

December 4, 2013

Mr. 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

Re: Contingency Plan for Aquifer Testing Associated with the 2013 GWETS Optimization Project; Nevada Environmental Response Trust Site, Henderson, Nevada

Dear Mr. Dong,

This contingency plan has been prepared in accordance with the Site Management Plan (SMP) ¹ for the Nevada Environmental Response Trust (NERT) Site (the "Site") in Henderson, Nevada. This contingency plan outlines procedures and equipment that ENVIRON International Corporation (ENVIRON) would use if damage is caused to any remediation system component in a manner that causes the release of untreated groundwater during the execution of the approved 2013 GWETS Optimization Work Plan.² In accordance with the SMP, preparation of a contingency plan is required prior to starting any activity within 50 feet of any *on-site* component of the groundwater monitoring, extraction, and treatment systems. Although not explicitly required by the SMP, work conducted within 50 feet of *off-site* monitoring, extraction, and treatment systems will also be managed under this contingency plan.

Anticipated Activities

As part of the 2013 Groundwater Extraction and Treatment System (GWETS) Optimization Project, ENVIRON is proposing to activate³ nine idle extraction wells located in the Interceptor Well Field (IWF) and Athens Road Well Field (AWF) and perform additional well testing to further characterize hydraulic properties of the major hydrogeologic units at the Site. As part of the characterization, several aquifer testing methods, including slug tests, step-drawdown pump tests, and recovery tests, will be conducted at existing monitoring and extraction wells. Existing pumps within a subset of wells in the IWF will also be evaluated to determine if they function properly. The work will be completed with the assistance of personnel from Envirogen Technologies, Inc. (Envirogen), the GWETS Operator, as well as ENVIRON subcontractors. Well testing activities are described in more detail within the 2013 GWETS Optimization Work Plan.

Precautions

ENVIRON personnel and subcontractors will protect the Site's monitoring wells, extraction wells, and related treatment system components by using the following precautions and procedures during aquifer testing:

¹ ENVIRON. 2013. Site Management Plan, Revision 1, Nevada Environmental Response Trust Site, Henderson, Nevada. October. Approved by NDEP on November 7, 2013.

² ENVIRON. 2013. 2013 GWETS Optimization Work Plan, Revision 1, Nevada Environmental Response Trust Site, Henderson, Nevada. November 22. Approved by NDEP on December 3, 2013.

³ A second contingency plan will be prepared during utility design to address the specific construction activities associated with well activation. This second contingency plan will be submitted to NDEP for review and approval by January 15, 2014.

- Daily health and safety “tailgate” meetings will be held prior to the start of field work. In addition to discussions of health and safety hazards and preventions, the names and mobile phone numbers for all ENVIRON field staff, ENVIRON subcontractors, and Envirogen operators will be confirmed. Clear lines of communication will be established each day to ensure a swift and coordinated response to a release. Shift changes and well testing schedules will be identified during these daily meetings.
- When possible, any work on existing GWETS infrastructure (e.g., installing temporary discharge fittings, inline flow meters, etc.) will be performed by the GWETS Operator, Envirogen. If the assistance of subcontractors is necessary, Envirogen will be asked to review and approve the planned work prior to commencement of well testing.
- Temporary connections to the GWETS wells at ART-7/7A will be made within the well vault such that in the event of a release from temporary fittings, water would be contained within the well vault.
- Envirogen will operate existing pumps and equipment associated with the GWETS.
- Water generated during aquifer testing will be discharged directly to the GWETS via existing infrastructure or via temporary connections completed by Envirogen. Decontamination rinse water will be contained in buckets or drums for subsequent discharge into GW-11 and treatment via the GWETS.
- Prior to step-drawdown pump testing, pumps, pipes, valves, meters, and associated equipment will be inspected for damage and replaced as necessary.
- Protective barriers (e.g., barricades, traffic cones/pylons, caution tape, etc.) will be used as necessary when activities that involve the use of heavy equipment (i.e., well development rigs) are performed near exposed wells or other exposed GWETS infrastructure.
- Storm drain inlet protection will be put in place as a precautionary measure if storm drains are present in the immediate vicinity of a tested well.
- Work areas will be delineated as necessary to avoid unauthorized entry during well testing.
- Extraction wells, pumps, and discharge lines will not be left unsupervised during active pump tests.
- Any startup/shutdown activities associated with the GWETS (e.g., temporary shutdown of extraction wells for recovery testing) will be conducted in accordance with Envirogen’s Operation and Maintenance (O&M) manuals and lockout/tagout (LOTO) procedures. Only Envirogen will be allowed to perform startup and shutdown of GWETS equipment.

Response Procedures and Equipment

- The primary response action for a release of untreated groundwater will be to shut down and contain any uncontrolled flow. Envirogen personnel will have primary responsibility for shutting down GWETS components. For pump testing performed using a well development rig and a portable pump, ENVIRON and their subcontractor will have responsibility for shutting down those systems. The portable pump operator will instruct field staff on emergency shutdown procedures.
- A spill response kit will be readily available during aquifer testing activities and utilized in the event of a release of untreated groundwater. The precautionary measures described in this contingency plan are intended to minimize the volume of a potential release; therefore, it is anticipated that the spill response kit will adequately contain potential releases from well testing activities.

- As defined in the SMP, if well testing results in the release of untreated groundwater, ENVIRON will immediately notify Weiquan Dong of NDEP at 702-486-2850, extension 252 and Andrew Steinberg of the Trust at (312) 498-2800 of the release, and the status of the GWETS operation. If any GWETS components are shut down due to damage to the system(s) or to control the release of untreated groundwater, ENVIRON will provide NDEP and the Trust with a written explanation for the shutdown.
- If well testing results 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 John Pekala at (602) 734-7710 or Allan DeLorme at (510) 420-2565 if you have any comments or questions concerning this Plan.

Sincerely,



John M. Pekala, PG
Senior Manager
CEM #2347, expires 9/20/2014



Allan J. DeLorme, PE
Managing Principal

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