## **URS**

April 27, 2015

Mr. Pad Kemmanahalli Corporate Senior Director, Global HSE & Sustainability Itron, Inc. 1111 Broadway, Suite 1800 Oakland, CA 94607

Re: Supplemental Work Plan for Continued Groundwater Investigation Itron, Inc., 1310 Emerald Road, Greenwood, SC Voluntary Cleanup Contract 13-6079-RP

Dear Mr. Kemmanahalli,

URS is pleased to submit this supplemental work plan for continued groundwater investigation at the above referenced site. The additional investigation was requested by the South Carolina Department of Health and Environmental Control (SCDHEC) in a letter dated March 3, 2015. As an initial response to SCDHEC, URS and Itron developed a proposed monitoring well location map (Figure 1) along with a table (Table 1) outlining the rationale and construction details for each well. Those items were subsequently provided to Ms. Carol Crooks by Itron. SCDHEC indicated in a letter dated April 13, 2015 that the well locations and construction details were an appropriate response to the previous letter. The correspondence also requested that a work plan be submitted to SCDHEC for review and approval.

Thus, this supplemental work plan describes the anticipated scope of work and incorporates by reference the methods discussed in the initial Remedial Investigation (RI) work plan (URS 2013a) submitted to SCDHEC in November 2013.

The following activities will be performed as part of the scope of work for this project:

- The Health and Safety Plan (URS 2013b) prepared prior to the implementation of the RI work plan will be reviewed and updated as needed to include the scope of work described in this supplemental work plan.
- Five shallow monitoring wells, one intermediate monitoring well, and one deep monitoring well will be installed to further assess the horizontal and vertical extent of chemicals of potential concern (COPC) in groundwater. The well locations are shown on Figure 1 and the rationale for well location, target screen interval, and construction

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details are summarized in **Table 1**. Target screen intervals are estimates and will be adjusted based on field conditions.

- Installation procedures for the shallow wells (i.e., those completed in the upper regolith) and deep wells (i.e., those completed in the intermediate and lower regolith) are described in Sections 7.2.1 and 7.2.2 of the RI work plan (URS 2013a), respectively. The proposed intermediate well will be installed using the same procedures as the deep well installations. Soil recovered from each borehole will be screened every 5 feet using a photo ionization detector (PID). If a PID reading greater than 100 parts per million (ppm) is measured during the soil screening process, then the screening will be conducted every 1-foot until the readings decrease to below 100 ppm. If PID readings exceed 100 ppm, then the soil sample exhibiting the highest PID reading will be collected and analyzed for VOCs by EPA Method 5035A/8260B as described in Section 7.2.1 and Appendix B Field Sampling and Analysis Plan (FSAP) of the RI work plan (URS 2013a).
- The new wells will be developed as described in Section 7.2.3 of the RI work plan (URS 2013a).
- The new wells will be surveyed by a South Carolina licensed surveyor as described in Section 7.4 of the RI work plan (URS 2013a).
- Investigative Derived Waste (IDW) will be managed as described in Section 7.5 of the RI work plan. However, the IDW will not be sampled and analyzed. Instead, all IDW will be assumed to be hazardous and managed as such using the waste profiles for similar IDW generated during the remedial investigation in 2014.
- Approximately 1 to 2 weeks after new well development, all 29 groundwater monitoring
  wells will be gauged and sampled as described in Section 7.2.4 and Appendix B FSAP of
  the RI work plan (URS 2013a).
- All groundwater samples will be analyzed for volatile organic compounds (VOCs) by EPA Method 8260B. Monitoring well MW-3 will also be sampled and analyzed for polyaromatic hydrocarbons (PAHs) by EPA Method 8270D-SIM as naphthalene exceeded the regulatory limit at this well during the past sampling event. Trip blanks, equipment blanks, duplicates and matrix spike (MS) and matrix spike duplicates (MSD) will be collected per the FSAP.
- Procedures and methods described in the Quality Assurance Project Plan (QAPP) included as Appendix C of the RI work plan (URS 2013a) will be followed, including a data quality review of the groundwater analytical results for the samples collected from all site groundwater monitoring wells.
- At the conclusion of field activities, URS will prepare an addendum to the RI report that summarizes the findings. The addendum report will include an updated conceptual model



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• of the site groundwater conditions, a photo log, monitoring well logs and water well records, survey report, well development logs, groundwater sampling logs, laboratory reports, IDW waste manifests, groundwater quality tables and figures, potentiometric surface maps and updated geologic cross sections.

If you have any questions, please do not hesitate to contact us.

Sincerely,

URS, A subsidiary of AECOM

Aaron S. Council

**Environmental Specialist** 

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Craw & Count

James Narkunas, P.G.

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Project Hydrogeologist

James Flynn

Senior Project Manager

## **Attachments:**

Figure 1 – Monitoring Well Location Map / Proposed Locations Table 1 – Proposed Monitoring Well Locations and Rationale

## References:

- SCDHEC 2015. Remedial Investigation Report Comments Letter, Itron Site, Greenwood County, Voluntary Cleanup Contract 13-6079-RP. March 3.
- SCDHEC 2015. Remedial Investigation Report Comments Letter, Itron Site, Greenwood County, Voluntary Cleanup Contract 13-6079-RP. March 3.
- URS 2013a. Remedial Investigation Work Plan, Itron Inc., 1310 Emerald Road, Greenwood, South Carolina. URS Corporation, Greenville, South Carolina. November.
- URS 2013b. Health and Safety Plan, Itron Inc., 1310 Emerald Road, Greenwood, South Carolina. URS Corporation, Greenville, South Carolina. November.



Table 1 Proposed Monitoring Well Locations and Rationale Itron Greenwood

G IIOM moM		e in	Alexanise G	Target Screened	Target Screened	Screen Length	Diameter
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MW-10R	Adjacent to well MW-10	Upper Regolith	Replace well MW-10 which was constructed using different techniques than other site wells	25-35	525 -515	10	2
MW-15R	Adjacent to well MW-15R	Upper Regolith	Replace MW-15 which appears to be too shallow to effectively monitor upper regolith	36-46	520 -510	10	2
MW-19	Approximately 200 feet west of well MW-15	Upper Regolith	Assess downgradient extent of VOCs	35 -45	495 - 485	10	2
MW-20	Near eastern property boundary east of wells MW-12 and MW-4	Upper Regolith	Assess lateral extent of VOCs	40-50	510 - 500	10	2
MW-22D	Approximately 200 feet east of well MW-	Lower Regolith	Assess lateral extent of VOCs	70-75	485 - 480	5	2
12-MM	Near western property boundary southwest of wells MW-10 and MW-14	Upper Regolith	Assess lateral extent of VOCs	32 - 42	505 - 495	10	2
10T-MM	Adjacent to well MW-10	Intermediate Regolith	Significant silty sand zone between MW-10 and MW-10D	55 - 65	497 - 487	10	2

Notes

1 bgs - below ground surface
2 msl - mean sea level
3 VOCs - volattle organic compounds