

UTAH DIVISION OF WATER QUALITY

195 North 1950 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

Willard Bay Project Proposal Form

Applicant Name: Edward P. Hickey, Utah Division of Water Quality, on behalf of residents of Ferron, UT
Project Title: Replacement of benzene-contaminated Drinking Water System piping
Agency or Business Name (if applicable): Utah Division of Water Quality (DWQ)
Mailing Address: 195 North 1950 West P.O. Box 144870, Salt Lake City, UT 84114-4870
Phone: (801-536-4357) - E-mail: ehickey@utah.gov
Govt. Agency: Utah Department of Environmental Quality (DEQ)

1. Estimated Project Costs:

Budget Category	Project 1	Project 2	Description
Labor	\$500	\$0	Emergency response field installation
Materials	\$ 2,000	\$0	purchase P.O.E. filtration system, VOC testing
Equipment	\$0	\$0	
Administration	\$0	\$0	
Miscellaneous	\$0	\$172,600	Culinary pipeline replacement cost payment
TOTAL	\$2,500	\$172,600	
TOTAL PROJECT COST		\$175,100	

2. Describe the purpose and need of the project:

Provide a safe drinking water supply free of petroleum contamination to the residents of Ferron, Utah.

This project proposes to:

- A) Project 1: Provide a Point of Entry (POE) device to filter benzene from the water supply before it enters a single family home. The residence is located at 25 S. State Street, Ferron, UT. This should be considered an emergency response measure. The estimated cost is \$2,500 for a benzene and VOC filtering device, extra filters, exterior protection cover, plumbing modifications, installation, and post-installation VOC testing of the tap water.
- B) Project 2: Repay to the Utah Division of Drinking Water Board the full amount of the hardship grant provided to Castle Valley Special Services District (CVSSD) for emergency construction and replacement of the system’s water main through the contaminated area. In effect, remove the burden of remediation costs on parties not responsible for the contamination.

Background: A gasoline release was reported to DWQ in June 2010. DWQ issued Notice of Violation UGW10-05 to the operators of the Main Street Market, which operated an above ground tank gasoline dispensing system found to be leaking. Evidence of gasoline contamination was found in soil, groundwater, residential drinking water, sewers, and utility corridors. Petroleum fumes were entering homes and Ferron City Hall, and affecting indoor air. DEQ found the gas station operators to be financially unable to pay for the required site remediation and emergency response. Because of the presence of BTEXN in the drinking water system, the Utah Division of Drinking Water (DDW) required the local water supplier, Castle Valley Special Services District (CVSSD), to replace a water main through the contaminated area. Because contaminated soil removal was uncertain to be effective, the replacement pipe was ductile iron pipe with special gaskets. It was encased in a petroleum-resistant sleeve. The water line to the most affected residence was replaced from the water main to the meter and to the home with copper pipe, replacing non-chemical resistant PVC materials. CVSSD was not responsible for the contamination that was affecting their distribution system, nor did CVSSD have funds for this unanticipated cost. CVSSD has provided excavation services at several locations that helped determine the petroleum source, all at their own labor cost. CVSSD obtained a Hardship Grant from the Drinking Water Board as no other sources of funds for water main replacement were available. Most of the drinking water supply was secured by this emergency response, but benzene contamination in tap water persists in at least one residence.

DWQ pursued the responsible party (owner of the market and AST) and required a Corrective Action Plan. This plan, through forced court action, was effected in August and September of 2013 by a professional environmental contractor. Contaminated soil in the driveway and around the meter was excavated and replaced with clean fill dirt. All corrective action items in the site work plan were completed, but inaccessible contaminated soil around the water main remains in place. The source of residual benzene into the home's tap water has not been located and removed. Benzene is no longer detected in the first draw sample, but is consistently detected above the drinking water MCL in the 5 minute flush sample. The proposed P.O.E. device will use activated charcoal filtration to remove the benzene prior to entering the residence's plumbing system.

