

DECLARATION FOR THE RECORD OF DECISION

Baird & McGuire/Alternate Water Supply
Holbrook, Massachusetts

Statement of Purpose

This Decision Document presents the selected remedial action for this Site developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Contingency Plan (NCP), 40 CFR Part 300, 55 Federal Register 8666 (March 8, 1990).

The Commonwealth of Massachusetts has concurred with the selected remedy.

Statement of Basis

This decision is based on the Administrative Record which was developed in accordance with Section 113(k) of CERCLA and which is available for public review at the information repositories located at the Holbrook Public Library in Holbrook, Massachusetts, and at the EPA offices at 90 Canal Street in Boston, Massachusetts. The attached index identifies the items which comprise the Administrative Record upon which the selection of a remedial action is based.

Description of the Selected Remedy

A. Description of Remedial Components

After evaluating all of the feasible alternatives using the criteria for remedy selection, EPA has selected AW-1, the reactivation of the Donna Road aquifer, as the alternate water supply to replace the lost demand resulting from contamination of the South Street Wellfield. AW-1 can be broken into four components: (1) permitting/pre-design studies, (2) groundwater extraction, (3) treatment, and (4) delivery to distribution system. Each component is described below.

1. Permitting/Pre-Design Studies

Since the Donna Road Aquifer is not part of the Baird & McGuire Site, Section 121(e), which waives the administrative permitting requirements for remedial actions conducted on-site, is not applicable; therefore all necessary federal, state and local permits must be obtained for this remedial action. Two permits which will be critical to the timely implementation of this remedy will be a water withdrawal permit as required by the Massachusetts Water Management Act and a new source approval as required by the Massachusetts Department of Environmental Protection's (DEP) "Guidelines and Policies for Public Water Supplies" document.

The Randolph-Holbrook Joint Water Board currently has a water withdrawal permit which authorizes them to withdraw a total of 3.27 mgd from the following four points: South Street Well No. 1 (which was closed in 1982), Donna Road Wellfield, Richardi Reservoir and the Great Pond/Upper Reservoir. The Joint Water Board is currently operating close to that 3.27 mgd capacity; the addition of 0.31 mgd will exceed the permitted capacity thus requiring a new permit. In addition to a new permit for total volume of water, under the Massachusetts Water Management Act the addition of a new well constitutes a new withdrawal point and will also require a new permit.

The "Guidelines and Policies for Public Water Supplies" guide provides for a nine-step procedure for seeking Massachusetts Department of Environmental Protection (DEP) approval of a drinking water source. The process is a phased approach which include exploration and preliminary testing, a five day pump test, and a summary hydrologic report.

Although all studies and historical data indicate the Donna Road Aquifer should be able to meet the 0.31 mgd Lost Demand under the Source Approval Process, DEP may limit the pumping of the wells based on the safe yield (the maximum rate at which the system can be expected to deliver water continually under a defined set of drought conditions) of the aquifer. Should the Donna Road Aquifer be unable to provide the entire Lost Demand of 0.31 mgd, any incremental difference between 0.31 mgd and the amount of water the Donna Road Aquifer provides will be obtained by increasing the diversion of the Farm River. If however, the production of ground water from Donna Road is insufficient to support the balance between the remedy selection criteria, EPA will reexamine the remedy. EPA anticipates that a water production from Donna Road of less than 0.21 may prompt such a reevaluation.

2. Groundwater Extraction

The extraction system is conceptualized as two 12-inch diameter wells approximately 40 feet deep, and 800 to 1,000 feet apart, aligned perpendicular to groundwater flow. Submersible pumps located in each well will extract water and pump it directly to treatment units. It is anticipated that the pumps will be turned on and off by pressure/demand. The exact number and location of the wells will be refined during the hydrogeologic investigations necessary for the DEP's Source Approval Process.

3. Treatment

National Primary Drinking Water Regulations (NPDWR) (40 CFR 141, Subpart H) require that public water systems supplied by a groundwater source under the direct influence of surface water provide filtration and disinfection treatment processes, unless the supplier can demonstrate that the raw water source meets stringent criteria for bacteria and other microbiological contaminants. The filtration treatment steps proposed for iron and manganese control and the subsequent disinfection step will satisfy the requirements of 40 CFR 141, Subpart H.

As levels of iron and manganese in the Donna Road Aquifer exceed federal drinking water standards, included in this alternative, as with all the possible alternatives, is a potassium permanganate treatment system. The iron and manganese treatment system consists of adding potassium permanganate to the extracted water. The potassium permanganate then causes the iron and manganese to precipitate out of the water. The process is then followed by greensand filtration. The greensand acts as a filter to further remove precipitate.

Although the treatment method is well established, a pilot test will be performed to assure its effectiveness before design and implementation.

4. Distribution System

Treated groundwater will be piped to the current distribution system which is within a few hundred feet of the Randolph-Holbrook water distribution main. No modifications to the distribution system are anticipated.

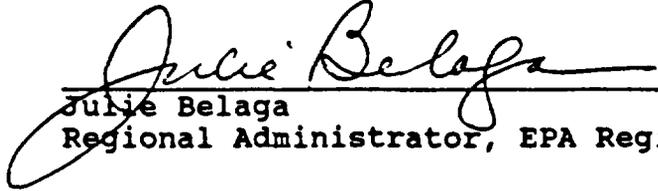
Declaration

The selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable for this remedial action and is cost-effective. The selected remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. The

statutory preference for remedies that utilize treatment as a principal element to reduce the mobility, toxicity, or volume of hazardous substances is not applicable.

9/27/90

Date



Julie Belaga
Regional Administrator, EPA Region I

**BAIRD & MCGUIRE SITE
ALTERNATE WATER SUPPLY**

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**ROD DECISION SUMMARY
BAIRD & MCGUIRE SITE/ALTERNATE WATER SUPPLY**

I. SITE NAME, LOCATION AND DESCRIPTION

The Baird & McGuire Site is located on South Street in northwest Holbrook, Massachusetts, approximately 14 miles south of Boston. The twenty-acre Site is bounded by South Street to the south and west, Mear Road to the north, and the Cochato River to the east. Approximately 2.5 miles downstream from the Site, the Cochato River flows past a sluice gate regulating the diversion of river water to the Richardi Reservoir, a water supply source for the towns of Holbrook, Randolph, and Braintree. This diversion has been closed since 1983.

Eight of the twenty acres have been owned by the Baird & McGuire, Inc. since 1912, when chemical manufacturing operations began. The Baird & McGuire property originally included a laboratory, storage and mixing buildings, an office building and a tank farm.

For over 70 years, Baird & McGuire, Inc. operated a chemical manufacturing and batching facility on the property. Later activities included mixing, packaging, storing and distributing various products, including herbicides, pesticides, disinfectants, soaps, floor waxes and solvents. Some of the raw materials used at the Site were stored in the tank farm and piped to the laboratory or mixing buildings. Other raw materials were stored in drums on-site. Waste disposal methods at the Site included direct discharge into the soil, nearby brook and wetlands, and a former gravel pit (now covered) in the eastern portion of the Site. Underground disposal systems were also used to dispose of wastes.

The Baird & McGuire Site includes a portion of the Cochato River sediments. This area begins at approximately the center of the Site fence along the Cochato River and extends north to Union Street.

The South Street wellfield, part of the municipal water supply for Holbrook, is within 1,500 feet of the Baird & McGuire property. The last operating well was shut down in 1982 due to organic contamination. Studies indicate that contaminants used or stored at the Site were possible sources for contamination of the well. In December 1982, the Baird & McGuire Site was placed on EPA's Proposed National Priorities List (NPL).

A more complete description of the Site can be found in the Focused Feasibility Study at pages 1-2 through 1-4.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

A. Land Use and Response History

In 1983, EPA conducted a removal action at the Site after a waste lagoon overflowed near the Cochato River and spread contaminants into the river. Emergency activities included removing approximately 1,000 cubic yards of heavily contaminated soils, construction of a groundwater interception/recirculation system to limit contaminated groundwater from migrating into the river, regrading the contaminated waste disposal area and covering it with a temporary clay cap. In response to the lagoon overflow, the Tri-Town Water Board (Holbrook, Randolph, and Braintree) closed the sluice gate located approximately 2.5 miles downstream from the Site that diverted water to the Richardi Reservoir. To date, the sluice gate remains closed.

A second removal action for the Site was initiated in 1985 following the discovery of dioxin in Site soils. EPA conducted additional sampling of air, soils and water, and an additional 5,600 feet of fence was installed at that time.

Another major activity conducted at the Site by EPA in 1985 through 1987 was an Initial Remedial Measure (IRM). A new water main was constructed along South Street to replace an existing main that passed through the Baird & McGuire Site. The water main passing through the Site was abandoned and filled with concrete. The Baird & McGuire laboratory and mixing buildings and tank farm were demolished and removed as part of the IRM, and a temporary synthetic cap was installed over that portion of the Site. Wood from the demolished buildings was shredded and placed into barrels and crates that are currently stored on-Site in the storage building.

A Record of Decision (ROD) for the Site, signed in 1986, divided the cleanup of the Baird & McGuire Site into operable units. An operable unit is a discrete part of an entire response action that decreases a release, a threat of a release, or a pathway of exposure. EPA determined in the 1986 ROD that operable units are appropriate for the overall remediation of the Baird & McGuire Site. The 1986 ROD selected two major remedial components, extraction and on-site treatment of groundwater (operable unit #1), and, on-Site excavation and incineration of contaminated soil, much of which is currently covered by temporary caps (operable unit #2). In addition, the demolition material remaining from the original Baird & McGuire buildings will be incinerated on-Site when the soil incineration portion of the long-term remedial action program is initiated.

EPA and the U.S. Army Corps of Engineers have completed the design of the on-Site groundwater extraction/treatment/recharge system (operable unit #1), and the U.S. Army Corps of Engineers

awarded the construction contract to Barletta Engineering Corporation in February 1990. In August 1989, a series of tests was conducted at EPA's Office of Research and Development facility in Arkansas aid in determining the operating procedures that will most effectively destroy soil contaminants. Preparation of the incineration system specifications is currently underway, and the solicitation of bids is expected to take place during the fall of 1990.

A second ROD for operable unit #3, which addressed Cochato River sediment contamination, was signed on September 14, 1989. The design is expected to begin in the fall of 1990.

This ROD is for operable unit #4 and addresses an alternate water supply/replacement of lost demand which resulted from the contamination and subsequent shutdown of the South Street wells.

A more detailed description of the Site history can be found in the Focused Feasibility Sediment Study at pages 1-5 through 1-6.

B. Enforcement History

The Baird & McGuire facility had a lengthy history of violating environmental laws. From the mid-1950s on, the company received numerous citations for violations of the Federal Insecticide, Fungicide, and Rodenticide Act. Further, both the state and the local governments took legal actions against the company at various times.

EPA involvement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) began in March 1983 with the first removal action conducted at the Site. Baird & McGuire, Inc. ceased operating shortly thereafter, and the company and its officers took the position that they did not have sufficient assets to pay for the remedial work necessary at the Site.

In October 1983, the United States of America, on behalf of the Administrator of EPA, filed a cost recovery action under Sections 104(a) and (b) and 107(a) of CERCLA. The complaint sought reimbursement for costs incurred by the United States in remedying Site conditions from Baird & McGuire, Inc., Baird Realty Co., Inc. (subsequently know as the Ann E. Realty Trust, Inc.), Cameron M. Baird, and Gordon M. Baird.

Baird & McGuire, Inc. owned and operated the Baird & McGuire facility. Baird Realty Co., Inc. was a record owner of part of the Site. Cameron Baird was the president, treasurer, and chief executive of Baird & McGuire, Inc. Gordon M. Baird (Cameron's brother) was the chairman of the board of Baird & McGuire, Inc.

The government contends that both individuals exercised control over the company's conduct, activities and operations.

The defendants to the lawsuit, as listed above, are also the only Potentially Responsible Parties ("PRPs") identified to date by EPA.

The PRPs maintained from early on in discussions with EPA both that they lacked the financial assets to conduct the remedy and that they were not liable. The PRPs provided some information regarding their finances, and the United States obtained a lien on a parcel of property owned by the Ann E. Realty Trust, Inc. EPA subsequently determined that the PRPs were unable and unwilling to implement the full remedy at the Site.

The cost recovery action filed in 1983 was settled on an "ability to pay" basis in 1987. The Consent Decree that was signed by all parties in September 1987 includes the following requirements of the Defendants:

- A cash payment to EPA of \$900,000, made in two installments;
- Full EPA access to the Site for the purposes of implementing response actions;
- Liens on the Baird & McGuire property, which consists of 2 lots owned by the Ann E. Realty Trust and the Baird & McGuire lot; and
- Rights to insurance policies which may provide coverage for costs incurred in response to the release or threat of release of hazardous substances from the Baird & McGuire property.

Pursuant to the Baird's assignment to EPA of their rights regarding insurance policies, EPA has negotiated with insurers of Baird & McGuire, Inc for cost recovery. To date, no settlements have been reached with these parties.

The PRPs have had no involvement in the Focused Feasibility Study (FFS) and remedy selection process for this operable unit. EPA notified the public, including the PRPs, of the issuance of the Proposed Plan, but received no PRP comments on the Proposed Plan.

Special notice has not been issued in this case for the earlier operable units since the cost recovery case, filed in 1983, was settled with the only PRPs in 1987.

III. COMMUNITY RELATIONS

Throughout the Site's history, community concern and involvement has been high. EPA has kept the community and other interested parties apprised of the Site activities through Baird & McGuire Task Force meetings, informational meetings, fact sheets, press releases and public meetings.

In 1985, EPA released a community relations plan which outlines a program to address community concerns and keep citizens informed about and involved in activities during remedial activities. Throughout 1985 and 1986, EPA held a series of public informational meetings to describe the plans for and results of the Remedial Investigation, Feasibility Study, and other actions taken by the Agency at the Site during this time.

In May 1989, EPA made the administrative record available for public review at EPA's offices in Boston and at the Holbrook Public Library. The administrative record was updated in June 1989 to include documents used by the Agency for the Cochato River Sediment Study decision and again in June 1990 for the Alternate Water Supply/Lost Demand Study. In June 1990 EPA published a notice and a brief analysis of the Proposed Plan for this operable unit in The Patriot Ledger on June 22, 1990 and made the Plan available to the public at the Holbrook Public Library.

On June 26, 1990, EPA held an informational meeting to discuss the alternatives presented in the Alternate Water Supply Focused Feasibility Study and to present the Agency's Proposed Plan. Also during this meeting, the Agency answered questions from the public. From June 27, 1990 to July 26, 1990, the Agency held a 30 day public comment period to accept public comment on the alternatives presented in the Focused Feasibility Study, the Proposed Plan and on any other documents previously released to the public. On July 17, 1990, the Agency held a public hearing to discuss the Proposed Plan and to accept any oral comments. A transcript of this meeting, the comments, and the Agency's response to comments are included in the attached responsiveness summary.

IV. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

As anticipated in the "Future Action" section of the 1986 ROD for the Site, an Alternate Water Supply Focused Feasibility Study was performed to select a potential water source that could replace the lost demand which occurred when the South Street wells were shut down due to possible contamination resulting from Baird & McGuire industrial practices. This remedial action will address replacement of that lost demand.

