

**MALCOLM
PIRNIE**

**WORK PLAN
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
BB&S TREATED LUMBER CORPORATION SUPERFUND SITE**

Prepared for:

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION**

FEBRUARY 1996

MALCOLM PIRNIE, INC.

**S-3515 Abbott Road
P. O. Box 1938
Buffalo, New York 14219**

0266-323-100/WP

1

February 7, 1996

Ms. Sally W. Dewes
Environmental Engineer 2
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Response to Comments on BB&S Work Plan

Dear Ms. Dewes:

This letter highlights the changes that have been made to the attached work plan for the above-referenced project. These changes are the result of our telephone conversations, a fax from Kelly Bologna, and an internal review of the Health and Safety Plan. The changes include:

- Figure 1 in the Work plan and Appendix B, the Health and Safety Plan has been updated.
- The holding time of TOC has been changed from 2 days to 26 hours in Table 3-2.
- The project schedule in Section 4.0 has been updated with a total of 3.5 months cut from the project.
- The Health and Safety Plan has been revised to include the requirements of 29CFR1910.1080; requirements for inorganic arsenic sites. Our plan now includes personal air monitoring for all Malcolm Pirnie employees that will be on site. We have notified our subcontractors of this proposed change to our Health and Safety Plan and informed them that they would be responsible for conducting their own air monitoring. Costs associated with this additional monitoring have been included in the budget.
- Page 11 of Appendix A has been reworded to include the maintenance of ELAP certification.

Ms. Sally W. Dewes
Division of Hazardous Waste Remediation


February 7, 1996
Page 2

- The Schedule 2.11's have been modified to reduce program administration's hours as per NYSDEC Program Management. In addition, the mail expense in Tasks 2 and 5 have been increased to account for Citizen Participation mailings and one airline ticket for my participation in the first public meeting has been removed. Miscellaneous expenses have also been increased by ~~\$100~~ ⁶⁵⁰ for personal air monitoring on Schedule 2.11 (d-5).

If you have any questions concerning our responses to the NYSDEC comments, please contact me at (716)828-1300.

Very truly yours,

MALCOLM PIRNIE, INC.



Anne Marie C. McManus, P.E.
Project Manager

Attachment

0266-323-100
haf/ACM02076.L3

January 5, 1996

Ms. Sally W. Dewes
Environmental Engineer 2
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: WA#D002852
Response to Comments on BB&S Work Plan

Dear Ms. Dewes:

This letter responds to the comments received from your office and Kelly Bologna regarding the work plan for the above-referenced project.

Comments from Kelly Bologna dated December 1, 1995.

- 1) **The administrative level of effort (LOE) is excessive. For the proposed LOE and duration of this project, it should be between 80-110 hours. The following are specific items that need a reduction in hours:**
 - a) **Preparation of Monthly Project Report and Updating WA Progress Schedule.**
 - b) **Preparation of Monthly CAP and Cost Control Reports.**
 - c) **Word Processing and Report Preparation.**

Response: We have reduced the administrative hours associated with preparation of the monthly progress reports and monthly CAP and cost control reports to the minimum we feel is appropriate for an eighteen-month duration project. We do not feel we can reduce word processing hours any further and still prepare draft and final work plan, RI report, engineering evaluation FS report and periodic correspondence over an eighteen month period. See Schedule 2.11(b-1) for revisions to the administrative hours.

- 2) **Schedule 2.11c should show a maximum reimbursement rate and estimated number of units for travel. This is missing for some tasks. How was the estimated lump sum cost for these items determined?**

Response: Travel was changed to airfare costs and broken out by estimated number of tickets needed and cost associated with each. See Schedule 2.11© in the revised work plan.

