the amended Record of Decision have been approved for the UPF Project site. NEPA screenings or additional NEPA documentation will be developed as necessary to address design changes and facility evolution. Threatened and Endangered Species assessments will be performed (as necessary) if the Project affects additional natural habitat areas.

All connections or modifications to the sanitary sewer system must be approved by the Water Compliance Section of the Environmental Compliance Department through the use of form UCN-18615, *Application for Modification to Y-12 Storm Drain and Sanitary Sewer Systems*. The internal process requires approval from the EC sanitary sewer coordinator, followed by approval from the BNI Site Manager after construction.

4.1.5 Waste Management

All waste generated by UFP site activities will be handled, stored, and managed in accordance with PL-SH-801768-A002. Any questions or concerns regarding waste management shall be immediately directed to BNI Environmental. No UPF Project-generated waste shall be disposed of or dispositioned offsite. Prior to hazardous chemicals and/or materials being brought onsite, subcontractors shall notify and coordinate with BNI Environmental.

4.2 Construction ES&H Orientation Training

Construction ES&H Orientation training has been developed and will be provided to construction personnel, including subcontractor employees. This training is designed to provide a general overview to site workers, including:

- General Site Maintenance (e.g., staying within approved work limits, good housekeeping, no open burning, fire prevention, SPCCs)
- EPSC (e.g., assessing site conditions and erosion control requirements, installing and maintaining EPSC measures while working in area, reporting non-functioning EPSC)
- Sensitive Areas Protection (e.g., working only within approved limits, maintaining required buffer zones around sensitive resources, storing hazardous materials away from wetlands and streams, restrictions on dewatering near surface water bodies)
- Unanticipated Discoveries (e.g., stop work immediately if archeological artifacts, contaminated and/or native soils are encountered, containers, pipes, and tanks are discovered/uncovered, immediately notify the BNI STR)

- Hazardous Material/Waste Handling (e.g., hazard identification, segregation, container management, proper labeling, disposal)
- Spills Prevention and Response (e.g., proper storage of hazardous materials, secondary containment, SPCCs, response, and notification).

This training stresses the importance of maintaining "environmental awareness" in the employee's everyday duties. Attendance at these training sessions is mandatory and will be recorded in an appropriate UPF training roster.

4.3 Environmental Compliance Reviews, Coordination, and Communication

The Project utilizes three primary activities to maintain environmental compliance and coordination/communication.

The first is the Project-specific NEPA/Environmental Compliance review conducted in conjunction with the Y-12 Environmental Compliance Group. This includes the development of a Project environmental compliance checklist in accordance with Y71-915, *The National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) Review and Compliance of Proposed Actions*, with presentation and review by site subject matter experts (SMEs).

The second consists of monthly Y-12 Environmental Officer meetings used to discuss current and future environmental compliance topics, changing requirements, and lessons learned.

The third consists of Plans of the Day and subcontractor progress meetings that are used to discuss current and/or future work activities and environmental compliance requirements.

5.0 ENVIRONMENTAL REQUIREMENTS, PLANS, AND PROCEDURES

This section describes the major categories of environmental requirements for this CEPC. The specific issues and requirements are taken from the Project's EIS/A documents, PL-SH-801768-A001, regulatory agency permits and approvals, and contract conditions with the customer.

5.1 Noise and Vibration

Noise and vibration requirements related to eliminating and/or mitigating noise and vibration impacts from construction activities will be addressed as necessary. The requirements are contained in UPF-CP-312, *Hearing Conservation Program*. Possible noise reducing measures include restricting noise and vibration generating activities to certain hours, use of less vibration producing equipment and/or methods (e.g., dampeners, staggering activities), and verifying that noise control equipment on vehicles and equipment is in proper working order.

5.2 Air Quality (Fugitive and Vehicular Emissions)

This Project will minimize the generation of fugitive dust from construction activities and reduce the release of emissions from construction equipment and vehicles. Fugitive dust control is required. Examples of techniques that can be used for dust control include watering of roads, reducing materials handling activities, and limiting

vehicle speed as required (in accordance with PL-EC-801768-A006, *Storm Water Pollution Prevention Plan for the Uranium Processing Facility Project*).

5.3 Erosion and Sedimentation Control

The UPF Project has developed PL-EC-801768-A006, which is the Project-specific plan to address EPSC measures required for the Project. This plan is associated with the NPDES CGP for Discharges of storm water. The project is permitted to perform construction activities under this General Permit and Tracking Number TNR134022 for work being conducted at Y-12 and Number TNR135568 for work being conducted at ETPP.

All subcontractors performing grading and earth moving activities on the Project are required to obtain coverage under the CGP by submitting a NOI to TDEC and obtaining permit coverage or Notice of Coverage (NOC). Contractor work scope not addressed in the applicable SWPPP may require the development of site-specific EPSC measures for submission with the contractor NOI.

