

**Moats, William P**

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**From:** Baird Swanson [Baird\_Swanson@nmenv.state.nm.us]  
**Sent:** Wednesday, March 03, 2004 1:18 PM  
**To:** Carolyn Cooper; Will Moats  
**Subject:** Sparton



MW-71R Workplan  
for Pump & Tre...



Card for Baird  
Swanson

Mw-71R plan attached. From Stavros Papadopoulos. fro Sparton.

TITLE  
ST-04-001

**METRIC  
Corporation**

 **S.S. PAPADOPOULOS & ASSOCIATES, INC.**

**SPARTON TECHNOLOGY INC.  
FORMER COORS ROAD PLANT REMEDIAL PROGRAM  
WORK PLAN FOR THE PROPOSED MW-71R PUMP-AND-TREAT SYSTEM**

Prepared by:

S. S. Papadopoulos & Associates, Inc. and Metric Corporation

**INTRODUCTION**

Monitoring well MW-71R was installed in February 2002 as a replacement for deep flow zone (DFZ) well MW-71. Sampling of MW-71R from February 2002 through November 2003 continues to indicate the presence of TCE and other chlorinated solvents in the deep flow zone below the 4800-foot clay layer. TCE concentrations in samples from the well have ranged from 130 micrograms per liter ( $\mu\text{g/l}$ ) in February 2002 to 210  $\mu\text{g/l}$  in August 2003 (see Table 1); the November 2003 sample contained 190  $\mu\text{g/l}$  of TCE.

In the 2002 Annual Report<sup>1</sup>, Sparton proposed to install a pump-and-treat system by pumping well MW-71R at a rate of about 40 gallons per minute (gpm) for a period of one year and then evaluating the results to assess the severity of the problem associated with the detection of contaminants in this well. This Work Plan presents additional information on this proposed pump-and-treat system.

**Pump-and-Treat System**

The layout of the components of the proposed pump-and-treat system is shown in Figure 1. As shown in this figure, the water pumped from MW-71R will be conveyed by a double containment pipeline

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<sup>1</sup> S. S. Papadopoulos & Associates, Inc., 2003, Sparton Technology, Inc., Former Coors Road Plant Remedial Program, 2002 Annual Report, prepared for Sparton Technology, Inc. in association with Metric Corporation, May 16.

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to the lot located in the southeast quadrant of the Buckeye Street and Arrowhead Avenue intersection. The pipeline length would be about 500 feet. Despite considerable effort, Sparton was unable to gain access (by lease or purchase) to one of the lots located at 4100, 4104, and 4108 Bryan Avenue (see Figure 1). Access to one of these three lots on Bryan Avenue would have been preferable as it would have resulted in a shorter double containment pipeline that could have been probably installed without disturbing the newly paved street.

At the lot, the water would be passed through a prefilter, installed in a 3-foot diameter and 3-foot deep manhole, to remove any sediment. After the prefilter, the water will be conveyed to an activated carbon filter unit, installed in a 6-foot diameter and 6-foot deep manhole, to remove TCE and any other organic compounds. Following treatment, the water would be reinjected into the vadose zone above the contaminant plume through a dry well installed for this purpose. The dry well will be installed adjacent to the carbon filter unit by drilling with an auger to a depth of 100 to 150 feet and installing a casing-and-screen assembly with 50 to 100 feet of screen.

### **Operation and Sampling**

After the installation of the conveyance, treatment and reinjection components of the system, and prior to the start of its continuous operation, a temporary pump will be installed in well MW-71R and a step-test will be conducted to determine the sustainable pumping rate of the well. The test will consist of three two-hour steps at different pumping rates. Although actual rates will be determined in the field, it is anticipated that the rates for test steps will be 20 gpm, 40 gpm, and 60 gpm, respectively. The water pumped during the test will be conveyed, treated, and reinjected through the already installed system. At the beginning and near the end of the test, water samples will be collected before and after treatment and analyzed for TCE, 1,1-DCE, and 1,1,1-TCA, by USEPA Method 8260, and for dissolved chromium by USEPA Method 6010. During the test, water levels will be monitored not only in MW-71R but also in the re-injection well. The step-test results will be evaluated to determine the appropriate pumping rate for the

system and to size the permanent pump for the well. A permanent pump will then be installed in the well and connected to the double containment pipeline.