- 3) **The equipment rental rates for the Pressure Transducers and the Hermit SE2000 must be supported by three responsive written or verbal quotes.**

Response: Only two vendors that Malcolm Pirnie is familiar with provide the type of equipment that is required. The cost estimate is slightly higher than the estimate from Instrumentation Northwest. However, Malcolm Pirnie normally uses In-Situ data logger and transducers and is confident in the data produced. Additional labor cost would be associated with Instrumentation Northwest.

Supporting documentation for these costs is provided in Appendix F of the Work Plan.

- 4) **Regarding the Professional service subcontract with Edward Watts, the following is needed:**

- a) **Three written quotes are needed for the \$6,750 surveying subcontract**
- b) **Three written quotes are needed for the submersible pump (\$4000) rental**
- c) **Specify what the \$1,950 shipping charge is for (\$75/day).**
- d) **If miscellaneous supplies are expected to run more than \$1,000, a detailed cost breakdown is needed.**
- e) **Nancy Potak's data validation subcontract expired in 8/95. Does Malcolm Pirnie intend to solicit bids for another round of standby data validators?**

Response: The response from Edward O. Watts, P.E is included in Appendix F to the Work Plan. A new standby contract with Nancy Potak was signed in 12/95 and is currently awaiting approval from NYSDEC program management.

Comments from Sally Dewes dated January 2, 1996 and January 4, 1996.

1. **Page 2-3. Regional data (McClymonds and Franke, 1972) shows the site to lie in an area with a transmissivity of about 200,000 gallons per day per foot. Was the transmissivity value presented in this section developed from drawdown data collected in the pumping well? If so the discrepancy between the regional value and the site specific value of 91,000 gpd/ft may be a result of well efficiency.**

Response: The transmissivity value presented in this section was obtained from information presented to Malcolm Pirnie by the Department and is from Observation Well 2 located on the site.

2. **Page 3-1. Please specify that the literature search will include locating public and private well supplies.**

Response: Addressed on Page 3-1 of the Work Plan.

3. **Page 3-3. When sampling surface soil, areas that have been obviously covered with fill should be avoided. If necessary and possible, deeper samples may be taken to sample undisturbed soil. Nine samples should be taken with one duplicate.**

Response: Addressed on page 3-3 of the Work Plan.

4. **Page 3-4. Discuss the selection of soil boring locations.**

Response: Addressed on Page 3-3 of the Work Plan.

5. **Page 3-5. Please list the analytical methods that will be used for the water quality parameters listed on this page: phosphate, silica, total organic carbon etc. Please explain why these parameters are necessary for the reverse osmosis (RO) analysis.**

Response: The analytical methods are provided on Table 3-1. The explanation is provided on Page 3-5 of the Work Plan.

6. **Page 3-7. When we discussed the work plan outline with Malcolm Pirnie (MP), it was agreed to skip the step drawdown test if data from earlier investigations could be substituted. There is no mention of attempting to obtain and interpret previous data in the work plan. This should be included.**

It was also agreed that the pretest water level monitoring would be cut from seven to four days. This has not been addressed. One justification MP uses for seven days of water level monitoring is that there is a sand mine and well near the site that may be affecting the study area. On Figure 1 of the Work Plan a gravel pit is shown ½ mile to the south-southeast of the site. A well in the Upper Glacial Aquifer that far away would have to produce massive amounts of water to cause significant interference in the aquifer test.

The proposed work plan does not address the production well that is within 20 feet of the recovery well RW-1. The well must be shut down during the test or taken into account. Please discuss.

Response: Addressed on Page 3-7 of the Work Plan.