The responsible party for the contaminant release is recalcitrant and has not fully paid the contractor for services that provided limited source removal and site restoration, an estimated balance of \$130,000. It is unlikely that any other remediation costs will be secured from the responsible party by the contractor or DWQ.

3. Estimated time frame of the project with significant milestones:

Project 1: The POE benzene filtration device can be installed within one month or less after an appropriate device is secured. CVSSD and the Division of Drinking Water would both be involved in the service action. DWQ would provide project oversight. The homeowner would be responsible for future maintenance.

Project 2: The water main grant can be reimbursed immediately when funding is available.

4. Describe the location of the project with attached location map, including details on the total area that will be directly enhanced by the project:

See Figures 1 and 2.

5. Describe how the project will specifically enhance and protect waterways affected by the Willard Bay diesel release and improve the conditions of one or more of the following: wildlife, habitat, natural vegetation, water quality or emergency response:

This project does not specifically enhance and protect waterways affected by the Willard Bay diesel release, or ecosystems in close proximity.

6. Describe the project's connectivity to other natural areas or projects that further enhance wildlife, habitat, natural vegetation, water quality, or emergency response:

This project provides emergency response to a human health threat situation caused by a petroleum release by removing carcinogens from the culinary water supply. Most residences with benzene detections in tap water were secured by the water main replacement and subsequent VOC testing of the water supply.

7. Describe any additional social benefits of implementing this project:

This project does provide emergency response, infrastructure improvement, and partial remediation for a petroleum product spill that directly impacts human health. It will provide a safe drinking water supply to residences with benzene detections in their water samples.

8. Project plans and details, including rights to work on specified piece of land:

The owner of the residence at 25 S. State Street, Ferron, UT where the filtration unit will be installed has previously given rights to access the property to the Utah Division of Environmental Response and

Remediation, IHI Consultants, and Terracon consultants for environmental investigation. CVSSD owns the water system piping up to the residence's water meter.

9. Describe your experience in implementing projects of a similar scope and magnitude:

I am the State of Utah project manager providing oversight of the limited and incomplete site investigation and petroleum remediation. Installation of the point of entry device to filter culinary water would be completed by the water supplier, the water line maintenance professionals at CVSSD. The Utah Division of Drinking Water engineering staff will provide equipment selection and installation oversight.

10. Describe how ongoing maintenance of the project will be funded and carried out:

Long term and ongoing maintenance of the filtration device will be the responsibility of the owner of the residence. A signed agreement will be executed between the homeowner and DEQ.