The appropriate UPF Project SWPPP and associated modifications should address the following:

- Clearing limits and maintenance of existing vegetative cover
- Site grading
- Topsoil stripping and stockpiling
- Management of excess rock
- Temporary EPSCs (e.g., silt fencing, mulching, erosion control blankets, temporary seeding)
- Permanent EPSCs (e.g., re-establishing natural drainage patterns, vegetated swales, permanent seeding/plantings)
- Check dams, rip-rap, retention/detention structures, diversion channels, and sediment traps
- Slope restoration and protection
- Site stabilization
- Roads and equipment crossings
- Maintaining of drainage patterns.

5.4 Construction Storm Water Management

Measures used by the UPF Project to manage storm water runoff from construction areas and to prevent and/or minimize contamination of storm water caused by Project activities (e.g., hazardous material storage, waste management, material stockpiles) are described in the UPF SWPPP.

5.5 Unanticipated Discoveries

The ORR has been designated as a National Priority Listed site, and the U.S. Department of Energy (DOE) has entered into agreements with the U.S. Environmental Protection Agency and TDEC that require remediation of legacy contamination on the reservation.

The Federal Facility Agreement for the *ORR Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund) (40 CFR 300, DOE O 5400.4) (CERCLA)* screening process defines the process used on the ORR to screen proposed construction and demolition projects and facilities projects to determine if they need CERCLA oversight. All areas identified for use or development as part of the UPF Project have been characterized and internally reviewed through the CERCLA screening process. In the event of an unexpected condition or discovery, all contractors are required to stop work and notify their assigned BNI STR.

If excavation activities yield existing soil or there is a possibility/suspicion of excavating native soil rather than strictly fill material, the assigned BNI STR shall contact CNS RADCON to conduct field screening for possible radioactivity. The assigned BNI STR shall also be notified. If there is any doubt regarding whether any excavated material is contaminated, work will stop, and the BNI STR will provide instructions for how subcontractors should proceed.

5.6 Hazardous Materials Management

Hazardous Materials Management includes the process for the control and management of hazardous materials and their associated safety data sheets. Hazardous Materials Management applies to the request, generation, transfer, storage, or disposition of hazardous materials within the Y-12 facilities.

The Hazardous Materials Management Program applies to all UPF personnel and operations. This program also applies to subcontractor personnel as communicated through their contract. All UPF hazardous material utilization and storage practices will comply with applicable sections of 10 CFR 851, *Worker Safety and Health Program*, as well as Y73-181PD, *Hazardous Materials Management Program Description*, Y74-801, *Hazardous Material Identification*, and UPF-CP-202, *UPF Hazard Communication Program*.

BNI Environmental will coordinate with the Y-12 Waste Management organization to ensure compliance with hazardous waste management requirements.

Before any chemical materials are brought onsite and/or dispositioned, coordination with BNI Environmental is required. Coordination will include an assessment of the types of anticipated wastes, their expected quantities, and subcontractor-planned BMPs for storage, handling, and disposition.

NOTE: *As discussed in **Section 4.1.1, National Pollutant Discharge Elimination System and Water Pollution Prevention**, BNI ES&H personnel must grant approval prior to any chemicals being brought onsite. Additionally, RECIDs must be assigned to each chemical that will be brought onsite, chemical HIMIS inventory reports must be produced (on a monthly basis for subcontractors and a quarterly basis for BNI), and all chemicals must be properly handled and stored.*

5.7 Solid Waste Management (Hazardous/Non-Hazardous Wastes)

Solid Waste Management for the UPF Project is described in PL-SH-801768-A002, which also describes the solid waste management program for construction wastes generated at the site by BNI and its subcontractors.

BNI Environmental will coordinate with the Y-12 Waste Management organization to ensure compliance with solid waste management requirements.

Coordination with BNI Environmental and ample notice to BNI ES&H personnel is required before any hazardous materials are brought onsite and/or dispositioned. Coordination will include an assessment of the types of anticipated wastes, their expected quantities, and subcontractor-planned BMPs for storage, handling, and disposition. In addition, no offsite waste disposal or disposition generated as part of the UPF Project is authorized. Waste storage, disposal, and/or disposition shall be coordinated with BNI Environmental.

5.8 Asbestos and Lead-Based Paint

Asbestos and lead-based paint are restricted from the UPF Project by design. In the event that construction activities encounter hazardous substances such as asbestos, asbestos-containing material, or lead-based paint, the materials will be addressed by processes described in PL-SH-801768-A002 or as directed by Y-12 Waste Management SMEs.

5.9 Spill Prevention and Response

All Y-12 personnel and subcontractors are required to have General Employee Training. As a result of this training, all personnel are aware that the Y-12 Operations Center office should be called at (865) 574-7172 if using a cell phone, or 911 if using a Y-12 landline, at any time of the day or night for any spill or other emergency.

The primary responsibility of the spiller or spill discoverer is to warn others in the immediate area of the spill if it creates a potentially dangerous situation and notify the Operations Center at (865) 574-7172, the project STR, and BNI Environmental (or their designee). If the spiller or spill discoverer can safely stop, contain, or otherwise control the spill, they should do so if they are familiar with the material spilled.