After the start-up of the system, water samples from the influent to and the effluent from the treatment system will be collected weekly during the first month of operation and monthly during the remaining eleven months of operation. Sample collection will be in accordance with the protocols established in the Consent Order and/or the site's Discharge Permit (DP-1184). The samples will be analyzed for TCE, 1,1-DCE, 1,1,1-TCA, and for dissolved chromium by the methods specified above.

### **Potential Future Actions**

Potential future actions that Sparton might take depending on the data obtained from the one-year operation of the system are listed below:

- If the concentrations of the detected contaminants begin to decline and reach levels that are at or below their respective MCLs<sup>2</sup> by the end of the one-year operation, the system will continue to be operated for another 3 months with monthly sampling and analysis. If during these 3 months concentrations continue to remain at or below MCLs, the system will be shut down. Sampling of MW-71R will revert to quarterly frequency.
- If the concentrations are declining from the current levels but do not reach MCLs by the end of the one-year operation, an evaluation will be conducted to determine whether continued operation of the system should reduce the concentrations below MCLs.
- If the concentrations stabilize at a level above MCLs, or continue to increase throughout the one-

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<sup>2</sup> For the purposes of this Work Plan, MCLs denote the more stringent of the Maximum Contaminant Levels for drinking water established under the Safe Drinking Water Act or the maximum allowable contaminant concentrations in groundwater set by the State of New Mexico Water Quality Control Commission.

year operation period, an investigation plan will be developed to obtain the data needed for assessing the risks associated with the presence of contaminants in the DFZ and/or for determining the appropriate remedial action.

Any proposed future action will be submitted to the agencies for approval, and implemented upon approval.

**Required Permits**

Sparton has identified the permits and approvals that will be required to construct and operate the proposed system, and initiated work on obtaining these permits and approvals. A list of the permits and approvals that will be required is presented below:

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Permit/Approval	Approving Agency
Discharge Permit (DP-1184) Modification	NMED/GWB
Water Rights Permit	NMSEO
Zoning (Request for Information)	COA/Zoning
Easement for Pipeline	COA/Property Management
Approval of Pipeline Design	COA/Public Works
Construction Permits	COA

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**Schedule for Implementation**

A schedule for the implementation of the system is presented in Figure 2. As shown in this schedule, it is anticipated that the system can be implemented in seven and one-half months after the

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approval of this Work Plan. The schedule is based on the assumption that all required permits and approvals will be obtained within the time frame stipulated in the schedule, and is subject to modifications for any delays that may be encountered in obtaining these permits and approvals.

TABLE 1

MW-71R WATER QUALITY DATA

Well ID	Sample Date	TCE µg/l	1,1-DCE µg/l	1,1,1-TCA µg/l	Unfiltered		Filtered		Additional Compounds µg/l
					Cr Total mg/l	Cr <sup>+6</sup> mg/l	Cr Total mg/l	Cr <sup>+6</sup> mg/l	
MW-71R	02/28/02	130	3	<1.0	0.02	NA	0.0162	NA	MeCl: 1.5
	04/09/02	150	5.3	<1.0	0.004	NA	NA	NA	
	05/08/02	160	4.2	<1.0	0.003	NA	NA	NA	MeCl: <1.0
	08/07/02	190	5.6	<1.0	<0.005	NA	NA	NA	MeCl: 2.0
	11/07/02	180	4.9	<1.0	<0.005	NA	NA	NA	MeCl: 1.7
	02/19/03	180	5.9	<1.0	<0.005	NA	NA	NA	MeCl: 1.9
	05/13/03	190	5.4	<1.0	<0.001	NA	NA	NA	MeCl: 1.9
	08/13/03	210	5.8	<1.0	<0.001	NA	NA	NA	MeCl: 2.1
Dupl. (PZ-3-03)	08/13/03	210	6.2	<1.0	<0.001	NA	NA	NA	MeCl: 2.1
	11/18/03	190	5.3	<1.0	0.015	NA	NA	NA	MeCl: 2.4

Drinking  
water  
mCLs  
(2002)

(5) (7) (200) ~~0.1~~ (0.1) (5)

(5) (5) (60)