V. SUMMARY OF SITE CHARACTERISTICS

This ROD does not address Site related contaminants, rather it involves selecting an alternate water supply to replace the South Street wells lost demand which occurred because of contamination from Baird & McGuire. The 1986 and 1989 RODs for operable units #1, #2 and #3 addressed all sources of contamination from the Baird & McGuire Site. A description of those Site characteristics can be found in Section 5.20-5.21.5 of the Remedial Investigation (RI) and Section 5.4-5.42.5 of the Addendum to the RI and pages 1-12 through 1-17 of the Cochato River Focused Feasibility Study. No further investigation of the Baird & McGuire Site was done in connection with this Focused Feasibility Study or ROD.

VI. SUMMARY OF SITE RISKS

The Alternate Water Supply FFS study area differs from the RI and RI Addendum Site study area (operable units #1 and #2) and the FFS Sediment study area (operable unit #3). The risks associated with each of these operable units were addressed in the 1986 and 1989 RODs. Risks associated with drinking of the groundwater in the South Street well area, the Lost Demand of which this alternate water supply will replace, is 4×10^{-3} , outside EPA's risk range of 1×10^{-6} to 1×10^{-6} . The South Street wells were closed in 1982 and therefore, no one is currently drinking water.

A complete description of the Baird & McGuire Site risks can be found in the 1987 Feasibility Study at pages 2-1 through 2-32 and the Sediment Focused Feasibility Study at pages 1-18 through 1-58.

As this operable unit does not address contamination from the Baird & McGuire Site, there were no site risks associated with this fourth operable unit. Therefore no risk assessment was performed in connection with this study.

VII. DEVELOPMENT AND SCREENING OF ALTERNATIVES

A. Statutory Requirements/Response Objectives

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including: a requirement that EPA's remedial action, when complete, must comply with all federal and more stringent state environmental standards, requirements, criteria or limitations, unless a waiver is

invoked; a requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and a preference for remedies in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances is a principal element over remedies not involving such treatment. Section 121 also provides that if EPA selects a remedy not appropriate for the above preferences, EPA is to publish an explanation as to why a remedial action involving such reduction was not selected. Response alternatives were developed to be consistent with these Congressional mandates.

Based on preliminary information such as constraints of the present water system and known available water sources, a remedial action objective was developed to aid in the development and screening of alternatives. The response objective for operable unit #4 is:

- to identify a candidate water source that will replace the 0.31 million gallons per day (mgd) Lost Demand in an environmentally sound, cost-effective manner without placing additional stress on the Great Pond Reservoir system or existing water treatment facilities.

B. Technology and Alternative Development and Screening

CERCLA and the NCP set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements, a range of alternatives was developed for the site.

As discussed in Chapter 3 of the Focused Feasibility Study, alternate water supply sources were identified, assessed and screened based on implementability, effectiveness, and cost (Figure 1 and Tables 1 and 2). The purpose of the initial screening was to narrow the number of potential remedial actions for further detailed analysis while preserving a range of options. Each alternative was then evaluated and screened in Chapter 3 of the Feasibility Study.

In summary, of the 13 alternate water supply sources screened in Chapter 3, three plus the no action alternative were retained for detailed analysis. Tables 1 and 2 identify the three alternatives that were retained through the screening process, as well as those that were eliminated from further consideration.

VIII. DESCRIPTION OF ALTERNATIVES

This Section provides a narrative summary of each alternative evaluated. A detailed tabular assessment of each alternative can be found in Table 5-3 of the Focused Feasibility Study.

A. Alternate Water (AW) Supply Sources**Alternative NA: No Action (AW-NA)**

Analysis of the No Action alternative is required by federal law and is included for comparison with other alternatives. In this alternative, no alternative water supply to replace the lost demand would be developed.

ESTIMATED FIVE-YEAR REVIEW COSTS: \$ 0
ESTIMATED TOTAL COST (NPW): \$ 0

Alternative 1: Reactivation of the Donna Road Aquifer (AW-1)

This alternative has been chosen as EPA's preferred alternative for the Alternate Water Supply/Replacement of Lost Demand. See pages 15 through 19 for a discussion of the selected remedy.

Alternative 2: Increased Farm River Diversion (AW-2)

In this alternative, an additional 0.31 mgd of water would be diverted from the Farm River into the Richardi Reservoir to replace the Lost Demand. The Farm River currently provides an undocumented volume of water to the Richardi Reservoir through a diversion channel located at the north end of the reservoir. Currently, water drawn from the Richardi Reservoir is treated and disinfected at the Randolph-Holbrook water treatment facility. This facility operates beyond capacity at times, and expansion of the facility would be necessary if the flow from the reservoir and, hence to the treatment facility, were increased. The Randolph-Holbrook Joint Water Board is planning to expand the capacity of the water treatment plant to address its current overload situation; implementation of this alternative would be possible only after completion of the expansion.

Additionally, since levels of iron and manganese in the Farm River exceed federal drinking water standards, included in this alternative is a potassium permanganate treatment system to be installed at the Randolph-Holbrook treatment facility. This iron and manganese treatment system consists of adding potassium permanganate to the extracted water; the potassium permanganate causes the iron and manganese to precipitate (form a solid and drop out of the solution) out of the water. The process is then followed by greensand filtration. The greensand acts as a filter

to further remove precipitate. The water would then be disinfected at the Randolph/Holbrook Water Treatment Plant.

Implementation of this alternative would require compliance with the Massachusetts Water Management Act (obtaining a water withdrawal permit) and obtaining a Source Approval under the DEP "Guidelines and Policies for Public Water Supplies" document. (See Section X.A.1, page 15, 16 for a description of these processes).

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: Dependent upon expansion of the Randolph-Holbrook treatment facility and DEP permits and approvals.

ESTIMATED CAPITAL COST: \$306,000

ESTIMATED O & M (Present Worth): \$68,100

ESTIMATED TOTAL COST (Present worth): \$374,000

Alternative 3: Diversion of Cochato River (AW-3)

In this alternative, the diversion of the Cochato River into the Richardi Reservoir would be re-established. The Cochato River is capable of supplying the 0.31 mgd Lost Demand. Water quality in the Cochato River was extensively analyzed during this FFS and during the Cochato River Sediment FFS. The results of these studies indicated that, like the Farm River and the Donna Road Aquifer, the only contaminants which exceed federal drinking water standards are iron and manganese.

Like alternative AW-2, water from the Cochato River would be currently drawn from the Richardi Reservoir is treated and disinfected at the Randolph-Holbrook water treatment facility. This facility operates beyond capacity at times, and expansion of the facility would be necessary if the flow from the reservoir and, hence to the treatment facility, were increased. The Randolph-Holbrook Joint Water Board is planning to expand the capacity of the water treatment plant to address this current overload situation; implementation of this alternative would be possible only after completion of the expansion.

Additionally, since levels of iron and manganese in the Cochato River exceed federal drinking water standards, included in this alternative is a potassium permanganate treatment system to be installed at the Randolph-Holbrook treatment system. This iron and manganese treatment system consists of adding potassium permanganate to the extracted water. The potassium permanganate causes the iron and manganese to precipitate from the water. The process is then followed by greensand filtration. The greensand acts as a filter to further remove precipitate. The water would then be treated at the Randolph/Holbrook water treatment facility.

Implementation of this alternative would require compliance with the Massachusetts Water Management Act (obtaining a water

withdrawal permit) and obtaining Source Approval under DEP "Guidelines and Policies for Public Water Supplies" document. (See Section X.A.1, page 15, 16 for a description of these processes).

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: Dependent upon expansion of the Randolph-Holbrook treatment facility and DEP permits and approvals.

ESTIMATED CAPITAL COST: \$306,000

ESTIMATED O & M (Present Worth): \$68,100

ESTIMATED TOTAL COST (Present worth): \$374,000

IX. SUMMARY OF THE COMPARATIVE ANALYSIS OF ALTERNATIVES

Section 121(b)(1) of CERCLA presents several factors that, at a minimum, EPA is required to consider in its assessment of alternatives. Building upon these specific statutory mandates, the National Contingency Plan articulates nine evaluation criteria to be used in assessing the individual remedial alternatives. In addition, for this operable unit, the criteria from "Guidance Document of Providing Alternate Water Supplies" (OSWER Directive 9355.03-03) were also used. These criteria allow for a more focused and detailed analysis of an alternate water supply alternative than would the nine criteria alone. Those criteria are consistent with the nine criteria and can be interchanged in the FFS as follows:

1. Overall Protection of Human Health and the Environment	Public Health Analysis and Environmental Analysis
2. Compliance with ARARs	Compliance with ARARs
3. Long-Term Effectiveness and Permanence	Performance and Reliability
4. Reduction of Mobility, Toxicity or Volume through Treatment	Not Applicable
5. Short-Term Effectiveness	Timeliness and Safety
6. Cost	Cost
7. Implementability	Implementability/Constructability
8. State Acceptance	State Acceptance
9. Community Acceptance	Community Acceptance

A detailed analysis was performed on the alternatives using the evaluation criteria in order to select a site remedy. The following is a summary of the comparison of each alternative's strengths and weaknesses with respect to the evaluation criteria. These criteria and their definitions are as follows:

Threshold Criteria

The two threshold criteria described below must be met in order for the alternatives to be eligible for selection in accordance with the NCP.

1. **Overall protection of human health and the environment** addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced or controlled through treatment, engineering controls, or institutional controls.
2. **Compliance with Applicable or relevant and appropriate requirements (ARARS)** addresses whether or not a remedy will meet all of the ARARs of other Federal and State environmental laws and/or provide grounds for invoking a waiver.

Primary Balancing Criteria

The following five criteria are utilized to compare and evaluate the elements of one alternative to another that meet the threshold criteria.

3. **Long-term effectiveness and permanence** addresses the criteria that are utilized to assess alternatives for the long-term effectiveness and permanence they afford, along with the degree of certainty that they will prove successful.
4. **Reduction of toxicity, mobility, or volume through treatment** addresses the degree to which alternatives employ recycling or treatment that reduces toxicity, mobility, or volume, including how treatment is used to address the principal threats posed by the site.
5. **Short-term effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period, until cleanup goals are achieved.
6. **Implementability** addresses the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.

7. **Cost** includes estimated capital and Operation and Maintenance (O&M) costs, as well as present-worth costs.

Modifying Criteria

The modifying criteria are used on the final evaluation of remedial alternatives generally after EPA has received public's comment on the RI/FS and Proposed Plan.

8. **State acceptance** addresses the State's position and key concerns related to the preferred alternative and other alternatives, and the State's comments on ARARs or the proposed use of waivers.
9. **Community acceptance** addresses the public's general response to the alternatives described in the Proposed Plan and RI/FS report.

A detailed tabular assessment of each alternative according to the criteria can be found in Table 5-3 of the Feasibility Study.

Following the detailed analysis of each individual alternative, a comparative analysis, focusing on the relative performance of each alternative against the criteria, was conducted. This comparative analysis can be found in Table 3.

The section below presents the criteria and a brief narrative summary of the alternatives and the strengths and weaknesses according to the detailed and comparative analysis.

1. Overall Protection of Human Health and the Environment

AW-1, AW-2, and AW-3 would all be protective of human health and the environment by providing clean drinking water by treatment. Each of these alternatives is equally protective since Maximum Contaminant Levels (MCLs) will be achieved for all compounds after treatment.

2. Compliance with ARARS

Each alternative was evaluated for compliance with ARARs, including chemical-specific, action-specific, and location specific ARARs. AW-1 and AW-3 meet their respective ARARs. AW-2 may not meet the requirements of Executive Order 11990 (Protection of Wetlands). Since the present volume of water being diverted from the Farm River is unknown, it is not possible to quantify the impact that an additional 0.31 mgd diversion would have on downstream wetlands. AW-NA would meet ARARS when the Randolph-Holbrook treatment facility is upgraded to include iron and manganese treatment.

3. Long-Term Effectiveness and Permanence

Alternative AW-1 offers the greatest degree of long-term effectiveness and permanence. AW-1 is expected to be capable of supplying 0.31 mgd based on previous usage of Donna Road Aquifer at 0.5 mgd.

Alternatives AW-2 and AW-3 also offer long-term protectiveness and permanence but, not to as great a degree as AW-1. As noted above, diverting an additional 0.31 mgd from the Farm River may have negative impacts on downstream wetlands; therefore, it is possible that withdrawal might need to be limited at times of low flow. This potential reduces the degree of certainty that AW-2 will prove successful, and thus makes alternative AW-2 less effective in meeting EPA's goal of providing a water source to meet the lost demand. For Alternative AW-3, since no water is currently being diverted, it is less likely than AW-2 that a low flow condition would occur.

Alternative AW-NA will not replace the Lost Demand, and will result in continued reliance on existing water supply and treatment systems; it is neither effective in the long-term nor will it provide a permanent replacement of the lost water demand.

4. Reduction of Mobility, Toxicity, or Volume through Treatment

The reduction of mobility, toxicity and volume through treatment was determined not to be applicable to this operable unit since site contaminants are not being treated under this operable unit.

5. Short-Term Effectiveness

As noted above, since this ROD does not involve treatment of site contaminants, the short-term effectiveness criteria can not be evaluated using the time frame for protection of human health and the environment. This criterion can, however, be used to evaluate the time frame necessary for implementation.

Alternatives AW-1, AW-2 and AW-3 all require issuance of a withdrawal permit under the Massachusetts Water Management Act and each must also go through the Massachusetts Department of Environmental Protection (DEP) Source Approval Process. It is estimated that two to three years will be required to develop Alternatives AW-1, AW-2 or AW-3. Although it appears that AW-2 and AW-3 are equivalent in short-term effectiveness to AW-1, there are two factors which impact the start of implementation of alternatives AW-2 or AW-3 that are outside the control of either EPA or DEP, which make it impossible to predict when the process would begin. Those factors are: (1) the schedule for increasing the capacity of the Randolph-Holbrook water treatment facility, and (2) the schedule for upgrading the Randolph-Holbrook water treatment facility to achieve the Secondary Maximum Contaminant Levels (SMCLs) for manganese. Because of this dependency,

implementation of alternatives AW-2 and AW-3 are considered less timely than AW-1.

Alternative AW-NA does not require performance of any activities, and will not require any time to implement. However, it is considered ineffective in the short-term since it does not meet EPA's objective to provide a water source.

6. Implementability

No engineering problems are foreseen for construction of the wellfield and required water treatment facilities for AW-1 or diversions under alternative AW-2 and AW-3. For AW-1 the estimated 16-by-30-foot treatment building will fit within available space at the end of Donna Road, and access for facility construction and for O&M personnel would be via existing streets. As for Alternatives AW-2 and AW-3, structures are already in place for diverting the Farm and Cochato Rivers; therefore AW-2 and AW-3 are easily implementable from a technical standpoint.

The major concern with implementability of alternatives AW-2 and AW-3 is EPA's lack of control over the plans and schedule of the Randolph-Holbrook Joint Water Board to increase capacity and upgrade treatment.

Since no new construction would be necessary to implement Alternative AW-NA, the implementability of the no-action alternative is high. This alternative can be considered already implemented.