If a discovered spill represents an emergency, the spiller or spill discoverer should call 911 using a Y-12 landline telephone. If the spiller or spill discoverer is using a cell phone, they should call the Operations Center at (865) 574-7172, not 911. Normally, the Operations Center would dispatch the Spill Response Coordinator during day shift hours and the Fire Department during off-shift hours to assess the severity of the spill and provide recommendations on containment and clean-up actions.

If the release presents a situation that could cause imminent danger to personnel, the primary action is evacuation. For properly trained personnel, the following steps may be initiated only if it is safe to do so:

- Stop the source of the discharge.
- Attempt to contain the migration of the spill through the use of spill control equipment and containerization measures.
- The following response measures should be taken if the spill is in your assigned work area and these actions are safe to do so until assistance from BNI and/or Operations Center arrives:
 - Shut down equipment.
 - Isolate leaks in lines with valves.
 - Upright leaking drums or containers.
 - Apply absorbent material (spill kit equipment).
 - Plug leaks.
 - Block floor drains, storm drains, or ditches.

- Build temporary dikes to prevent further spreading or contamination using soil, sand, absorbents, booms, etc.

5.10 UPF Project Final Configuration

The final configuration of all Project construction areas will be as described in issued plans and drawings.

6.0 REFERENCES

6.1 Source References

ASME B31.3, Process Piping

COL-OC-SH-801768-A003, *Aquatic Resources Alteration Permit (ARAP)/Section 401 Certification*

LPA-SH-801768-A007, *General NPDES Permit, SWPPP, Notice of Coverage*

LPA-SH-801768-A013, *UPF Construction Air Permit - Permit to Construct or Modify an Air Contaminant Source*

National Environmental Policy Act of 1969 (40 CFR 1500-1508; DOE O 5400.1C [revision 199C])

PL-EC-801768-A008, *Storm Water Pollution Prevention Plan for the K-31 Construction Laydown Area*

TDEC Construction Air Permit 967

TDEC Y-12 Title V Operating Air Permit

6.2 Interfacing References

10 CFR 851, *Worker Safety and Health Program*

40 CFR 112, *Oil Pollution Prevention*

Clean Air Act of 1970 (40 CFR 50-80; DOE O 5400.1 and 5400.5)

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund) (40 CFR 300, DOE O 5400.4)

CS-EC-801768-310500-A015, *Erosion and Sediment Control for General Yard*

CS-EC-801768-312000-A015, *Earthwork for General Yard*

ICD-PM-801768-A011, *Interface Control Document for CNS Organizations and the UPF Project*

LPA-SH-801768-A004, *US Department of the Army USACE 404 Permit Number 2010-00366*

PL-EC-801768-A006, *Storm Water Pollution Prevention Plan for the Uranium Processing Facility Project*

PL-PJ-801768-A007, *Consolidated Nuclear Security Uranium Processing Facility Environment, Safety, and Health Plan*

PL-SH-801768-A001, *Environmental Permitting Plan for the Uranium Processing Facility*

PL-SH-801768-A002, *Construction Waste Management Plan for the Uranium Processing Facility*

PL-SH-801768-A007, *Bechtel National Inc. Uranium Processing Facility (UPF) Environment, Safety, and Health Plan*

TDEC Erosion and Sediment Control Handbook

UCN-18615, *Application for Modification to Y-12 Storm Drain and Sanitary Sewer Systems*

UPF-CP-202, *UPF Hazard Communication Program*

UPF-CP-211, *Fire Prevention and Protection*

UPF-CP-312, *Hearing Conservation Program*

Y/SUB/02-001091, *Spill Prevention Control and Countermeasures Plan (SPCC) for the U.S. Department of Energy Y-12 National Security Complex*

Y71-915, *The National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) Review and Compliance of Proposed Actions*

Y73-181PD, *Hazardous Materials Management Program Description*

Y74-801, *Hazardous Material Identification*

Y79-001, *Y-12 Fire Protection Program Manual*

7.0 SUPPLEMENTAL INFORMATION

Appendix A, *Environmental Triggers*

APPENDIX A Environmental Triggers

If you answer yes to any of the questions below, you should consult with an Environmental SME.

ENVIRONMENTAL SUMMARY: Would changes, disturbances and/or use occur within the following entities either during construction or operation? <i>Y = Yes, N = No, U = Uncertain</i>			
	Yes	No	Uncertain
1. Air Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Liquid Effluents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Solid Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Soil or Sediment (e.g., Storm Water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Radioactive Sources/Material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Hazardous Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Chemical Storage/Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Petroleum Storage/Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Pesticide/Herbicide Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Volatile/Toxic/Water Reactive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Rad/Hazardous Substance Exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Floodplain/Wetland Interaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Threatened and/or Endangered Species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Clearing or Excavation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Archeological/Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Ozone-Depleting Substances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Explosives	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Transportation Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Drinking Water System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Sanitary Sewage System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Storm Drain System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Water Use/Diversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>Would the action require new Environmental Permits or modifications to existing ones?</p> <p><input type="checkbox"/> Yes (<i>if yes, identify</i>) <input type="checkbox"/> No</p>