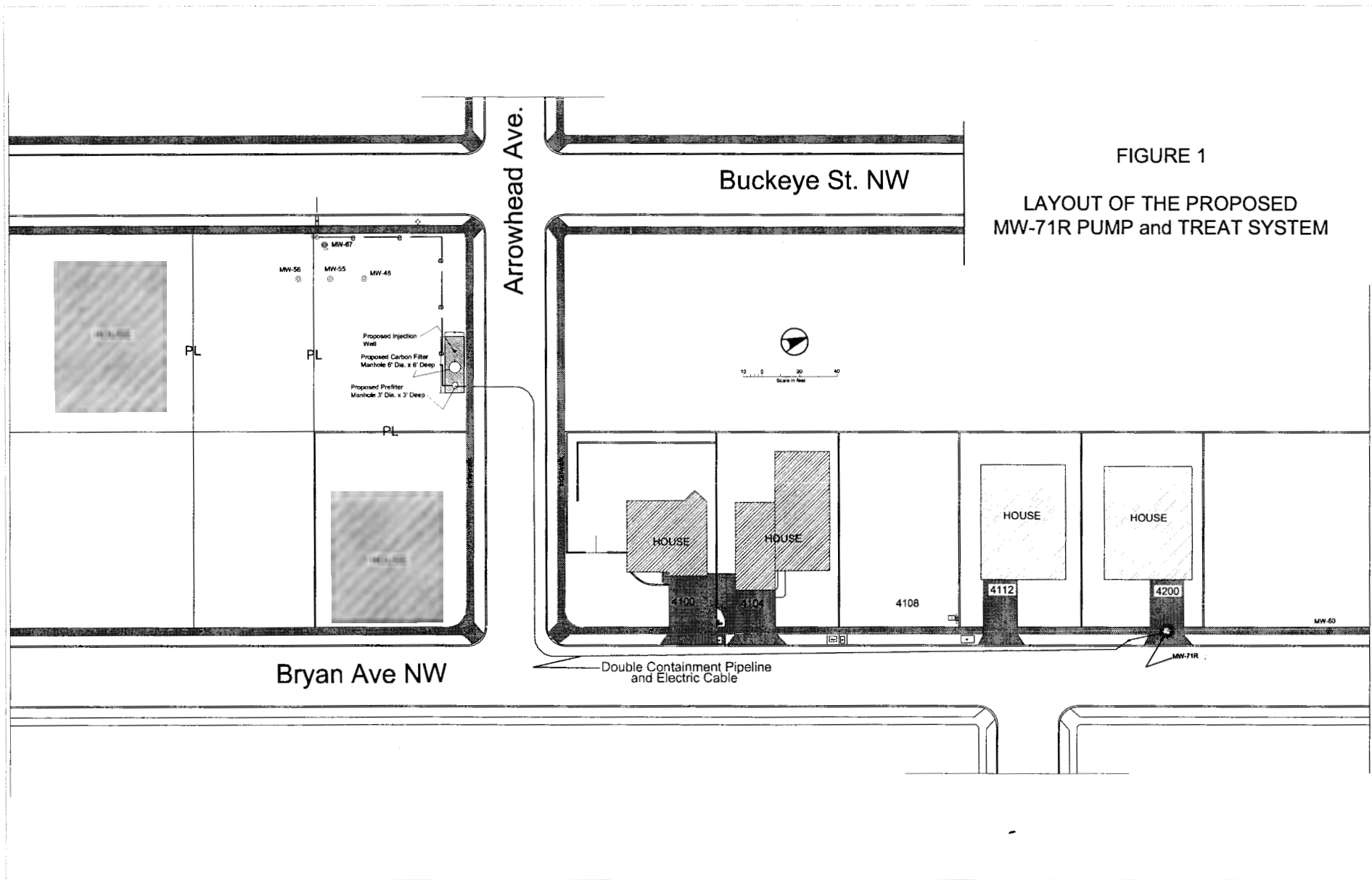


FIGURE 1  
 LAYOUT OF THE PROPOSED  
 MW-71R PUMP and TREAT SYSTEM



FIGURE 2

SCHEDULE FOR THE IMPLEMENTATION OF THE PROPOSED MW-71R PUMP-and-TREAT SYSTEM