7. **Page 3-16. The section regarding the feasibility study needs to be more specific. The detailed analysis of each alternative begins with a detailed description of the alternative. This description includes: a site plan; projected life of containment or treatment systems; supporting data from literature surveys; and a projection of the extent to which the alternative achieves the response objectives. If appropriate, modeling done to predict the performance of the alternative is included in this information. Present all of the above data followed by an evaluation of each alternative against the following seven criteria:**

- overall protection of human health and the environment
- compliance with State Standards, Criteria, and Guidance Values (SCGs)
- long-term effectiveness and performance
- short-term impacts and effectiveness
- reduction of toxicity, mobility, or volume
- implementability
- cost

Following the detailed evaluation of each alternative, the alternative will be compared with each other using the information collected and the factors described above. The evaluation will also consider the future operations at the site. For example, if the site is going to continue to operate it will be able to continue to recycle spent CCA solution. If, however, the site will shut down the recycling of CCA is not practical. These considerations must be made in the selection of a remedy. Particular attention will be paid to comparison of the effectiveness of each alternative with the relative cost of achieving the effectiveness for alternatives that achieve the same relative degree of protection of human health and the environment; lower cost alternatives will be considered over more expensive ones.

At the conclusion of the detailed analysis of the alternatives, MP will formulate a preferred alternate for each of the operable units discussed at the site. The results of all phases of the FS will then be combined in an FS report that documents the approach and methodology used to select the preferred alternative. The report will be prepared for NYSDEC to present for public comment.

MP will prepare a conceptual plan for implementation of the proposed remedy. This plan will include: a site plan; process flow diagrams; a proposed

implementation schedule; equipment lists; and a cost estimate of the selected remedial alternative.

Response: MP agrees with the comment, and will consider these points when preparing the FS. Additional detail is provided on Page 3-16 of the Work Plan.

8. Table 3-1. Holding times - Change holding times* to:

| | |
|--|---|
| Volatile (soil) | 7 days |
| Volatile (aqueous) | 7 days |
| Semi-volatile (soil) | 5 days after VTSR extraction, 40 days analysis |
| Semi-volatile (aqueous) | 5 days after VTSR extraction, 40 days analysis |
| TAL Metals (soil & aqueous) | 6 months |
| Total Organic Carbon | 26 days |

* **Add that the holding times are from Verified Time of Sample Receipt (VTSR) at the laboratory. Samples must be received by the laboratory within 48 hours of sampling.**

Water quality parameters should be listed with methods and holding times from NYSDEC Analytical Services Protocol (ASP) '91 Rev.

Response: The holding times were removed from Table 3-1. Holding times are now on Table 3-2. Water quality parameter methods were added to Table 3-1.

9. A chart that defines for each analysis the type and size of sample bottle and sample preservation should be included in the work plan. (Volatile samples should be unpreserved.) This chart should also define the site-specific quality control (QC) samples planned for the project and include the necessary sample bottles (example: site-specific matrix spike, matrix spike duplicates require three bottles per analysis category). Field duplicates should also be accounted for in this chart. Note that field duplicates should be blind to the laboratory (i.e., given different sample IDs that are documented in field notes). Page 3-5 discusses filtered and unfiltered groundwater samples. This should also be clarified in the sampling and analysis chart, since it will affect the number of sample bottles needed.

Response: Table 3-2 provides the sampling containers and preservation methods. QC samples have been added to Table 3-1.

10. **Page 3-5, third paragraph- Change “The groundwater samples will be filed filtered prior to the addition of preservatives.” to “The filtered set of groundwater samples for dissolved metals will be filed filtered prior to the addition of any preservatives.”**

Response: Addressed on Page 3-5 of the work plan.

11. **Page 3-7, first paragraph- Change”The HydroPunch Samples will be field filtered prior to the addition of preservatives.” to “The filtered set of HydroPunch Samples for dissolved metals will be filed filtered prior to the addition of any preservatives.”**

Response: Addressed on Page 3-7 of the work plan

12. **Page 3-7, first paragraph - describes VO and SVO compound testing (volatile and semi-volatile analysis) on one HydroPunch borehole. This testing is not designated on Table 3-1. Please clarify.**

Response: The testing described on page 3-7 has been added to Table 3-1.

13. **Page 3-9, 3.3, first paragraph- Change “The ASP QA/QC package” to “The NYSDEC ASP Category B deliverables package.”**

Table 3-1 should also designate in a footnote that NYSDEC ASP Category B deliverables package is required.