7. Cost

The estimated present worth value of each alternative is as follows:

		COST COMPARISON		
		<u>Capital</u> <u>Costs</u>	<u>O&M Costs</u> ¹ <u>(\$/year)</u>	<u>Present</u> <u>Worth</u>
AW-NA	No Action	\$ 0	0	0
AW-1	Reactivation of Donna Road Aquifer	992,000	23,000	1,188,000

¹O&M costs are not EPA's responsibility, and EPA will not provide O&M funds; however, O&M costs for a twenty year period were included in the estimates to enable comparison of total project costs.

		<u>Capital Costs</u>	<u>O&M Costs² (\$/year)</u>	<u>Present Worth</u>
AW-2	Increased Diversion of the Farm River	306,000	8,000	374,000
AW-3	Cochato River Diversion	306,000	8,000	374,000

8. State Acceptance

The DEP has been involved with the Site from the early 1970's and throughout the CERCLA process. At the request of DEP, EPA has included an additional provision in this alternative. This additional provision involves the use of the Farm River diversion should the Donna Road aquifer be unable to provide the entire 0.31 mgd. The DEP has reviewed the Alternate Water Supply Focused Feasibility Study and concurs with the selected alternate water supply alternative.

9. Community Acceptance

The comments received during the public comment period and the discussions during the Proposed Plan and Feasibility Study public meeting are summarized in the attached document entitled "The Responsiveness Summary" (Appendix A). Generally, all commenters agreed with EPA's proposed remedy. Commenters did want assurances, however, that 0.31 mgd of water would be provided. As outlined in Section XI, in response to comments received during the public comment period, EPA has included in the selected remedy a provision to supplement the water pumped from the Donna Road aquifer if Donna Road is unable to produce 0.31 mgd. Commenters, particularly the Baird & McGuire Task Force, were strongly against AW-3 (Cochato River) as an alternate water supply, due to a perception that the Cochato River surface water contains contamination from the Baird & McGuire Site.

X. THE SELECTED REMEDY

As indicated in Section II.A above, this ROD is for operable unit #4, Alternate Water Supply; operable units #1 and #2 were addressed in the 1986 ROD and operable unit #3 was addressed in the 1989 ROD.

²O&M costs are not EPA's responsibility, and EPA will not provide O&M funds; however, O&M costs for a twenty year period were included in the estimates to enable comparison of total project costs.

A. Description of Remedial Components

After evaluating all of the feasible alternatives using the criteria for remedy selection, EPA has selected AW-1, the reactivation of the Donna Road Aquifer, as the Alternate Water Supply to replace the Lost Demand resulting from contamination of the South Street Wellfield. AW-1 can be broken into four components: (1) permitting/pre-design studies, (2) groundwater extraction, (3) treatment, and (4) delivery to distribution system. Each component is described below.

1. Permitting/Pre-Design Studies

Since the Donna Road Aquifer is not part of the Baird & McGuire Site, Section 121(e), which waives the administrative permitting requirements for remedial actions conducted on-site, is not applicable; therefore all necessary federal, state and local permits must be obtained for this remedial action. Two permits which will be critical to the timely implementation of this remedy will be a water withdrawal permit as required by the Massachusetts Water Management Act and a new source approval as required by the DEP "Guidelines and Policies for Public Water Supplies" document.

The Randolph-Holbrook Joint Water Board currently has a water withdrawal permit which authorizes them to withdraw a total of 3.27 mgd from the following four points: South Street Well No. 1 (which was closed in 1982), Donna Road Wellfield, Richardi Reservoir and the Great Pond/Upper Reservoir. The Joint Water Board is currently operating close to that 3.27 mgd capacity; the addition of 0.31 mgd will exceed the permitted capacity thus requiring a new permit. In addition to a new permit for total volume of water, under the Massachusetts Water Management Act the addition of a new well constitutes a new withdrawal point and will also require a new permit.

The application process for the withdrawal permit consists of:

- o Preparation of an application package including but not limited to:
 - general system information
 - historic and projected withdrawals
 - water demand estimates
 - preparation by the Town of Holbrook of a water conservation program and timetable of implementation

- alternatives to the withdrawal
- potential effects of the withdrawal on surrounding water based users (e.g., wetlands, ash and wildlife, recreation)
- acceptance by Massachusetts Department of Water Supply under the source approval guidelines
- o Notification of abutters and publication of notice of intent to withdraw water:
- o Response to any public comments

DEP also requires a Source Approval for any public drinking water supply over 100,000 mgd. The Source Approval Permit process is outlined in the "Guidelines and Policies for Public Water Supplies" document. The process includes the following nine steps:

1. Exploratory Phase;
2. Site Exam Request;
3. Site Exam;
4. Pump Test Approval;
5. Pump Test Proposal Review and Approval;
6. Pump Test;
7. Pump Test Report;
8. Final Report; and
9. Approval.

This process is expected to take six (6) months to one year. Further details of each of the nine steps can be found in Appendix A of the FFS.

Although all studies and historical data indicate the Donna Road Aquifer should be able to meet the 0.31 mgd Lost Demand under the Source Approval Process, DEP may limit the pumping of the wells based on the safe yield (the maximum rate at which the system can be expected to deliver water continually under a defined set of drought conditions) of the aquifer. Should the Donna Road Aquifer be unable to provide the entire Lost Demand of 0.31 mgd, any incremental difference between 0.31 mgd and the amount of water the Donna Road Aquifer provides will be obtained by increasing the diversion of the Farm River. If however, the

production of ground water from Donna Road is insufficient to support the balance between the remedy selection criteria, EPA will reexamine the remedy. EPA anticipates that a water production from Donna Road of less than 0.21 may prompt such a reevaluation.

2. Groundwater Extraction

The extraction system is conceptualized as two 12-inch diameter wells approximately 40 feet deep, and 800 to 1,000 feet apart, aligned perpendicular to groundwater flow. Submersible pumps located in each well will extract water and pump it directly to treatment units. It is anticipated that the pumps will be turned on and off by pressure/demand. The exact number and location of the wells will be refined during the hydrogeologic investigations necessary for the DEP's Source Approval Process.

3. Treatment

National Primary Drinking Water Regulations (NPDWR) (40 CFR 141, Subpart H) require that public water systems supplied by a groundwater source under the direct influence of surface water provide filtration and disinfection treatment processes, unless the supplier can demonstrate that the raw water source meets stringent criteria for bacteria and other microbiological contaminants. The filtration treatment steps proposed for iron and manganese control and the subsequent disinfection step will satisfy the requirements of 40 CFR 141, Subpart H.

As levels of iron and manganese in the Donna Road Aquifer exceed federal drinking water standards, included in this alternative, as with all the possible alternatives, is a potassium permanganate treatment system. The iron and manganese treatment system consists of adding potassium permanganate to the extracted water. The potassium permanganate then causes the iron and manganese to precipitate out of the water. The process is then followed by greensand filtration. The greensand acts as a filter to further remove precipitate (Figure 2).

Although the treatment method is well established, a pilot test will be performed to assure its effectiveness before design and implementation.

4. Distribution System

Treated groundwater will be piped to the current distribution system which is within a few hundred feet of the Randolph-Holbrook water distribution main. No modifications to the distribution system are anticipated.

XI. STATUTORY DETERMINATIONS

The remedial action selected for implementation at the Baird & McGuire Site is consistent with CERCLA and, to the extent practicable, the NCP. The selected remedy is protective of human health and the environment, attains ARARs and is cost effective. Additionally, the selected remedy utilizes alternate treatment technologies or resource recovery technologies to the maximum extent practicable.

A. The Selected Remedy is Protective of Human Health and the Environment

The remedy at this Site will permanently reduce the risks posed to human health and the environment by eliminating, reducing or controlling exposures to human and environmental receptors through treatment, engineering controls, or institutional controls; more specifically, since water from the Donna Road Aquifer meets all MCLs, and Massachusetts Maximum Contaminant Levels (MMCLs) except sodium, and can meet all Maximum Contaminant Level Goals (MCLGs), Secondary Maximum Contaminant Levels (SMCLs) with treatment the remedy is considered protective of human health and the environment. Implementation of the selected remedy will not pose unacceptable short-term risks or cross-media impacts, since any wetland impacts will be mitigated, if necessary, by the source approval process limiting pumping rates.

B. The Selected Remedy Attains Applicable Requirements

This remedy will attain all applicable federal and state requirements that apply to the Site. Since this remedy is being conducted entirely off-site only applicable requirements, including obtaining all applicable permits will be required. Environmental laws from which applicable requirements for the selected remedial action are derived, and the specific applicable requirements include:

Chemical Specific

Safe Drinking Water Act
Massachusetts Drinking Water Regulations

Location Specific

Executive Order 11990 (Wetlands Protection)
Fish and Wildlife Coordination Act
Clean Water Act
Rivers and Harbors Act of 1899

Resource Conservation and Recovery Act (Land Ban)
 Massachusetts Wetlands Protection Act
 Massachusetts Waterways Act
 Massachusetts Surface Water Quality Standards
 Massachusetts Ground Water Quality Standards
 Massachusetts Water Quality Certification and Certification of
 Dredging
 Massachusetts Water Management Act
 Massachusetts Supervision of Inland Waters

Action Specific

Occupational Safety and Health Act
 Massachusetts Guidelines & Policies for Public
 Water Systems

A discussion of why these requirements are applicable may be found in the FFS Report at pages 2-1 through 2-23 and pages 5-33 through 5-55.

1. Chemical-specific Applicable Requirements

a. Safe Drinking Water Act

Since the purpose of this FFS was to develop a drinking water source to replace the lost demand from the South Street wells, the National Primary Drinking Water Regulations (NPDWR) which establish Maximum Contaminant Levels (MCLs) that specify the maximum permissible level of a contaminant in water used as a public water supply are applicable.

National Secondary Drinking Water Regulations establish Secondary Maximum Contaminant Levels (SMCLs), are also applicable and can be met with treatment.

b. Massachusetts Drinking Water Regulations

As with the National Primary Drinking Water Regulations, since the purpose of this remedy is to establish a drinking water source for the Town of Holbrook, the Massachusetts Drinking Water Regulations (310 CMR 22.00) are applicable to this remedy. Data indicate that water from the Donna Road Aquifer meets all MMCLs except for sodium (27 mg/L versus 20 mg/L). The MMCL for sodium is based on the amount of sodium recommended from drinking water for individuals on a reduced-sodium diet. DEP generally does not shut down a water supply because sodium levels slightly exceed the MMCL; rather, it requires the water supplier to notify persons served by the water supply of the sodium levels and possible ways of correcting the situation (310 CMR 22.16), thus this requirement can be met.

2. Location-specific Applicable Requirements

a. Executive Order 11990 (Wetlands Protection)

Executive Order 11990, Wetlands Protection, is applicable to actions involving construction of facilities in wetlands or alterations of wetland property. Since AW-1 is located in a wetland, the Wetland Executive Order is applicable.

b. Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC 661 et seq.) requires that before issuing a federal permit or undertaking any federal action that causes the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, the applicable federal agency must consult with (1) the appropriate state agency exercising jurisdictions over wildlife resources; (2) the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service, within the Department of Interior; and (3) the National Marine Fisheries Service, within the Department of Commerce. Since AW-1 is to take place in the Trout Brook bottomland this Act is applicable.

c. Clean Water Act

Section 402 of the Clean Water Act (CWA) regulates the discharge of pollutants into navigable waters of the U.S. A National Pollutant Discharge Elimination System (NPDES) permit must be obtained from EPA or a delegated state agency for such a discharge. The discharge of filter backwash from a water treatment facility to a surface water body would require an NPDES permit.

Section 404 of the CWA regulates the discharge of dredged and fill materials to waters of the U.S. Filling wetlands would be considered a discharge of fill material to waters of the U.S. If construction of access roads in the Trout Brook bottomland are deemed necessary during the permitting process or pre-design studies, it would be considered a disturbance of a wetland and section 404 of the CWA would be applicable.

d. Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbor Act of 1899 requires authorization from the Secretary of the Army, acting through the U.S. Army Corps of Engineers (USACE), for the construction of any structure in or over any "navigable water of the U.S.," the excavation from or deposition of material in such waters, or any obstruction or alteration in such waters. Should additional diversion be needed to supplement the Donna Road supply by using the Farm River, this Act would be considered applicable.

e. Resource Conservation and Recovery Act (Land Ban)

Since this ROD does not involve the disposal or treatment of hazardous substances, land ban requirements are not applicable.

f. Massachusetts Wetlands Protection Act.

At the state level, similar to the Wetlands Executive Order, wetlands and land subject to flooding are protected under the Massachusetts Wetlands Protection Act (MGL, Chapter 131) and wetlands regulations at 310 CMR 10.00. Since AW-1 involves work in the wetlands, the Act is applicable.

g. Massachusetts Waterways Act

The Massachusetts Waterways Act (MGL, Chapter 91) and regulations at 310 CMR 9.00 require that a license from DEP be obtained for any work in or over any tidelands, river or stream (with respect to which public funds have been expended), or great pond, or any outlet thereof. Farm and Cochato Rivers are considered to be subject to these regulations. Should additional diversion be needed to supplement the Donna Road supply by using the Farm River, this Act would be considered applicable.

h. Massachusetts Surface Water Quality Standards and Ground Water Quality Standards

The Massachusetts Surface Water Quality Standards and Ground Water Quality Standards (314 CMR 4.00 and 314 CMR 6.00, respectively) set forth procedures to be used by the state in classifying surface water and groundwater according to the uses which the class is intended to protect. For each class, the most sensitive beneficial uses are identified and minimum criteria for water quality are established. The regulations establish three classes for inland surface waters according to the most sensitive and therefore governing uses the classes are intended to protect. In accordance with 314 CMR 4.04 and 6.04, the quality of surface water will be maintained and protected to sustain existing beneficial uses. In addition, water whose quality is or becomes higher will be maintained at that higher level of quality unless limited degradation is authorized. Since AW-1 involves surface water discharge permits, the standards are applicable.

i. Massachusetts Water Quality Certification and Certification of Dredging

For activities that require a DEP Wetlands Order of Conditions to dredge or fill waters or wetlands, a Chapter 91 Waterways License, a USACE permit, or any major permit issued by EPA (e.g., CWA NPDES permit), a Massachusetts Division of Water Pollution Control Water Quality Certification pursuant to 314 CMR 9.00 is

required. As in Section XI.B.2.c above, if an additional access road is necessary then this certification is applicable.

j. Massachusetts Water Management Act

Under the Massachusetts Water Management Act (MGL Chapter 21G) and regulations (310 CMR 36.00), DEP, in conjunction with the Executive Office of Environmental Affairs Water Resource Commission, implements a program to assess and regulate the use of water in the state, plan for future water needs, and assess the safe yields of all river basins.

The program requires registration with the DEP Division of Water Supply (DWS) of withdrawals of ground or surface water in Massachusetts above an daily average of 100,000 gallons for a quarter year. A permit must be obtained prior to making a new withdrawal in excess of the threshold volume from a water source or constructing the means to make the withdrawal. A new withdrawal also includes an increase above the registered withdrawal in excess of the threshold value of 100,000 gallons per day. Alternative AW-1 includes a withdrawal over the threshold, a new withdrawal and an increase above the registered withdrawal, thus the Water Management Act is applicable.

k. Massachusetts Supervision of Inland Waters Act

Section 111, MGL Chapters 159 and 160, gives general oversight and care of all inland waters and of all streams, ponds and underground waters used by any city or town in the commonwealth as sources of water. The provision requires recordkeeping by DEP. Since the Donna Road aquifer is an underground water, this Act is applicable.