11. List consultants or agency partners that have participated in project development:

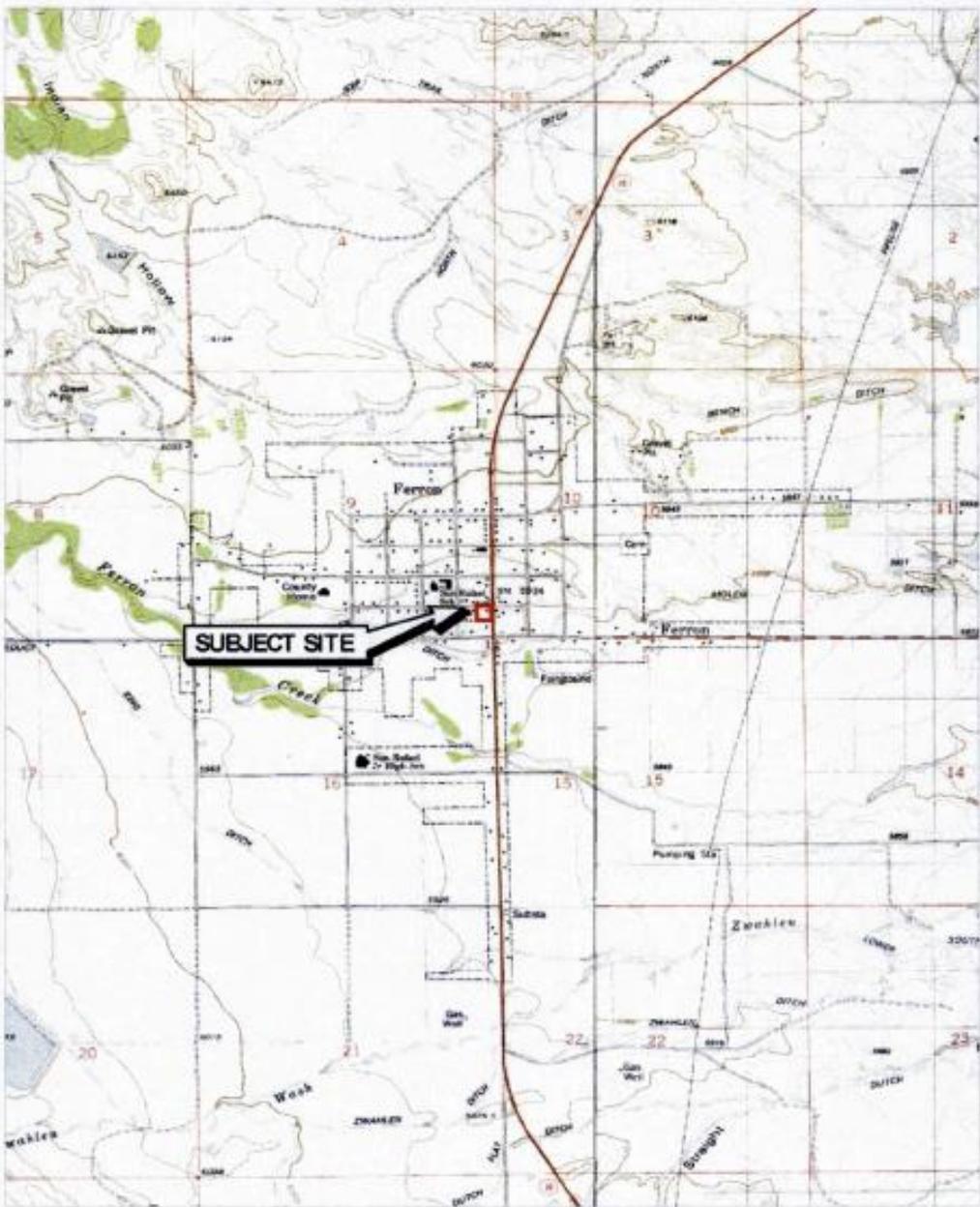
The Utah Division of Water Quality, the Utah Division of Drinking Water, and the Utah Division of Environmental Response and Remediation have participated in the emergency response to date.



Signature _____

Applicant

Date April 30, 2014

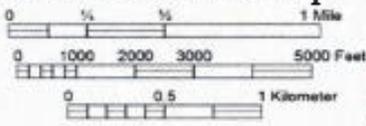


Ferron, UT project site location map

Figure 1



1927 North American Datum; UTM grid zone 12
 Generated by BigTopo7 (www.igage.com)
 Map compiled from USGS Quads Ferron, UT Molen
 UT
 BIGTOPO7 IS FOR GENERAL LOCATION ONLY AND IS NOT
 INTENDED FOR CONSTRUCTION PURPOSES.



BigTopo Map 1979

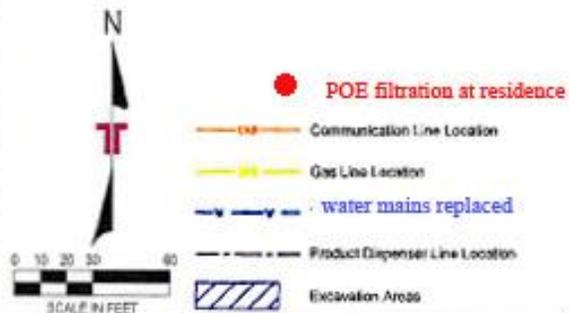


Figure 2
Location of P.O.E. water filtration equipment and water main replacement