Response: Addressed on Page 3-9 of the work plan and in Table 3-1.

14. **Page 3-9, 3.3, third paragraph- Clarify that data validation will be performed by Nancy Potak in accordance with the EPA Functional Guidelines for Data Validation and the NYSDEC ASP ‘91 Rev. method quality control requirements.**

Response: Addressed on Page 3-9 of the work plan

15. **Appendix A, Page 10, 1.12- Add “Any deviations from the analytical protocols in this Work Plan must have prior approval by the NYSDEC Project Manager, Sally Dewes, or NYSDEC Quality Assurance Officer, Christine McGrath.”**

Response: Addressed on Page 11 of Appendix A.

16. **Appendix A, Page 10, 1.12- Add "The Malcolm Pirnie QAO is responsible for monitoring that the laboratory maintains NYSDOH ELAP CLP and general certification for the analysis required for this project."**

Response: Addressed on Page 11 of Appendix A.

17. **Page 5-1- Paul Werthman cannot be the Project Officer (QAO?) And Program Manager (see attached QAO guidelines). The attached duties of the QAO, as described in the QAO guidelines, must be incorporated into the duties of the QAO in the Work Plan.**

Response: Addressed on Page 5-1 of the Work Plan. Conrad Tuefel is designated as the QAO for this project.

18. **In the directions to the hospital, Item #2, the turn from Speonk-Riverhead Road to Rt. 27 cannot be made. Rt. 27 is a limited access road with no ramp at that intersection. Please revise.**

Response: Addressed on Page 2 of Attachment 2 to Appendix B.

19. **Standard Operation Procedure (SOP) C-3 for hollow stem augers. This SOP does not contain a contingency for running sand. It is recommended a sand bailer be used. If the sand inside the auger barrel is not cleared, the force of the hammer driving the spoon or punch will be transferred to the inside of the auger, as will the retracting force, causing sand lock. If the drillers attempts to over drill and shake the sand out, the split spoons will not provide representative samples. If the drillers suppress the running sand with water, the HydroPunch may not yield representative samples.**

Response: Addressed on SOP C-3 of Appendix C.

20. **SOP C-9. Although the water table is expected to be below 20 bgs, the procedures in paragraph 2.3 regarding pumping rate must be followed, i.e., pump from top, for not let the water drop below the screen, etc.**

Response: MP agrees with this statement and has modified SOP C-9 of Appendix C.

21. **The contact list should include *residents* in the area, not just property owners. The property owners that should be notified are the adjacent property owners, not all property owners in the vicinity of the site. Please include a map in the Citizens Participation (CP) Plan that outlines the area that the contact list**

covers. Also, the residents on the mailing list should be referred to generically as "Resident" , not with their proper name (e.g. Mr. John Smith).

Response: Malcolm Pirnie will revise the mailing list and submit it with the Citizen Participation Plan as a separate submittal to immediately follow the enclosed submittal.

22. The CP Plan mentions several tasks that BB&S will perform. BB&S will not be responsible for any of the CP items; either the NYSDEC or MP will be. For example, MP will help develop fact sheets associated with the site and mail them for the NYSDEC. Please remove all references to BB&S participating in the CP Plan.

Response: All references to BB&S participating in the plan have been removed.

23. Page 1. One purpose of the CP Plan is to keep the public abreast of the activities at the site, including the investigation and remedial measures, through periodic activities such as public meetings and mailings. Please include this on this page.

Response: Addressed on Page 1 of Appendix E.

24. Page 2. The third bullet on this page should refer to public *meetings*, not *availability sessions*. Please correct.

Response: Addressed on Page 2 of Appendix E.

25. Page 4. The RI/FS Work Plan will also be approved in the winter of 1996. Please include that in the schedule.

Response: Addressed on Page 4 of Appendix E.