3. Action-specific Applicable Requirements

a. Occupational Safety and Health Act

The Occupational Safety and Health Administration (OSHA) standards (i.e., 29 CFR 1910, 1904, and 1926) apply to worker safety, and require employers to communicate risks at the workplace to employees. OSHA standards must be complied with during all site work.

b. Massachusetts Guidelines & Policies for Public Water Systems

The DEP DWS published a document that provides guidance for the exploration, evaluation, treatment, storage/distribution, and protection of new public water supply sources (DEP, 1990). For all groundwater withdrawals, the document specifies an exploration phase, site exam, five-day pump test, requirements for delineating three affected zones, and a final report.

C. The Selected Remedial Action is Cost-Effective

In the Agency's judgment, the selected remedy is cost-effective, i.e., the remedy affords overall effectiveness proportional to its costs. In selecting this remedy, once EPA identified alternatives that are protective of human health and the environment and that attain, or, as appropriate, waive applicable requirements, EPA evaluated the overall effectiveness of each alternative by assessing the relevant three criteria--long term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness, in combination. The relationship of the overall effectiveness of this remedial alternative was determined to be proportional to its costs. The costs of this remedial alternative are: \$992,000 in capital costs, and \$23,000 annually for 20 years for operation and maintenance, resulting in a total net present worth of \$1,188,000.

Each of the alternatives evaluated is protective of human health and the environment; however, when evaluated in conjunction with short- and long-term effectiveness and permanence, Alternative AW-1 is the most cost-effective. AW-1 will provide a separate water source that has been shown to be able to produce in excess of the 0.31 mgd lost demand. Alternative AW-1 is most effective in the short-term since, unlike AW-2 and AW-3 it is not dependent on the Randolph-Holbrook Joint Water Board for upgrade of the treatment plant. Alternative AW-2 may impact downstream wetlands which could cause water withdrawal to be restricted. As noted above, the reduction of mobility, toxicity and volume was determined not to be applicable to this operable unit because site contaminants are not being treated under this remedy.

D. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable

Once the Agency identified those alternatives that attain or, as appropriate, waive applicable requirements and that are protective of human health and the environment, EPA attempts to identify which alternative utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. This determination was made by deciding which one of the identified alternatives provides the best balance of trade-offs among alternatives in terms of: 1) long-term effectiveness and permanence; 2) reduction of toxicity, mobility or volume through treatment; 3) short-term effectiveness; 4) implementability; and 5) cost. The balancing test emphasized long-term effectiveness and permanence and the reduction of toxicity, mobility and volume

through treatment; and considered the preference for treatment as a principal element, the bias against off-site land disposal of untreated waste, and community and state acceptance. The selected remedy provides the best balance of trade-offs among the alternatives. As the scope of this operable unit does not include treatment of Site contaminants, each alternative, including the selected remedy, utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

E. The Preference for Treatment Which Permanently and Significantly Reduces the Toxicity, Mobility or Volume of the Hazardous Substances as a Principal Element is Not Applicable to the Selected Remedy

The reduction of mobility, toxicity and volume was determined not to be applicable to this operable unit since treatment of Site contaminants is not an objective of this operable unit.

XII. DOCUMENTATION OF SIGNIFICANT CHANGES

EPA presented a proposed plan (preferred alternative) for remediation of the Site on June 26, 1990. The alternate water supply preferred alternative was AW-1 Reactivation of the Donna Road Aquifer. This Alternative included the following four elements: (1) permitting/pre-design studies, (2) groundwater extraction, (3) treatment, and (4) delivery to distribution system. Based on public comment, the following two components were added to the selected alternative:

1. should the Donna Road Aquifer be unable to provide the entire lost demand of 0.31 mgd, any incremental difference between 0.31 mgd and the amount of water the Donna Road Aquifer provides will be obtained by increasing the diversion of the Farm River. If however, the production of ground water from Donna Road is insufficient to support the balance between the remedy selection criteria, EPA may reexamine the remedy. EPA anticipates that a water production from Donna Road of less than 0.21 may prompt such a reevaluation; and
2. in addition to the routine monitoring required at public drinking water supplies, a yearly round of sampling, full TCL organics, TAL inorganics and pesticides will be performed.

XIII. STATE ROLE

The Massachusetts Department of Environmental Protection has reviewed the various alternatives and has indicated its support for the selected remedy. The State has also reviewed the Alternate Water Supply Focused Feasibility Study to determine if the selected remedy is in compliance with applicable or relevant and appropriate State Environmental laws and regulations. The State of Massachusetts concurs with the selected remedy for the Baird & McGuire Site Alternate Water Supply Study. A copy of the declaration of concurrence is attached as Appendix C. In accordance with Section 104 of CERCLA, Massachusetts is responsible for 10 percent of the cost of the remedial action. In the case of the selected remedy the Commonwealth's share is estimated to be 118,800.

TABLE 1

SUMMARY OF GROUNDWATER SOURCE SCREENING

BAIRD & McGUIRE WATER SUPPLY FEASIBILITY STUDY

<u>SITE</u>	<u>PROBABLE YIELD (mgd)</u>	<u>POTENTIAL FOR FUTURE CONTAMINATION</u>	<u>NEEDED DISTRIBUTION SYSTEM MODIFICATIONS</u>	<u>EXPECTED TREATMENT NEEDED FOR IRON AND MANGANESE</u>	<u>DEVELOPMENT WOULD IMPACT EXISTING WATER SUPPLIES</u>	<u>POTENTIAL REGULATORY ISSUES</u>	<u>RECOMMENDED FOR FUTURE INVESTIGATION</u>
Deane Road Wellfield	0.3	Low	Minor	Yes	No	Yes	Yes
Caine Pit	0.13	High	Minor	Yes	No	No	No
South Street Wellfield	0.31*	High	Minor	Yes	No	No	No
Tower Hill	<0.31	Low	Moderate	Yes	Probable	No	No
Gleasons Brook	0.31	High	Moderate	Yes	No	No	No
Town Line	0.31	Low	Moderate	Yes	Probable	Yes	No
Beaver Brook	1.3	Low	Major	Yes	Probable	Yes	No

NOTES:

Section 3 discusses potential regulatory issues.

TABLE 2

SUMMARY OF SURFACE WATER SOURCE SCREENING

DAIRD & MCQUIRE WATER SUPPLY FEASIBILITY STUDY

SITE	PROBABLE YIELD (mgd)	POTENTIAL FOR FUTURE CONTAMINATION	REQUIRES NEW CONSTRUCTION OR EXCAVATION	EXPECTED TREATMENT NEEDED FOR IRON AND MANGANESE	POTENTIAL REGULATORY ISSUES	RECOMMENDED FOR FUTURE INVESTIGATION
Fern River	1.3	Moderate	No	Yes	No ¹	Yes
Cochato River	1.9	Moderate	No	Yes	No ¹	Yes
Blue Hill River	0.62	Moderate	Yes	Yes	Yes ²	No
Dear and Mary Lee Swamps	0.37	Moderate	Yes	Yes	Yes ³	No
Expansion of Richard's Reservoir	Variable	Moderate	Yes	Yes	Yes ⁴	No

NOTES:

- ¹ Diversion of flow may reduce downstream low flows to unacceptable levels.
- ² Creating a needed impoundment would flood upstream wetlands.
- ³ Diversion of flow would severely reduce downstream flows.
- ⁴ Excavation may require alteration of wetlands.

TABLE 3

COMPARATIVE SUMMARY OF WATER SUPPLY ALTERNATIVES

BAIRD & MCGUIRE WATER SUPPLY FEASIBILITY STUDY

CRITERIA	DONNA ROAD ACQUIFER	FARM RIVER DIVERSION	COCHATO RIVER DIVERSION
ENGINEERING ANALYSIS			
Timeliness	Estimated 16 months to develop a water supply, including 12 weeks for further hydrogeologic investigation, 6 weeks for installation and testing of wells, and 52 weeks for design and construction of treatment facility.	Estimated 9-month design and construction of Randolph-Halbach water treatment facility upgrade. Estimated 3 to 6 months for design and installation of manganese treatment. No time will be required for construction of diversion or distribution facilities.	Estimated 9-month design and construction of Randolph-Halbach water treatment facility upgrade. Estimated 3 to 6 months for design and installation of manganese treatment. No time will be required for construction of diversion or distribution facilities.
Performance	Proposed system should be effective for supply and treatment of water.	Proposed system should be effective for supply and treatment of water.	Proposed system should be effective for supply and treatment of water.
Reliability	Treatment methods and mechanical equipment should be reliable.	Upgraded water treatment facility should be reliable for treatment; age of plant makes ongoing repairs likely.	Upgraded water treatment facility should be reliable for treatment; age of plant makes ongoing repairs likely.
Implementability/ Constructability	No physical problems foreseen with construction or access. Operation will not require full-time staffing; require additional staffing.	Schedule of proposed treatment plant upgrade not under control of EPA. Treatment of Lost Demand will not require additional staffing.	Schedule of proposed water treatment facility upgrade not under control of EPA. Treatment of Lost Demand will not require additional staffing.
Safety	Does not pose safety risks beyond those associated with routine construction activities.	Does not pose safety risks beyond those associated with current diversion and treatment.	Does not pose safety risks beyond those associated with current diversion and treatment.
COST ANALYSIS			
	<p>Cost Projected to 0.31 mgd</p> <p>New Source Pre-design Studies \$531K</p> <p>Water Treatment Facility Capital Cost \$461K</p> <p>Total Capital Cost \$992K</p> <p>Total Annual Operation and Maintenance Cost \$ 23K</p> <p>Present Worth of Operation and Maintenance \$194K</p> <p>Total Present Worth \$1,186K</p>	<p>Cost Projected to 0.31 mgd</p> <p>New Source Pre-design Studies \$180K</p> <p>Water Treatment Facility Upgrade Capital Cost \$123K</p> <p>Potassium-permanganate Facility Capital Cost \$ 3K</p> <p>Total Capital Cost \$306K</p> <p>Total Annual Operation and Maintenance Cost \$ 8K</p> <p>Present Worth Operation and Maintenance \$ 68K</p> <p>Total Present Worth \$374K</p>	<p>Cost Projected to 0.31 mgd</p> <p>New Source Pre-design Studies \$180K</p> <p>Water Treatment Facility Upgrade Capital Cost \$123K</p> <p>Potassium-permanganate Facility Capital Cost \$ 3K</p> <p>Total Capital Cost \$306K</p> <p>Total Annual Operation and Maintenance Cost \$ 8K</p> <p>Present Worth of Operation and Maintenance \$ 68K</p> <p>Total Present Worth \$374K</p>
ENVIRONMENTAL ANALYSIS			
Discharges of Contaminants	Treatment for iron and manganese would generate backwash water and solids. Water can be discharged to surface water or sewer system. Solids can be landfilled.	Backwash water and solids can be handled using current backwash treatment method.	Backwash water and solids can be handled using current backwash treatment method.

TABLE 3

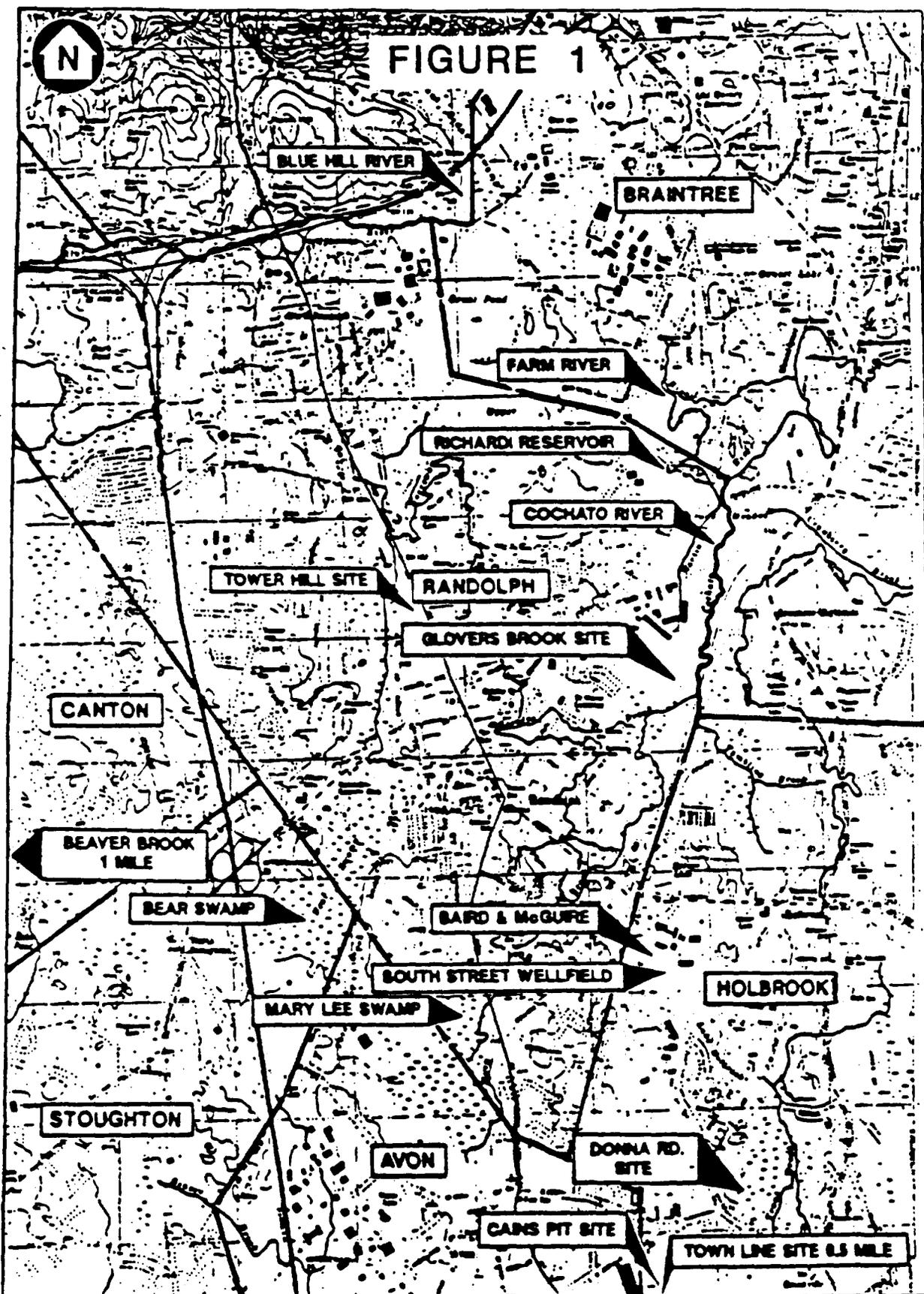
(continued)
COMPARATIVE SUMMARY OF WATER SUPPLY ALTERNATIVES

