TETRA TECH

May 16, 2022

Dr. Weiquan Dong, PE
Bureau of Corrective Actions, Special Projects Branch
Nevada Division of Environmental Protection
2030 E. Flamingo Rd., Suite 230
Las Vegas, Nevada 89119

Subject: **Contingency Plan for Unit 4 Source Area in-Situ Bioremediation Treatability Study – Process Tank Unloading Pad Installation, Process Tank T-201 Modifications, and Chromium Treatment Subsystem Pipeline Installation**

Dear Mr. Dong:

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech, Inc. (Tetra Tech) has prepared this Contingency Plan to support ongoing Phase 2 activities for the Unit 4 Source Area In-Situ Bioremediation (ISB) Treatability Study (TS), which are described in the Nevada Division of Environmental Protection (NDEP) approved Unit 4 Source Area ISB TS Work Plan Addendum. Supporting activities include the Process Tank unloading pad installation, Process Tank T-201 modifications, and Chromium Treatment Subsystem pipeline installation. Summaries of the scopes of work for these activities are provided below followed by applicable contingency measures and response procedures required because some of these activities will occur within 50 feet of groundwater extraction treatment system (GWETS) components and/or existing monitoring wells. In accordance with Section 5.7 of the Site Management Plan (SMP), this Contingency Plan outlines protection measures that will be implemented to prevent damage of the nearby GWETS components and monitoring wells that could result in a release of untreated groundwater during field activities if proper mitigation steps are not followed.

Process Tank Unloading Pad Installation Scope of Work

The Process Tank unloading pad will be installed just south of Process Tank T-201 to allow water trucks to unload extracted groundwater from Unit 4 TS operations into Process Tank T-201 as shown in **Figure 1**. Site preparation includes leveling the area of the future unloading pad utilizing on-site Type II material (road base). The unloading pad site will be constructed to support the weight of both the unloading pad and a loaded 10,000-gallon tanker truck. Ramps will be placed at the ingress and egress of the unloading pad to promote safe travel onto the pad by tanker trucks. The road to and from the Process Tank unloading pad will be graded with Type II material to create a level surface. The graded road surface will be moistened to within 2% of optimum moisture content and compacted to 95% of the maximum dry density as determined by ASTM International (ASTM) Standard D1557. The final road surface will be paved with asphalt (3.5 inch dense-grade). The existing drainage swales along the south side of the Process Tank containment area will be rerouted to generally maintain existing site drainage patterns. Drainage from the unloading pad will be routed to flow into a 1,000- to 2,000-gallon temporary holding tank stationed inside the existing secondary containment for the Process Tanks. The existing secondary containment liner will be extended to the unloading pad to capture spills that may occur on the unloading pad.

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Process Tank T-201 Modifications Scope of Work

Process Tank T-201 will be modified, as necessary, to receive an approximate daily average of 17,000 gallons of water extracted as part of the Unit 4 Source Area ISB TS. New infrastructure will be installed to pump water from tanker trucks parked at the unloading pad into Tank T-201. The Process Tank T-201 modifications consist of the following tasks:

- Rebuild two existing centrifugal pumps in laydown area;
- Hydrovac and locate existing utilities at the unloading area;
- Construct piping from unloading area to Tank T-201;
- Install rebuilt pumps on equipment pad north of Tank T-201;
- Install electrical and process controls to transfer water from tanker trucks on the unloading pad to Tank T-201;
- Install unloading area (including unloading pad, liner extension from existing secondary containment to unloading pad, holding tank within existing secondary containment, and associated piping).

Envirogen Technologies, Inc. (ETI) will manage the water levels and treatment of water transferred into Process Tank T-201.

Chromium Treatment Subsystem Pipeline Installation Scope of Work

New piping will be installed to transfer groundwater contained in Ground Water Treatment Plant (GWTP) equalization tank T-100 to an existing transfer line from the Process Tanks that will connect to new Chromium Treatment Subsystem reaction tank T-605, as shown in **Figure 1**. The length of the new transfer piping will be approximately 500 feet. The piping will be installed over (above) the ground surface except for two buried sections and one section routed through the existing aboveground Fluidized Bed Reactor (FBR) pipe rack system. The buried portions of the piping will be installed below an existing asphalt road and asphalt parking lot. Prior to subsurface work, an underground utility call will be completed. The asphalt will be sawcut and a trench will be excavated utilizing hydro-vacuum methods for piping installation. The excavated material will be placed in a roll-off bin, profiled, and disposed of off-site. Following piping installation, the trench will be backfilled with clean fill and patched with hot mix asphalt to allow for continued use as a roadway.

Protection Measures

Personnel and subcontractors will protect the GWETS components and monitoring wells during the work outlined above by using the following precautions and procedures during field activities:

- Cones, caution tape, or safety fence will be installed as a visual indicator and protective barrier around the GWETS components and monitoring wells before activities involving heavy equipment are performed in their proximity.
- Daily health and safety "tailgate" meetings will be held prior to the start of field work. During that time, the Health and Safety Plan (HASP) will be reviewed. Discussions of health and safety hazards and preventions will also be held at that time. The names and contact numbers for all Tetra Tech field staff and Tetra Tech subcontractors will be confirmed. Clear lines of communication will be established to enable swift and coordinated responses to potential releases.
- A task-specific Activity Hazard Analysis (AHA) will be prepared and reviewed prior to beginning each new task. Hazards related to each step of a task will be identified, including working in proximity to existing GWETS components. Procedures needed to mitigate those hazards will be identified and implemented.
- Equipment transport routes will be established to avoid encounters with exposed monitoring wells. Drivers and operators will be informed of the hazards prior to operating equipment at the facility.