BAIRD & MCGUIRE
WATER SUPPLY FEASIBILITY STUDY

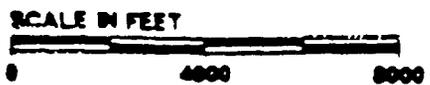
CRITERIA	DONNA ROAD AQUIFER	FARM RIVER DIVERSION	COCHATO RIVER DIVERSION
ENVIRONMENTAL ANALYSIS (Continued)			
Disruption of Normal Community Activities	Major disruption of community activities due to construction-related activities not anticipated.	Major disruption of community activities due to construction-related activities not anticipated.	Major disruption of community activities due to construction-related activities not anticipated.
Characteristics of Long-term System Operation	Should not cause disruption or nuisance.	Should not cause disruption or nuisance. Diversion during low flow may create extreme low flows downstream.	Should not cause disruption or nuisance. Diversion during low flow may create extreme low flows downstream.
Failure of Alternative System	Probability of failure considered low. Failure of proposed system would increase existing demand on Randolph-Holbrook water treatment facility slightly.	Failure of water supply would have major adverse impact on Great Pond system safe yield. Failure of water treatment facility would jeopardize entire Randolph-Holbrook supply.	Failure of water supply would have impact on Great Pond system safe yield during drought conditions. Failure of water treatment facility would jeopardize entire Randolph-Holbrook supply.
Processes That Increase Contamination	Drilling and construction in Trout Brook watershed can be managed to minimize or eliminate effluent in Trout Brook.	No construction will be necessary in the Farm River basin.	No construction will be necessary in the Cochato River basin.
PUBLIC HEALTH ANALYSIS			
	Will mitigate risk by providing uncontaminated water supply.	Will mitigate risk by providing uncontaminated water supply.	Will mitigate risk by providing uncontaminated water supply.
REGULATORY AND INSTITUTIONAL ANALYSIS			
	Construction in wetland will require permit. Massachusetts Water Management Act and New Source approvals required. Treatment for iron and manganese needed to comply with Secondary Maximum Contaminant Levels. Exceeds Massachusetts Maximum Contaminant Level for cadmium.	Treatment for iron and manganese may be required to meet Secondary Maximum Contaminant Levels. Additional authorization may be required for increased diversion pursuant to Massachusetts Water Management Act. Diversion may reduce downstream flows during low-flow conditions. Exceeds Massachusetts Maximum Contaminant Level for cadmium.	Treatment for iron and manganese may be required to meet Secondary Maximum Contaminant Levels. Additional authorization may be required for diversion pursuant to Massachusetts Water Management Act. Diversion may reduce downstream flows during low-flow conditions. Exceeds Massachusetts Maximum Contaminant Level for cadmium.



FIGURE 1

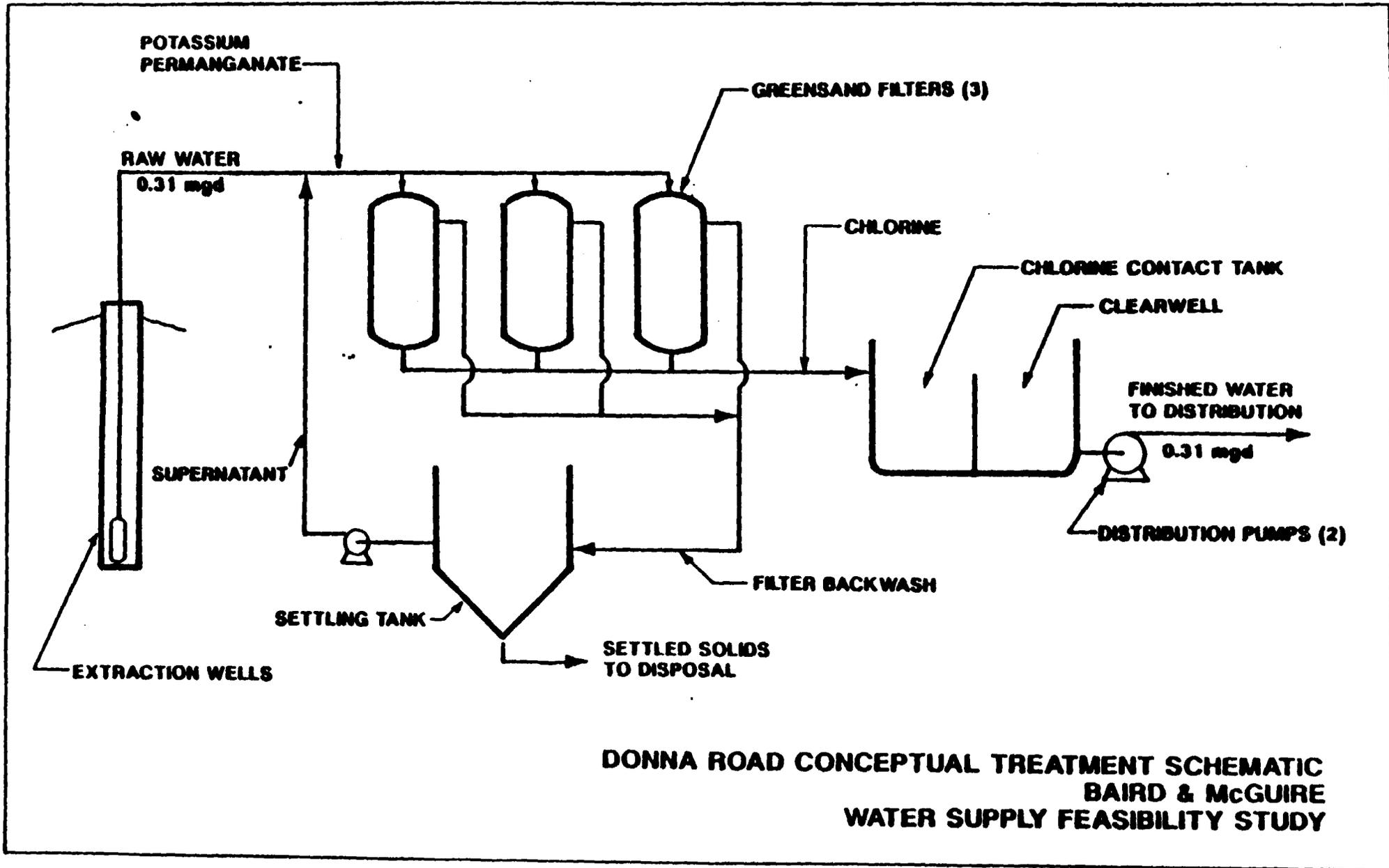


SOURCE: U.S.G.S. QUADRANGLE, BLUE HILLS, MASS., 1971, PHOTOREVISED 1979.



CANDIDATE SITE LOCATIONS
 BAIRD & MCGUIRE
 WATER SUPPLY FEASIBILITY STUDY
 EC. JORDANCO

FIGURE 2



APPENDIX A
RESPONSIVENESS SUMMARY

BAIRD & MCGUIRE SUPERFUND SITE
WATER SUPPLY FEASIBILITY STUDY
RESPONSIVENESS SUMMARY
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ATTACHMENT B - TRANSCRIPT OF THE JULY 17, 1990 INFORMAL PUBLIC HEARING

PREFACE

The U. S. Environmental Protection Agency (EPA) held a 30-day public comment period from June 27, 1990 to July 26, 1990 to provide an opportunity for interested parties to comment on the Water Supply Focused Feasibility Study (FFS) and the June 1990 Proposed Plan prepared for the Baird & McGuire Superfund Site in Holbrook, Massachusetts. The FFS examines and evaluates various options, called remedial alternatives, to replace the Lost Demand arising from Baird and McGuire industrial activities. EPA has defined the Lost Demand as the daily rate of groundwater production that the town of Holbrook historically imposed on the South Street wells for use within the town, and subsequently lost as a result of Baird and McGuire industrial activities. EPA identified its preferred alternative for replacing the Lost Demand in the Proposed Plan issued in June 1990, before the start of the public comment period.

To facilitate an efficient cleanup of the Site, EPA has divided its investigation of the Baird & McGuire Site into four segments, known as operable units. A Remedial Investigation (RI) and Feasibility Study for the first two operable units (groundwater and on-site soil contamination, respectively) was conducted between 1983 and 1986. EPA held a formal public comment period on its preferred alternative for addressing these contaminated areas and, in September 1986, signed a Record of Decision (ROD) that established EPA's plans for cleanup of the first two operable units. Extraction and on-site treatment were the technologies chosen by EPA to address groundwater; excavation and on-site incineration were the approaches chosen to address soil contamination. The third operable unit for the Site focused on site-related contamination found in the Cochato River sediments and adjacent wetlands. In 1989, EPA completed a FFS for the third operable unit and held a public comment period on its preferred alternative for addressing these contaminated areas. In September 1989 EPA signed a ROD that established another step in EPA's plan for Site cleanup: contaminated sediments will be excavated and incinerated at the incinerator that will be located on-site for soil treatment at the Baird & McGuire Site. This ROD for the fourth operable unit and evaluates remedial alternatives to replace municipal water supplies lost as a result of site-related contamination.

The purpose of this Responsiveness Summary is to document EPA responses to the questions and comments raised during the public comment period on the fourth operable unit, the Proposed Plan, and the Water Supply Focused Feasibility Study. EPA will consider all of these questions and comments before selecting a final remedial alternative to address replacement of the Lost Demand.

This Responsiveness Summary is divided into the following sections:

- I. **Overview of Remedial Alternatives Considered in the Draft Focused Feasibility Study, Including the Preferred Alternative**-This section briefly outlines the remedial alternatives evaluated in the FFS and the Proposed Plan, including EPA's preferred alternative.
- II. **Background on Community Involvement and Concerns**-This section provides a brief history of community interest and concerns regarding the Baird & McGuire Site.
- III. **Summary of Comments Received During the Public Comment Period and EPA Responses**-This section summarizes the oral and written comments received from the public during the public comment period and provides EPA responses to these comments.
- IV. **Remaining Concerns**-This section describes issues that may continue to be of concern to the community during the design and implementation of EPA's selected remedy for replacing the Lost Demand at the Baird & McGuire Site. EPA will address these concerns during the Remedial Design and Remedial Action (RD/RA) phase of the replacement process.

In addition, two attachments are included in this Responsiveness Summary. Attachment A provides a list of the community relations activities that EPA has conducted to date at the Baird & McGuire Site. Attachment B contains a copy of the transcript from the informal public hearing held on July 17, 1990.

I. OVERVIEW OF REMEDIAL ALTERNATIVES CONSIDERED IN THE DRAFT FEASIBILITY STUDY, INCLUDING THE PREFERRED ALTERNATIVE

EPA has identified a specific objective for the Water Supply Focused Feasibility Study. The objective is to identify a candidate water source that will replace the 0.31 million gallons per day (mgd) Lost Demand in an environmentally sound, cost-effective manner without placing additional stress on the Great Pond Reservoir system or existing water treatment facilities.

EPA has screened and evaluated several potential replacement alternatives for the Baird & McGuire Site in the Water Supply Focused Feasibility Study. The FFS describes alternatives for replacing the Lost Demand, as well as the screening criteria used to narrow the list to four potential remedial alternatives. Each of these alternatives is described briefly below.

- **No Action (AW-NA).** In this alternative, the Lost Demand would not be replaced.
- **Alternative 1 (AW-1): Reactivation of the Donna Road Aquifer.** In this alternative, the Donna Road Aquifer would be reactivated by installing new wells; water would then be brought to the surface using submersible pumps. The water would then be treated in an on-site treatment plant to remove iron and manganese. Treated water would be disinfected prior to being pumped to the existing Holbrook water distribution system.

In the Proposed Plan issued prior to the public comment period, EPA recommended this alternative as its preferred remedy for addressing the Lost Demand.

- **Alternative 2 (AW-2): Increased Farm River Diversion.** In this alternative, an additional 0.31 mgd would be diverted from the Farm River into the Richardi Reservoir to replace the Lost Demand. Water would be treated to remove iron and manganese and then be disinfected at the Randolph-Holbrook Joint Water Treatment Plant.
- **Alternative 3 (AW-3): Cochato River Diversion.** In this alternative, the diversion of the Cochato River into the Richardi Reservoir would be re-established to supply the 0.31 mgd Lost Demand. Water would be treated to remove iron and manganese and then be disinfected at the Randolph-Holbrook Joint Water Treatment Plant.

Additional information on each of the remedial alternatives can be found in the Focused Feasibility Study for the Water Supply Operable Unit, copies of which are located in the Holbrook Public Library and the EPA Records Center at 90 Canal Street in Boston, Massachusetts.

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The Baird & McGuire Site is located on South Street in the town of Holbrook, Massachusetts, approximately 14 miles south of Boston. For over 70 years, Baird & McGuire, Incorporated operated a chemical mixing and batching facility at the Site, formulating household and industrial products such as floor waxes, wood preservatives, pesticides and solvents. Widespread contamination by a variety of organic and inorganic chemicals, including dioxin, exists at the Site.

The Baird & McGuire property is approximately eight acres in size, and originally consisted of an office building, storage building, tank farm, laboratory building, and mixing building. The Site is located near the western bank of the Cochato River,

and is approximately 1,500 feet away from the Holbrook South Street well field.

Approximately 2.5 miles downstream of the Site, the Cochato River flows past the Richardi Reservoir, which serves as a secondary surface water reservoir for the towns of Holbrook, Randolph, and Braintree, Massachusetts. Prior to a breach in the Baird & McGuire creosote lagoon in 1983, water from the Cochato River was diverted into the Richardi Reservoir through surface water intakes. These intakes have been closed since March 1983.

The Baird & McGuire Site was added to the National Priorities List (NPL) in December 1982, making it eligible to receive federal funds for investigation and cleanup under the Superfund program. In 1983, EPA conducted a removal action after a waste lagoon overflowed into the Cochato River; a second removal action was conducted in 1985 when dioxins were discovered in Site soils. Further work was conducted at the Site during the 1987 IRM, including the removal of certain Site buildings and placement of a temporary cap over Site soils to prevent contact with contaminants. The tank farm and mixing buildings were demolished by EPA during a 1987 Initial Remedial Measure (IRM) which was conducted to address aspects of Site contamination prior to implementing long-term remedial measures.

Community concern surrounding contamination at the Baird & McGuire Site has been high since the early 1980s when drinking water well contamination in the vicinity of the Site was first detected. Regional media coverage of Site-related activities has been extensive. Community involvement heightened in early 1985 when a national environmental organization became active at the Site, and over 250 letters from residents expressing their concerns were received by EPA. In addition, a local citizens' group, People United to Restore the Environment (PURE), was formed at that time.

Following release of the 1985 RI, EPA held a public meeting to present the results of the RI on June 10, 1985. Over 200 people attended the meeting and presented a petition containing over 1,000 signatures. Principal concerns expressed in the petition included requests for fencing of the Site; a comprehensive health study; removal of Site buildings; diversion of the town water main passing through the Site; testing of Cochato River water quality; a meeting with the EPA Regional Administrator; and, citizen involvement in the development of Site cleanup plans.

EPA promised to respond to these requests, and also invited citizens and officials to establish an informal citizens advisory committee to work with the agency. This committee, known as the Baird & McGuire Task Force, was organized soon afterwards with broad representation from both residents and local officials.

EPA has met regularly with the Task Force to present new Site information and discuss issues of concern to the community.

Public interest increased again in July 1985, when EPA discovered low levels of dioxin in Site soils. EPA and the Massachusetts Department of Environmental Protection (DEP), formerly Massachusetts Department of Environmental Quality Engineering, subsequently held a briefing for officials and citizens on the implications of this discovery and the steps EPA would take to address potential risks associated with the discovery of dioxin. This briefing and subsequent Site-related events received extensive media coverage.

In 1989, EPA held a public comment period and a public meeting on the Cochato River Sediment Study Area FFS and Proposed Plan. The meeting included a presentation by the Baird & McGuire Task Force.

EPA conducted a ground-breaking ceremony on May 11, 1990 to begin construction of the groundwater treatment plant authorized in the 1986 ROD. The event was attended by local residents and officials and received extensive media coverage.

Public involvement in the Superfund process has continued at a high level throughout the RI/FS process, and the Task Force continues to meet on a regular basis with EPA. A public meeting held in June 1990 on the Water Supply Focused Feasibility Study and Proposed Plan was attended by approximately 15 persons including representatives of the Town of Holbrook and the Baird & McGuire Task Force. The principal community concerns expressed at that time are as follows:

- Residents and officials expressed overall support for development of the Donna Road Aquifer, EPA's preferred alternative, but stated that EPA should conduct extensive groundwater testing to verify that nearby industrial activities are not likely to contaminate the Donna Road Aquifer.
- Residents and officials stated their concern that implementation of the Lost Demand Replacement be conducted as soon as possible.
- Meeting attendees overwhelmingly stated their opposition to reactivation of the Cochato River diversion.

III. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES

This Responsiveness Summary addresses the comments received by EPA concerning the draft FFS and Proposed Plan for the Water

Supply Operable Unit for the Baird & McGuire Superfund Site in Holbrook, Massachusetts. Four sets of written comments were received during the public comment period (June 27-July 26, 1990). Eight oral comments were presented at the July 17, 1990 informal public hearing. Commenters included representatives of the Baird & McGuire Task Force, the Holbrook Board of Selectmen, the Holbrook Conservation Commission, and a resident. A copy of the transcript is included as Attachment B. Copies for the transcript are also available at the Holbrook Public Library, the information repository that EPA has established for the Site; and at the EPA Records Center at 90 Canal Street, Boston, Massachusetts, as a part of EPA's Administrative Record.

The comments from citizens, along with EPA responses, are summarized and organized into the following categories:

- A. Comments Regarding the Donna Road Aquifer;
- B. Comments Regarding the Cochato River Diversion; and
- C. Comments Regarding Public Health Concerns.

A list of commenters can be found on page ? of this document.

A. Comments Regarding the Donna Road Aquifer

1. Four commenters requested that EPA adequately test and characterize groundwater quality of the Donna Road aquifer before construction of groundwater extraction and treatment facilities.

EPA's Response 1

The Massachusetts Guidelines and Policies for Public Water Systems document defines a detailed testing and evaluation program that must be followed in order for the Donna Road aquifer to be approved as a public water supply. The guidelines include requirements for testing the groundwater for the presence of both organic and inorganic substances. As is required under CERCLA, EPA must comply with all applicable laws, and therefore will follow the Massachusetts guidelines in implementing the remedy.

2. Two commenters requested EPA evaluate additional diversion of the Farm River, if further testing indicates the Donna Road aquifer can not replace the entire 0.31 million gallons per day (mgd) Lost Demand.

EPA's Response 2

EPA believes the Donna Road aquifer is capable of replacing the 0.31 mgd Lost Demand. This is based not only on recent aquifer modeling, but also on the fact that the Town of Holbrook historically withdrew 0.5 mgd from the formerly used wellfield. However, if evaluations conducted during the Source Approval process indicate that the entire 0.31 mgd is not available from the Donna Road aquifer, EPA may supplement the aquifer by diverting the incremental difference from the Farm River to the Richardi Reservoir. If however, the production of ground water from Donna Road is insufficient to support the balance between the remedy selection criteria, EPA may reexamine the remedy.

3. One commenter requested EPA outline a schedule to "fast-track" the water supply New Source Approval process.

EPA's Response 3

EPA's estimate of the time needed to obtain New Source Approval for the Donna Road aquifer is based on the extensive requirements of the Massachusetts review and approval process. The Superfund Amendments and Reauthorization Act (SARA) requires that EPA follow all applicable requirements such as the Massachusetts regulations that govern public water supplies. Since the Source Approval process is a State and not a Federal program, EPA has no control over its duration or requirements. EPA will however, work with MA DEP in order to implement the alternative in a timely manner.

4. One commenter requested EPA estimate the future cost of operating the Donna Road wellfield to enable the Town of Holbrook to evaluate the cost and benefits of the proposed alternative.

EPA's Response 4

The Water Supply Focused Feasibility Study document prepared by EPA's technical contractor, which was available during the public comment period, estimates the annual operation and maintenance costs to be \$23,000. Copies of the document are available to Town officials and citizens at the Holbrook Public Library.

5. One commenter requested EPA define a testing program in the Record of Decision to monitor treated water quality after construction and start-up of the proposed water treatment facility at Donna Road.

EPA's Response 5

The proposed Donna Road facility will be subject to operational testing programs already defined in the National Primary Drinking Water Regulations (40 CFR 141, Subpart C) as well as in Massachusetts Drinking Water Regulations (310 CMR 22.00). These regulations define the type and frequency of required testing at Donna Road. Based on this comment, EPA has added a provision in the ROD which requires full TCL organics, TAL inorganics and pesticides testing annually.

6. An aquifer pump test will need to be performed at the Donna Road Site during the design phase to comply with Massachusetts Division of Water Supply regulations.

EPA's Response

An aquifer pump test is planned as part of the detailed evaluation to obtain Source Approval for the Donna Road aquifer.

B. Comments Regarding the Cochato River Diversion

7. Two commenters requested that EPA not consider reactivation of the Cochato River diversion for replacing the Lost Demand.

EPA's Response 7

EPA chose the reactivation of the Donna Road Aquifer to replace the Lost Demand rather than the Cochato River diversion based on the remedy selection criteria. During EPA's evaluation and subsequent selection of the Donna Road alternative, EPA considered public attitudes regarding future use of the Cochato which EPA had heard during EPA public meetings and Baird & McGuire Task Force meetings.

C. Comments Regarding Health Concerns

8. One commenter requested that impacts from releases of hazardous substances at two businesses located on South Franklin Street southeast of the Donna Road Site should be reviewed during the evaluation process.

EPA's Response 8

The Massachusetts Division of Water Supply requires in the Source Approval process that part of the evaluation of the Donna Road aquifer include delineation of a Zone II aquifer protection zone. This is the area of an aquifer that

contributes water to a well under the most severe pumping and recharge conditions that can realistically be anticipated (i.e., 180 days of pumping, with no recharge from precipitation). The Zone II delineation will evaluate anticipated impacts, if any, from the businesses on South Franklin Street.

9. One commenter asked if the contaminant plume from the Baird & McGuire Superfund Site might reach and contaminate the Donna Road aquifer as it did the South Street wells.

EPA's Response 9

EPA believes, based on the current understanding of area hydrogeology, contamination of the Donna Road aquifer by the Baird & McGuire Site is unlikely. Groundwater flow in the vicinity of Donna Road and the Baird & McGuire Site moves downgradient in a general northerly direction. The Donna Road Site is more than one mile south of the Baird & McGuire Superfund Site, approximately four times further than the South Street wells. The proposed pumping rate of 0.31 mgd is not considered adequate to induce the Baird & McGuire contaminant plume into the capture zone of the Donna Road wellfield. Lake Holbrook, located midway between the Donna Road Site and the Baird & McGuire Superfund Site, serves as a hydrologic flow boundary and would help prevent contaminant migration toward Donna Road. The computer modeling and Zone II delineation required as part of the New Source Approval process will provide additional insight into the northerly flow of groundwater past the Donna Road Site.

10. One commenter requested EPA limit movement of large construction vehicles on neighborhood streets during the periods when children are going out to, or returning from school.

EPA's Response 10

EPA will instruct contractors to exercise extra caution whenever driving on neighborhood streets and, to limit traffic during periods when children are going out to, or returning from school.

IV. REMAINING CONCERNS

Issues raised during the public comment period that will continue to be of concern as the Site moves into the RD/RA phase are described briefly below. EPA will continue to address these issues as more information becomes available during the RD/RA.

1. Residents and officials strongly urged EPA to conduct extensive groundwater sampling to ensure that contaminated groundwater and potential sources of groundwater contamination are not located in proximity of the Donna Road Aquifer.

As indicated above, the Massachusetts Division of Water Supply requires in the Source Approval process that part of the evaluation of the Donna Road aquifer include delineation of a Zone II aquifer protection zone. The Zone II delineation will evaluate anticipated impacts, if any, from the potential sources within that zone. EPA does not feel that sampling, in addition to this, is necessary to assure the integrity of the Donna Road Alternative.

Additionally, as is outlined in Response 5 above, EPA has added the additional provision of full TCL organics, TAL inorganics and pesticides annually to the selected remedy.

ATTACHMENT A

**COMMUNITY RELATIONS ACTIVITIES
CONDUCTED AT THE
BAIRD & MCGUIRE SUPERFUND SITE**

**COMMUNITY RELATIONS ACTIVITIES
CONDUCTED AT THE BAIRD & MCGUIRE SUPERFUND SITE**

Community relations activities conducted at the Baird & McGuire Superfund Site include the following:

- March 1983 - EPA, DEQE and local officials met to discuss Superfund remedial action plans. This meeting resulted in mandatory cleanup and preventive measures being imposed on Baird & McGuire, Inc. by EPA and the Town of Holbrook.
- April 1983 - EPA released a preliminary site assessment.
- May 1983 - EPA released a Remedial Action Master Plan (RAMP), a work plan to address emergency conditions at the Site.
- May 1983 - EPA issued a Community Relations Plan for the Site.
- 1983 - Information repositories were established at the Holbrook, Braintree and Randolph Public Libraries.
- August 23, 1983 - EPA issued a press release announcing that an additional \$165,000 in funding was approved to conduct cleanup and planning work at the Site.
- October 5, 1983 - EPA issued a press release stating that the Agency had filed suit against Baird & McGuire to recover past and future Site cleanup expenses.
- December 12, 1983 - EPA announced the approval of \$295,000 in additional funds to conduct waste removal and grading activities at the Site. The funds would also be used to update hydrogeologic studies.
- April 20, 1984 - EPA issued a press release announcing the public availability a Remedial Investigation (RI) Work Plan which details studies to be conducted that would lead to the selection of a long-term remedy for the Site.
- May 1985 - EPA released a draft RI for the Site.
- June 1985 - EPA held a public meeting and accepted public comments on the RI. EPA also announced that a Phase II RI would be conducted.
- July 1985 - EPA assisted in the organization of the Baird & McGuire Task Force. This Task Force has continued to meet regularly to review technical documents and Site activities. In addition, the Task Force serves as a liaison between

concerned citizens and government agencies. EPA representatives have attended these meetings since the Task Force was first established.

- July 1985 - EPA issued a press release stating that low levels of dioxin had been detected in Site soils. The release further explained that EPA is working closely with the federal Centers for Disease Control, DEQE and the Massachusetts Department of Public Health to assess the public health impacts of these findings.
- 1985 - EPA announced that Initial Remedial Measures (IRM) conducted at the Site would include demolition of Site buildings, relocation of an on-Site water main and additional capping of soil "hot spots."
- August 15, 1985 - EPA announced the results of dioxin sampling from the Site. EPA solicited input from local officials and residents regarding sampling locations and incorporated local suggestions into the Agency's sampling plan.
- October 2, 1985 - EPA announced the results of pesticide, herbicide and dioxin sampling from Site soils.
- June 30, 1986 - EPA issued a press release announcing the completion of the Phase II RI. EPA also provided notification of an August public informational meeting and an August hearing to review the results of the RI. The release stated that copies of the RI are available for public review.
- July 22, 1986 - EPA issued a press release stating the availability of the final Feasibility Study (FS) for the Site.
- July 1986 - EPA sent copies of a fact sheet summarizing the RI/FS to concerned citizens and to the information repositories for the Site.
- August 6, 1986 - EPA issued a press release stating that the dates for the RI/FS public meeting and public hearing would be changed. The release stated that the public informational meeting would be held on August 20; the public hearing would be held on September 3; and the public comment period would take place between August 13 and September 8, 1986.
- August 20, 1986 - EPA held a public informational meeting to present the results of the RI/FS, and to discuss proposed cleanup plans for the Site.
- September 3, 1986 - EPA held an informal public hearing to provide an opportunity for public comment on the results of

the RI/FS and the remedial alternatives that are being evaluated for the Site.

- September 30, 1986 - EPA signed a Record of Decision (ROD) outlining a phased remedial action plan for the Site.
- January 6, 1987 - EPA issued a press release announcing that EPA and the PRPs have signed a consent decree. A 30-day public comment period follows the signing of the consent decree.
- February 1987 - EPA allocates \$500,000 for a new water main at the Site as part of the IRM initiated in 1985.
- May 1987 - EPA allocates funding for building demolition at the Site; demolition activities are initiated.
- July 1987 - EPA issued a revised Community Relations Plan for the Site.
- 1988 - Remedial design of the on-Site groundwater extraction and treatment system proceeds; various design documents are provided to the Task Force for review and comment. The Focused Feasibility Study (FFS) for the Cochato River Sediment Study Area continues; various technical memoranda are made available.
- June 1, 1989 - EPA issued a press release announcing that a public meeting would be held June 13 to discuss cleanup alternatives to address the Cochato River Sediment Study Area.
- June 1989 - EPA distributed a fact sheet summarizing the results of the FFS for the Cochato River Sediment Study Area and describing the Proposed Plan to address sediment contamination to concerned citizens and local officials in the Site area.
- June 13, 1989 - EPA held a public informational meeting to present the FFS report and Proposed Plan to address contamination in the Cochato River Sediment Study Area. EPA announced that a public hearing would take place on July 12 regarding the Proposed Plan, and a 30-day public comment period on the Proposed Plan would begin on June 19.
- July 12, 1989 - EPA held an informal public hearing to accept comments on the FFS and the Proposed Plan for the Sediment Study Area.
- September 14, 1989 - EPA signs second ROD for Site which outlines the remedy for the cleanup of the Cochato River Sediments.
- February 20, 1990 - U.S. Army Corps of Engineers award

Groundwater Treatment Plant contract to Barletta Engineering Corporation of Roslindale, MA.

- June 26, 1990 - EPA held a public informational meeting to present the Alternate Water Supply FFS report and the Proposed Plan. EPA announced that a public hearing would take place on July 17 regarding the Proposed Plan, and a 30-day public comment period on the Proposed Plan would begin on June 27.
- July 17, 1990 - EPA held an informal public hearing to accept comments on the FFS and the Proposed Plan for the Alternate Water Supply. -

ATTACHMENT B
TRANSCRIPT FROM THE INFORMAL PUBLIC HEARING

UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY
BOSTON REGION

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In the Matter of:
INFORMAL PUBLIC HEARING
BAIRD & MCGUIRE SUPERFUND SITE

Auditorium
Holbrook Sr./Jr. High School
Holbrook, Massachusetts

Tuesday
July 17, 1990

The above entitled matter came on for hearing,
pursuant to Notice at 7:12 p.m.