- Erosion control measures, such as the use of temporary straw wattles or silt fences, will be implemented to prevent stormwater runoff erosion damage.
- Work areas will be delineated as necessary to avoid unauthorized entry into work areas.
- Staging areas and parking areas will be identified with cones, delineators, caution tape, or safety fence.
- A designated spotter will be used during movement of heavy machinery. A policy of no vehicle backing without performing a 360-degree inspection and spotter guidance will be enforced.

Response Procedures

The construction personnel will be informed of the following response procedures in the event of a release:

- The immediate action taken in response to a release of untreated groundwater during the pre-implementation field activities will be to shut down and contain uncontrolled flows.
- If Tetra Tech's activities result in the release of untreated groundwater, the release will be reported to the NDEP 24-Hour Spill Notification Line, if required by NAC 445A.345 to 445A.348.

Please contact us at (303) 447-1823 if you have questions. Tetra Tech appreciates the opportunity to provide this Contingency Plan.

Sincerely,

Tetra Tech, Inc.

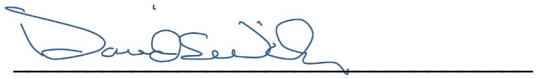
Dana Grady
Project Manager

Jesse Bunkers
Field Operations Manager

CERTIFICATION

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been prepared in a manner consistent with the current standards of the profession, and to the best of my knowledge, comply with all applicable federal, state, and local statutes, regulations, and ordinances.

Description of Services Provided: Contingency Plan for Unit 4 Source Area in-Situ Bioremediation Treatability Study – Process Tank Unloading Pad and Process Tank T-201 Modifications.



May 16, 2022

David Wilson, CEM
Principal Engineer
Tetra Tech, Inc.

Date

Nevada CEM Certificate Number: 2385
Nevada CEM Expiration Date: September 19, 2022

Figures

W.L. 1742.14

RISG-80
MW-16
AA-MW-16
M-160
M-159
M-161
M-135
M-134
M-136
M-69
M-109
M-140
M-157
M-158
M-159
M-166
M-167
M-34
M-168
M-169
M-57
M-57A
M-63
M-37
M-14D
M-14A
RISG-19
RISG-83
MC-MW-42
T-202
T-201
UFMW-01
UFMW-02
UFMW-03
UFMW-04
UFMW-05
UFMW-06

EXCAVATION CONTROL AREA D3
DISTURBANCE AREA = 0 SF / 0 AC

PROPOSED CHROMIUM
TREATMENT SUBSYSTEM (CTS)
PIPELINE - ABOVE GROUND (TYP.)

PROPOSED CHROMIUM
TREATMENT SUBSYSTEM
(CTS) PIPELINE - BURIED (TYP.)

EXISTING GROUNDWATER
TREATMENT PLANT (GWTP)

PROPOSED CHROMIUM
TREATMENT SUBSYSTEM
(CTS) LOCATION

APPROXIMATE EXISTING
PIPELINE TIE-IN LOCATION

EXCAVATION CONTROL AREA D7
DISTURBANCE AREA = 0 SF / 0 AC

EXCAVATION CONTROL AREA D6
DISTURBANCE AREA = 0 SF / 0 AC

PROPOSED LOCATION OF POLYSTAR
MOBILE CONTAINMENT PAD (60' x 12' x 6")

EXISTING SITE DRAINAGE FLOW DIRECTION

INSTALL CONCRETE CROSS GUTTER

EDGE OF ASPHALT ROAD (TYP.)

APPROXIMATE EXTENT OF
EXISTING VISIBLE LINER SYSTEM

UNLOADING PAD DRAIN
PIPES/HOSES TO HOLDING TANK

EXISTING STAIRCASE INTO
PROCESS TANK CONTAINMENT PAD

EXISTING ELECTRICAL
GROUNDING CABLE VAULT
(PRESERVE AND PROTECT)

PROPOSED AREA OF
COMPACTED FILL
EXCAVATED BENEATH
UNLOADING AREA ROAD

PRESERVE AND
PROTECT EXISTING
MONITORING WELL

RELOCATE EXISTING
DRAINAGE SWALE AS SHOWN.

TIE IN TO EXISTING PAVEMENT

DRYER ROAD
(PAVED)

TRUCK ENTRANCE

LIMITS OF ACCESS
ROAD GRADING

EDGE OF EXISTING PAVEMENT

TRUCK EXIT

TIE IN TO EXISTING PAVEMENT

EXCAVATION CONTROL AREA D5
DISTURBANCE AREA = 0 SF / 0 AC

EXCAVATION CONTROL AREA D8
DISTURBANCE AREA = 0 SF / 0 AC

EXCAVATION CONTROL AREA D2
DISTURBANCE AREA = 0 SF / 0 AC

MONITORING WELL LINE
2' DEEP

N

0 20' 40' 80'
SCALE: 1" = 40'

Bar Measures 1 inch

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FOR REVIEW
NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION	BY
A	4/5/22	ISSUED FOR REVIEW	KRA

NEVADA ENVIRONMENTAL RESPONSE TRUST
HENDERSON, NEVADA

UNLOADING AREA ACCESS ROAD

CONTINGENCY PLAN

Project No.: 117-7502022-I08-2201
Designed By: K. AVERY
Drawn By: L. WEATHERL
Checked By: C. HAYES

FIG 01