BEFORE: RICHARD CAVAGNERO
PAULA FITZSIMMONS

APEX REPORTING
Registered Professional Reporters
(617)426-3077

PROCEEDINGS

7:12 P.M.

1
2
3 MR. CAVAGNERO: Good evening. My name is Richard
4 Cavagnero. I'm Chief of the Massachusetts Superfund Section
5 of EPA and we're here tonight to have a public hearing on
6 EPA's proposed plan for provision of alternate water supply
7 for the Baird and McGuire site, this being the fourth phase
8 of the remediation at Baird and McGuire.

9 With me on my left is Paula Fitzsimmons who's the
10 Remedial Project Manager for the site and we also have, from
11 the state DEP in the audience, Evelyn Tapeny who's Paula's
12 counterpart.

13 The purpose of tonight's meeting, again, is to
14 take formal comment for the record to help us come to our
15 ultimate decision on what to do to provide alternate water.
16 A meeting was held here on June 26th at which Paula
17 explained in some detail the feasibility study that was
18 conducted and also EPA's proposed plan. I believe there is
19 a handout summarizing both the feasibility study findings
20 and EPA's recommended alternative. Also included in that
21 handout would be addresses for you to send any comments you
22 may have on either the proposed plan or any of the other
23 alternatives that were studied.

24 The public comment period runs from June 27th
25 through July 26th. We have a reporter here tonight who will

1 be transcribing any comments you want to make and we also
2 will be accepting any written comments which you can either
3 hand in tonight or send to Paula postmarked no later than
4 July 26th. After we receive all these comments we will
5 obviously give them consideration and we will sign the
6 fourth record of decision for the Baird and McGuire site.
7 Once we do that, which hopefully will take place sometime in
8 September, I believe, we will issue some kind of press
9 release informing you of that.

10 So, with that introduction let me just tell you
11 about the meeting format tonight. Again, this is a hearing
12 as opposed to a question and answer session and we would
13 like to confine the hearing to statements for the record
14 either in support of the preferred alternative or some other
15 alternative. Once we close the hearing we will be happy to
16 stay around if people have other questions they would like
17 to ask.

18 Paula was going to give a brief recap of the
19 proposed plan which she described in some detail at the
20 public meeting on June 26th unless all the same people are
21 here tonight who were at that meeting and I guess they we
22 thought they were all here. If you don't want to hear it
23 again tonight we will forego that part of it but if someone
24 wants to again have a brief recap we can certainly do that.

25 Is there anyone who would like to hear that again?

(Pause.)

1
2 MR. CAVAGNERO: Okay. Fine. Then, again, I will
3 turn this over to Paula who will give, I guess, a little
4 brief history of the site, how this phase fits into the
5 other three phases of Baird and McGuire, and a brief summary
6 of the proposed alternative and the other alternatives.

7 I also have, by the way, three cards from three
8 individuals who indicated -- four now, I guess. They wanted
9 to make statements and if there are other people I would ask
10 that you would fill out a card so we make sure we get your
11 name right for the record.

12 And with that I'll turn it over to Paula.

13 We'd also ask that you, when you make a statement
14 later, you come to this general vicinity so that we can pick
15 you up on the mike. Thank you.

16 MS. FITZSIMMONS: Okay. Once again, this is kind
17 of a tough spot. If I stand here can everyone see me or if
18 I blocking everybody's view? Yes? No? You're the only one
19 who cares?

20 I'll go through this very quickly.

21 As we've said, this is the lost demand of
22 alternate water supply, fourth operable unit feasibility
23 study for the Baird and McGuire site. What we're looking to
24 do is replace the lost demand that was lost when the South
25 Street wells were knocked out because of contamination from

Baird and McGuire.

1
 2 Most of you know this as well as I do, probably
 3 better. It's a 20 acre site and it's a former manufacturing
 4 -- chemical manufacturing facility. Contamination at the
 5 site is -- extends to ground water, soil and sediments. We
 6 talked about operable units. For people who don't know what
 7 operable units are, that the term's kind of foreign, when
 8 can split the site up into nice distinct pieces we sometimes
 9 do that in order to make it easier to clean up or to do
 10 parts sooner than others. In this case we did do this. The
 11 first operable unit we called ground water and those of you
 12 who have gone by the site have seen the groundwater
 13 treatment plant under construction.

14 The second operable unit is the soils and both the
 15 first and second operable unit were dealt with as far as a
 16 selecting a remedy back in 1980.

17 The third operable unit has to do with the
 18 sediments at the Cochato River which the record of decision
 19 was signed last September. And, as we said, this is the
 20 fourth operable unit for the alternate water supply.

21 In 1982 the site was placed on the National
 22 Priorities list which made it eligible for federal funding
 23 which is what we are using to clean up this site since the
 24 responsible parties are not viable, we're not able to get
 25 them to fund it. The government is, under the Superfund

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Program, is paying for the remedy.

In 1983 EPA took its first action at the site which was a removal action when the creosote lagoon overflowed and in 1985 we took a second removal action when dioxin was found at the site and they also added some extra fence and did some more extensive soil sampling.

In 1985 to 1987 we did what we called initial remedial measures. The tank farms were demolished and removed. There was a temporary path installed and a new water main was put in. As I said earlier, in 1986 there was the first record of decision for the site which dealt with operable units one and two, ground water and soils, and in 1989, last summer at this time, we dealt with the third operable unit having to do with the Cochato sediments.

In 1989 many of you were on site on May 11th when we had a ground breaking ceremony for the ground water treatment plant which is now under construction and also 1990 we are here to talk about the focus feasibility study and the third record of decision for the fourth operable unit, which is the alternate water supply.

As fast as I can do it; it has a long history.

We put together what we call a remedial action objective and that's what we're trying to accomplish at the site in this operable unit, this phase, and what we're trying to do is identify a candidate water source that will

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replace the .31 million gallons a day lost demand in an environmentally sound, cost effective manner without placing additional stress on the Great Pond Reservoir system or the existing water treatment facilities.

Alternatives. We evaluated four different alternatives, reactivation of Donna Road which is EPA's preferred alternative; diversion of the Cochato River into the Richardi Reservoir, increasing the diversion of the Farm River which is going on now, and EPA always looks at the no action alternative and that's the baseline that we look at to compare the other alternatives to.

As I said, EPA's preferred alternative is Donna Road, is reactivation of the Donna Road aquifer. It would require installing new wells and pumps, treating the water to drinking water standards, really requires the removal of both iron and manganese which are present in levels -- in higher levels in the water and then delivering the water to the existing Holbrook water distribution system. And, as it says here, the cost is \$1.18-million.

Real quick, many of you have seen these before, we have to look at nine criteria which in our national contingency plan -- these are the things we try to balance when we select a remedy. We look for something that's overall protecting this -- human health and the environment in compliance with ARARs, one of our favorites

1 -- Applicable and Relevant Appropriate Requirements. It's
2 got to essentially comply with other environmental laws.

3 Long term effectiveness and permanence is pretty
4 self explanatory. How long will it last and will it stay
5 around? Not very operable. In this alternative this
6 operable unit, by reduction of mobility and toxicity in
7 volume. You look at that when you're trying to reduce the
8 source of contamination.

9 Short term effectiveness. What impact may it have
10 on neighborhoods like ordinary construction would, truck
11 traffic, those are the things you look at.

12 Implementability, constructability. Can you do
13 it? We do look at very innovative technology sometimes and
14 we have to see if we're able to actually do them given the
15 site conditions.

16 We look at cost. We look for acceptance from the
17 state and we look at the state's opinion and number nine is
18 what we're here for today, community acceptance. We solicit
19 the opinions and preferences of the surrounding community
20 and we weigh that in our decision.

21 Because, as I said, this is kind of a different --
22 we're not dealing with a source that is contaminated, we
23 also look at other criteria. Time limits of
24 implementability, the performance, the reliability and the
25 safety. Again, pretty self explanatory, especially with an

1 alternate water supply you look at how long it takes to
2 implement, how long will the alternative last as far as
3 performance. Do we think it will give us what we need it to
4 give us. That falls right into reliability. And then the
5 safety of the actual supply itself.

6 Okay. Next step's what happens from here was, as
7 Rich said, we are in the public comment period. We will be
8 taking comments until the 26th, postmarked by the 26th and
9 mailed to me. There's an address in the proposed plan.
10 After that we put together a responsiveness summary. We do
11 not respond to individual comments as in writing back to
12 someone in telling them as in a personal response.
13 Sometimes we get two comments, sometimes we get 200
14 comments, sometimes we get 500 comments. It's just not
15 possible so we put it together in the document that's
16 attached, the record of decision, it's called the
17 Responsiveness Summary, and that will be available at EPA in
18 Boston and at the Holbrook Town Library. And, as I said,
19 that folds into and that's part of the record of decision.

20 After the record of decision is signed we go on to
21 actual designing the system and then finally implementation
22 of the remedy.

23 Quick, and I'll leave this one up here. Public
24 involvement, public comment. We are, as I said, we are in
25 the public comment period. Here we are today for the

1 informal public comment period and I'll leave the address up
2 there in case you need to mail me comments if you don't want
3 to read them into the record tonight. That's it.

4 MR. CAVAGNERO: Thank you, Paula.

5 For those of you who arrived after we began, Paula
6 Fitzsimmons, the Site and the Project Manager has just given
7 a brief summary of the proposed alternative and the other
8 alternatives that were looked at in the feasibility study
9 which was essentially a rehash of her public meeting here on
10 June 26th. And with that we will now open the formal
11 comment period. I have cards from those people wishing to
12 make statements. If there are others who also wish to make
13 them we need to get you to fill out an index card so we can
14 get your name right for the record.

15 We will only take statements during the record not
16 questions and answers. Once the record is closed we will
17 again stay and take questions and answers either on the
18 preferred alternative, other alternatives looked at. Once
19 we get beyond that other issues relative to the site or the
20 process for making a decision or getting your comments in.

21 So with that I will call on the first person here
22 who is Andy Prasnal from the Baird and McGuire Task Force.
23 And if you would, could you come at least to this area so we
24 can make sure we pick you up on the mike. Thank you.

25 MR. PRASNAL: As a member of the Baird and McGuire

1 Task Force I am in favor of the Donna Well -- or the Donna
2 Road aquifer project with the stipulation that we do have
3 careful pre-engineering during this phase of construction.

4 MR. CAVAGNERO: Will you speak up a little,
5 please?

6 MR. PRASNAL: Sure. As a Task Force member of the
7 Baird and McGuire Committee my comments would be that I
8 would be in favor of the Donna Road project with the
9 following conditions. That there be enough pre-testing
10 before the serious monies are spent to ensure that we do not
11 have a past history of contamination on this well field
12 project and that really is my major major source of concern
13 with the project since we cannot entertain questions and
14 answers at this point. Thank you.

15 MR. CAVAGNERO: Again, after we're through with
16 the statements Paula will be happy to answer any questions
17 we have. Or you have or others. Thank you.

18 Next we have Mr. Mort Brown from the Conservation
19 Commission.

20 MR. BROWN: Okay. Paula has mailed you a copy of
21 this letter. These are the official comments of the
22 Conservation Commission.

23 This Commission wishes to be recorded as favoring
24 the EPA's proposal to develop the Donna Road aquifer to
25 replace the water demand lost by the activities at Baird and

1 McGuire. We are concerned, however, by the fact that a
2 known source of contaminants located up gradient of the
3 Donna Road site is apparently not going to be considered
4 when evaluating the zone of influence. And as you read,
5 Taylor's at Fourth and North Street in Hingham has been
6 issued an enforcement order by this Commission as a result
7 of having released contaminants into the ground water at the
8 site located at 845 South Franklin Street in Holbrook. At
9 this time they are deemed to be in non-compliance and have
10 not instituted any program to investigate the extent of this
11 sphere of influence which might be involved.

12 Since there are sufficient reasons to suspect that
13 the extended contamination could very well affect the
14 quality of the water to be recovered from the Donna Road
15 wells, we strongly urge that a thorough investigation be
16 made prior to final acceptance of the Donna Road site. Your
17 proposal to investigate only the zone of influence
18 immediately adjacent to the well site does not address the
19 possible future migration of contaminants and could
20 invalidate all the effort and expense invested if post-
21 construction testing revealed such off site effects.

22 Basically, that's the way we feel about it. There
23 are other sites in the town in the same position. This
24 particular site has been well documented; the others have
25 not been as well documented. We're concerned about those

1 and afterwards, if you wish, I'll give you the addresses of
2 those places.

3 We are really concerned because all these things
4 are not very far away from Donna Road. They're close enough
5 that they could have an impact. We don't know. So far
6 we've had no investigation by any organization or any state
7 office to tell us whether there will be an impact and I
8 would really urge that before we go and spend any great
9 amounts of money on this, let's find out if we have more
10 problems than we presently know about. And that's the
11 reason for this.

12 MR. CAVAGNERO: I will now have Representative
13 Emmet Hayes, Chairman of the Baird and McGuire Task Force.

14 MR. HAYES: Good evening. As Chairman of the Task
15 Force I'm here to testify in favor and in agreement with the
16 preferred alternative that EPA has outlined and also to
17 elaborate further with a couple of points that the Task
18 Force has discussed and we would like to include in our
19 comments.

20 We would like to be recorded in favor, as I've
21 indicated, of the preferred alternative, the Donna Road well
22 field. We'd like to be strongly recorded in opposition to
23 the alternate number three, the potential diversion of the
24 Cochato River. Due to the extent and level of contamination
25 in close proximity we think it's important to be on the

1 record as being in strong opposition to that alternative, as
2 you review them.

3 Additionally, we would request that the record of
4 decision include provisions for the increased diversion of
5 the Farm River in the event that the Donna Road well field
6 does not produce the expected gallonage. We feel that the
7 record of decision should provide for that as a remedy in
8 the event the Donna Road well field doesn't produce the
9 amount of water that we're looking for.

10 Additionally, because of the comments voiced by
11 the Conservation Commission and others, we believe it's
12 important that the EPA include a comprehensive program of
13 organic chemical testing for the Donna Road well field in
14 the record of decision.

15 And finally, that the record of decision include a
16 schedule for implementation, a very clear schedule for
17 implementation with particular provisions being made on how
18 to short circuit the implementation of this alternative due
19 to the fact that Holbrook and the member communities are
20 facing very serious water shortages right now and this action
21 is needed desperately.

22 So we would ask that the EPA pay particular
23 attention to the implementation of this alternative and that
24 they outline in the record of decision the schedule and what
25 steps are going to be taken in order to shorten the bringing

1 this alternative on line.

2 And with that I conclude my remarks.

3 MR. CAVAGNERO: Next we have Nancy Anne Noone from
4 the Board of Selectmen.

5 MS. NOONE: My name is Nancy Anne Noone. I'm on
6 the Board of Selectmen. I'm also Chairman of Precinct 4
7 which is where this problem is. I would ask that you do as
8 you have done in the past, that you not have any trucks go
9 out or any of the, you know, moving in any of the materials
10 during the time that the children are going out to school.
11 That has been a problem in the past and I know when you were
12 doing the test sites you were aware of that and we did have
13 problems even though they said the trucks wouldn't go out
14 when the kids were going to school. We did have trucks
15 coming out at that time. So, we would ask that you make a
16 particular note of that and make sure that that does not
17 happen at this time. Thank you.

18 MR. CAVAGNERO: Michael Huntington, Board of
19 Selectmen.

20 MR. HUNTINGTON: I would just like to add one
21 thing. I'd like to see in the record of decision, if
22 possible, would you include an estimate of the future costs
23 of running the Donna Road well field so the town later on
24 can determine whether it is cost effective for us to run
25 this plant in the future compared to the amount of water

1 supply that we're going to gain from it.

2 MR. CAVAGNERO: And next we have Joanne Koval from
3 the Board of Selectmen.

4 MS. KOVAL: For the record my name is Joanne
5 Koval, Selectman. There may not be many people here yet my
6 phone has rung off the hook and it addresses the statement
7 of Mr. Prasnal, is that there is a great concern to make
8 sure that the water has been tested and retested and since
9 there would not be any future problems that you would come
10 back and you would say, well, we should have done this, or
11 we should have done that. I'm not as up to date, I'm not --
12 I've been briefed but I'm not up to date. I was there when
13 the original -- when Baird and McGuire site was discovered
14 and know a bit.

15 But I'm certainly not completely savvy or up to
16 date but I think that I need to speak for those people that
17 have called me at home. Their concern is still that the
18 water is okay and I don't know how we now monitor that
19 except to follow the direction of the Task Force that has
20 done a good job and probably the people trust the Task Force
21 and that's why they're not here tonight.

22 So, basically my statement is just that the safety
23 of the water, that it's drinkable, that it's usable is still
24 a concern for the people that have called me. Thank you.

25 MR. CAVAGNERO: Thank you.

1 And next we have David Holden from the Board of
2 Selectmen.

3 MR. HOLDEN: David Holden, Board of Selectmen. I
4 would just like to express my support for the Task Force and
5 the work that they have done to support Mr. Brown and the
6 Conservation Commission and reiterate their comments and
7 their concerns and state that I would support the project
8 with those concerns. Thank you.

9 MR. CAVAGNERO: Thank you.

10 I'm to the end of my index cards. Is there anyone
11 else who would like to make a statement? Conrad?

12 MR. JANKOWSKI: Yes, I'd like to.

13 MR. CAVAGNERO: Sure. Conrad Jankowski, also from
14 the Baird and McGuire Task Force.

15 MR. JANKOWSKI: Well, I'll speak as a private
16 citizen because they've already stated my position as far as
17 the Task Force is concerned.

18 MR. CAVAGNERO: Okay.

19 MR. JANKOWSKI: I would like to reemphasize the
20 testing procedures because the Donna Road well fields are
21 going to be an independent water source that is not going to
22 go through the Randolph Pumping Station where there are all
23 kinds of tests and procedures in place already. So I would
24 like to see somewhere in the record of decision a system of
25 checks and balances so you just don't have one man taking a

1 sample of water and testing it down at the Donna Road well
2 fields. I would like to see a comprehensive testing program
3 which would really be right for an independent water source.

4 MR. CAVAGNERO: Thank you.

5 If no one else wishes to make a formal statement
6 I'd like to thank you all for coming here tonight and for
7 giving us this feedback and hope that you also, those of you
8 who chose not to speak tonight, send us in a letter giving
9 us either your comment or questions or preferences one way
10 or the other. Believe me, it's something that we definitely
11 take into consideration before we make a final remedy choice
12 and it's always easier to make a choice when we have more
13 comments than if we only have a handful, although I think
14 you've been fairly well represented tonight by both your
15 elected officials and the Task Force.

16 And with that I will close the formal public
17 meeting tonight, reminding you that any comments will be
18 accepted, postmarked before July 26th, sent to Paula
19 Fitzsimmons at our EPA's office in Boston. We also have,
20 again, the public repository of information including all
21 the studies that would support this and copies of the
22 proposed plan at the Holbrook Town Library.

23 Is that it?

24 MS. FITZSIMMONS: That's it.

25 MR. CAVAGNERO: And so, again, with that we will

1 close the public hearing tonight but we will be happy to
2 stay here for a while off the record to answer any questions
3 you might have about this or other aspects of our activities
4 at Baird and McGuire, if there are any.

5 (Whereupon, at 7:40 P.M., the above hearing was completed.)
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This is to certify that the attached proceedings
before: U.S. ENVIRONMENTAL PROTECTION AGENCY
in the Matter of:
INFORMAL PUBLIC HEARING
BAIRD & MCGUIRE SUPERFUND SITE

Place: Holbrook, Massachusetts
Date: July 17, 1990

were held as herein appears, and that this is the true,
accurate and complete transcript prepared from the notes
and/or recordings taken of the above entitled proceeding.

M. Farley	7-17-90
Reporter	Date
E. Bartlett	7-23-90
Transcriber	Date

APPENDIX B
ADMINISTRATIVE RECORD INDEX

i

BAIRD & MCGUIRE, INC.
WATER SUPPLY STUDY
NPL SITE ADMINISTRATIVE RECORD

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BAIRD & MCGUIRE
ADMINISTRATIVE RECORD

BAI 002

0733

INTRODUCTION

This document is the Index to the **Water Supply Study** Administrative Record for the Baird & McGuire, Inc. National Priorities List (NPL) site. Section I of the Index cites site-specific documents, and Section II cites guidance documents used by the EPA staff in selecting a response action at the site.

The Administrative Record is available for public review at EPA Region I's office in Boston, Massachusetts, and at the Holbrook Public Library, 2 Plymouth Street, Holbrook, Massachusetts, 02343. **This Administrative Record includes, by reference only, all documents included in the September 30, 1986 Administrative Record (September 30, 1986 Record of Decision) for this NPL site. Also included, by reference only, is the September 14, 1989 Sediment Study Administrative Record (September 14, 1989 Record of Decision).** Questions concerning the Administrative Record should be addressed to the EPA Region I site manager.

The Administrative Record is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

SECTION I
SITE-SPECIFIC DOCUMENTS

**ADMINISTRATIVE RECORD INDEX
for the
BAIRD & MCGUIRE, INC. NPL SITE
WATER SUPPLY STUDY**

4.0 Feasibility Study (FS)

4.4 Interim Deliverables

1. "Field Operations Plan, Baird & McGuire Water Supply Feasibility Study," E.C. Jordan Company for Ebasco Services, Incorporated (November 1988).
2. "Draft Final Phase I/Task 2 Alternate Water Supply Evaluation, Baird & McGuire Water Supply Feasibility Study, Holbrook, Massachusetts," E.C. Jordan Company for Ebasco Services, Incorporated (November 1988).
3. "Final Technical Memorandum Evaluation of Surface Water Sources, Baird & McGuire - Water Supply Feasibility Study," E.C. Jordan Company for Ebasco Services Incorporated (January 1990).
4. "Final Technical Memorandum Evaluation of Groundwater Sources, Baird & McGuire - Water Supply Feasibility Study," E.C. Jordan Company for Ebasco Services Incorporated (March 1990).

4.6 Feasibility Study (FS) Reports

1. "Draft Final Baird & McGuire Water Supply Feasibility Study, Holbrook, Massachusetts," E.C. Jordan Company for Ebasco Services, Incorporated (May 1990).

Comments on the Feasibility Study received by EPA Region I during the formal public comment period on the Feasibility Study and Proposed Plan are filed and cited in 5.3 Responsiveness Summaries.

4.7 Work Plans and Progress Reports

1. "Work Plan, Baird & McGuire Water Supply Feasibility Study," E.C. Jordan Company for Ebasco Services, Incorporated (February 1988).

4.9 Proposed Plan for Selected Remedial Action

1. "EPA Proposes Replacement for Lost Water Demand at the Baird & McGuire Site," EPA Region I (June 1990).

Comments on the Feasibility Study received by EPA Region I during the formal public comment period on the Feasibility Study and Proposed Plan are filed and cited in 5.3 Responsiveness Summaries.

5.0 Record of Decision (ROD)

5.1 Correspondence

1. Cross Reference: Letter from Madeline Snow, Massachusetts Department of Environmental Protection to Paula Fitzsimmons, EPA Region I (July 20, 1990). Concerning the State's comments on the Proposed Plan for the Donna Road Aquifer, Baird & McGuire Superfund Site. [Filed and cited as entry number 2 in 5.3 Responsiveness Summaries].

5.3 Responsiveness Summaries

1. Cross-Reference: Responsiveness Summary is Appendix A of the Record of Decision. [Filed and cited as entry number 1 in 5.4 Record of Decision (ROD) as Appendix A].

The following citations indicate documents received by EPA Region I during the formal public comment period.

2. Letter from Madeline Snow, Massachusetts Department of Environmental Protection to Paula Fitzsimmons, EPA Region I (July 20, 1990). Concerning the State's comments on the Proposed Plan for the Donna Road Aquifer, Baird & McGuire Superfund Site.

5.4 Record of Decision (ROD)

1. "Record of Decision Summary - Baird & McGuire/ Alternate Water Study, Holbrook, Massachusetts," EPA Region I (September 27, 1990).

13.0 Community Relations

13.3 News Clippings/Press Releases

1. "EPA to Propose Alternate Water Supply for Town of Holbrook at June Public Meeting," EPA - Environmental News (June 14, 1990).
2. "The United States Environmental Protection Agency Invites Public Comment on the Proposed Plan and Focused Feasibility Study for Replacing the Lost Demand at the Baird & McGuire Superfund Site in Holbrook, Massachusetts," The Patriot Ledger - Quincy, Massachusetts (June 22, 1990).

SECTION II
GUIDANCE DOCUMENTS

BAIRD & MCGUIRE, INC.
WATER SUPPLY STUDY
NPL SITE ADMINISTRATIVE RECORD
GUIDANCE DOCUMENTS

EPA guidance documents may be reviewed at EPA Region I, Boston, Massachusetts.

General EPA Guidance Documents

1. "Appendix D - Protection of Wetlands: Executive Order 11990," 42 Federal Register 26961 (1977). [C003]
2. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Community Relations in Superfund: A Handbook (Interim Version) (EPA/HW-6), June 1988. [7000]
3. "National Oil and Hazardous Substances Pollution Contingency Plan," Code of Federal Regulations (Title 40, Part 300), as amended March 8, 1990. [C003]
4. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Remedial Design and Remedial Action Guidance (OSWER Directive 9355.0-4A), June 1986. [2011]
5. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Mobile Treatment Technologies of Superfund Wastes (EPA 540/2-86/003(f)), September 1986. [2311]
6. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, amended October 17, 1986. [C018]
7. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Public Health Evaluation Manual (OSWER Directive 9285.4-1), October 1986. [5014]
8. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Interim Guidance on Superfund Selection of Remedy (OSWER Directive 9355.0-19), December 24, 1986. [9000]
9. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Data Quality Objectives for Remedial Response Activities: Development Process (EPA/540/G-87/003), March 1987. [2101]
10. Memorandum from J. Winston Porter to Addressees ("Regional Administrators, Regions I-X; Director, Waste Management Division, Regions I, IV, V, VII, and VIII; Director, Emergency and Remedial Response Division, Region II; Director, Hazardous Waste Management Division, Regions III and VI; Director, Toxics and Waste Management Division,

General EPA Guidance Documents (cont'd)

Region IX; Director, Hazardous Waste Division, Region X; Environmental Services Division Directors, Regions I, VI, and VII"), (July 9, 1987). Concerning interim guidance on compliance with applicable or relevant and appropriate requirements.

11. U.S. Environmental Protection Agency. Office of Health and Environmental Assessment. A Compendium of Technologies Used in the Treatment of Hazardous Waste (EPA/625/8-87/014), September 1987. [C055]
12. U.S. Environmental Protection Agency. Technology Screening Guide for Treatment of CERCLA Soils and Sludges (EPA/540/2-88/004), September 1988. [2300]
13. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA/540/G-89/004) (OSWER Directive 9355.3-01), October 1988. [2319]

Baird & McGuire (Water Supply Study) NPL Site Specific Guidance Documents [2002]

1. "Guidelines for Ground-Water Classification Under the EPA Ground-Water Protection Strategy," USEPA, December 1986. [2404]
2. U. S. Environmental Protection Agency. "Guidance Document for Providing Alternate Water Supplies" (EPA 540/G-87/006), (OSWER Directive 9355.03-03), February 1988. [4001]
3. "Guidance for Compliance with Requirements of the Safe Drinking Water Act," Chapter 3 of the Draft Clean Water Act/Safe Drinking Water Act (CWA/SWDA) Volume of the Superfund Compliance Manual. -

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APPENDIX C
STATE CONCURRENCE LETTER

BAIRD & MCQUIRE
ADMINISTRATIVE RECORD

BAI 002

0742



Daniel S. Greenbaum
Commissioner

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

September 19, 1990

Julie Belaga
Regional Administrator
U.S. EPA
JFK Federal Building
Boston, Massachusetts 02203

RE: State Concurrence
with the Record of
Decision for the
Baird & McGuire
Federal Superfund
Site/Alternate
Water Supply
Operable Unit #4

Dear Ms. Belaga:

The Massachusetts Department of Environmental Protection has reviewed the preferred remedial action alternative recommended by the U.S. EPA for the Baird & McGuire Federal Superfund Site (Site) Alternate Water Supply in Holbrook, Massachusetts and the draft Record of Decision (ROD) that incorporates the State's comments submitted on July 20, 1990. The Department concurs with the decision to reactivate the Donna Road Aquifer as an alternate water supply to replace the lost water demand due to industrial activities at Baird & McGuire.

The remedy comprises the following components:

- 1.) Permitting/pre-design studies
 - a. Massachusetts Water Management Act permit
 - b. Source Approval
- 2.) Groundwater extraction
- 3.) Treatment
 - a. Potassium permanganate
 - b. Greensand filtration
- 4.) Delivery to the Randolph-Holbrook water distribution system

Since the Donna Road Aquifer is not part of the Site, but is off-site, all federal, state and local applicable permits must be obtained.

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State Concurrence

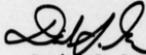
This concurrence is conditional upon the Donna Road Aquifer alternative remaining the basic foundation of the Lost Demand remedy. Should that alternative water supply not provide the full 0.31 mgd Lost Demand, we do not believe the entire operable unit should be re-evaluated. Rather, only the incremental amount which Donna Road may not be able to supply safely should be re-examined. The State also would like to reiterate that the diversion of the Cochato River is an unacceptable alternative to meet the Lost Demand.

The Department has evaluated EPA's alternative for consistency with the Massachusetts General Law Chapter (MGL) 21E and the Massachusetts Contingency Plan (MCP). However, since this ROD does not address site related contaminants, but rather selecting an alternate water supply to replace the South Street Wells lost demand, the Department also evaluated this remedy for consistency with the MGL Chapter 111.

The proposed remedy appears to meet all ARARs.

The Department is pleased that a decision has been made on the final operable unit. If you have any questions, please contact Evelyn Tapani, State Project Manager at 556-1125.

Very Truly Yours,



Daniel S. Greenbaum
Commissioner

cc:
James Colman, Assistant Commissioner
Dave Terry, Division Director of Water Supply
Gregory Vasil, Office of General Counsel
Richard Chalpin, Regional Engineer NERO
Emmet Hayes, State Representative
Conrad Jankowsky, Holbrook Task Force

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