26. Page 4. The technical contact person at the NYSDEC should be Sally Dewes only. Do not include Chris Magee's name in this document.

Response: Addressed on Page 4 of Appendix E.

27. Page 5. "Community Affair" should be changed to "Citizen Participation."

Response: Addressed on Page 5 of Appendix E.

28. Page 6. It is stated on this page that there is a discussion of the major elements of the project and the CP activities for each element. There is no such discussion. Please discuss fact sheets, meetings, comment periods, etc. There is no discussion of MP's role in the public meetings. Please add this to the CP plan.

Response: MP revised the CP plan to include this information. It is included in Section 3.5, starting on Page of Appendix E.

29. In Section 3.6, there is a discussion of what will happen after the completion of the design. This part of the remediation is out of the scope of this work plan and must be removed. Section 3.7 is out of scope. The second bullet on p. 2 is also out of scope.

Response: Section 3.6 and 3.7 and bullet 2 have been removed from the CP plan.

30. Page 11. Please remove the reference to the NYSDEC toll-free "800" telephone number.

Response: The reference was removed from page 11 as well as page 8.

31. Attachment 1 must be checked for typos. As stated previously, the list should be mainly composed of residents, not property owners. Only property owners of parcels adjacent to the site should be on the list.

Response: See response to Comment No. 21.

32. The Department Personnel listed in Attachment 1 are redundant. Please only include Sally Dewes and Joshua Epstein on this list.

Response: The names have been removed from the list.

33. A list containing additional names for the mailing list will be sent under separate cover.

Response: These names have been added to the list.

34. The Department has determined that no money should be allotted for Task 4 at this time. Please remove the costs from the budget.

Response: The costs have been removed from the schedule 2.11.

Additionally, the costs for Task 6 - Laboratory Audits have been removed from the project budget since we have been informed by Program Management that this is no longer a requirement of the Standby Analytical Subcontractor procurement process.

Comments from January 4, 1996 letter.

- 1. The pagination in the table of contents will need to be revised.**

Response: Malcolm Pirnie will update table of contents after corrections to the CP have been made.

- 2. Page 1. The last line, last paragraph should read; "To keep the public informed and involved regarding..."**

Response: Addressed on Page 1 of Appendix E.

- 3. Page 2. The second bullet should read; "Ensure that all fact-sheets, meeting notifications, and other informational materials are accurate and appropriately written."**

Response: Addressed on Page 2 of Appendix E.

- 4. The third bullet should read; Hold public meetings..."**

Response: Addressed on Page 2 of Appendix E.

- 5. Page 3. The last sentence should read; "...development and performance of a RI/FS, thus making this a state-lead site (see "Significant Elements of the Remedial Program" for definition of)."**

Response: Addressed on Page 2 of Appendix E.

- 6. Page 4. Under 2.1.1, the purpose is to present major technical milestones. The current draft mixes these with Citizen Participation. Rather, Citizen Participation (RI/FS Work Plan meeting, RI meeting, PRAP meeting, etc.) should be presented as part of specific citizen participation activities - see point 12.**

Response: Malcolm Pirnie will revise Section 2.1.1 to reflect technical milestones instead of citizen participation milestones.

7. **Page 6. The second sentence should read "...as the remedial program progresses, and may be supplemental..."**

Response: Addressed on Page 6 of Appendix E.

8. **The first sentence, second paragraph should read; "All informational materials must be reviewed and approved..."**

Response: Addressed on Page 6 of Appendix E.

9. **The last sentence in that paragraph should be deleted.**

Response: Sentence was deleted.

If you have any questions concerning the responses to the NYSDEC comments, please contact me at (716)828-1300. We can be prepared to initiate field work on January 16 if you can provide us with written preliminary authorization to proceed immediately upon receipt of the enclosed work plan.

Very truly yours,

MALCOLM PIRNIE, INC.



Anne Marie C. McManus, P.E.
Project Manager



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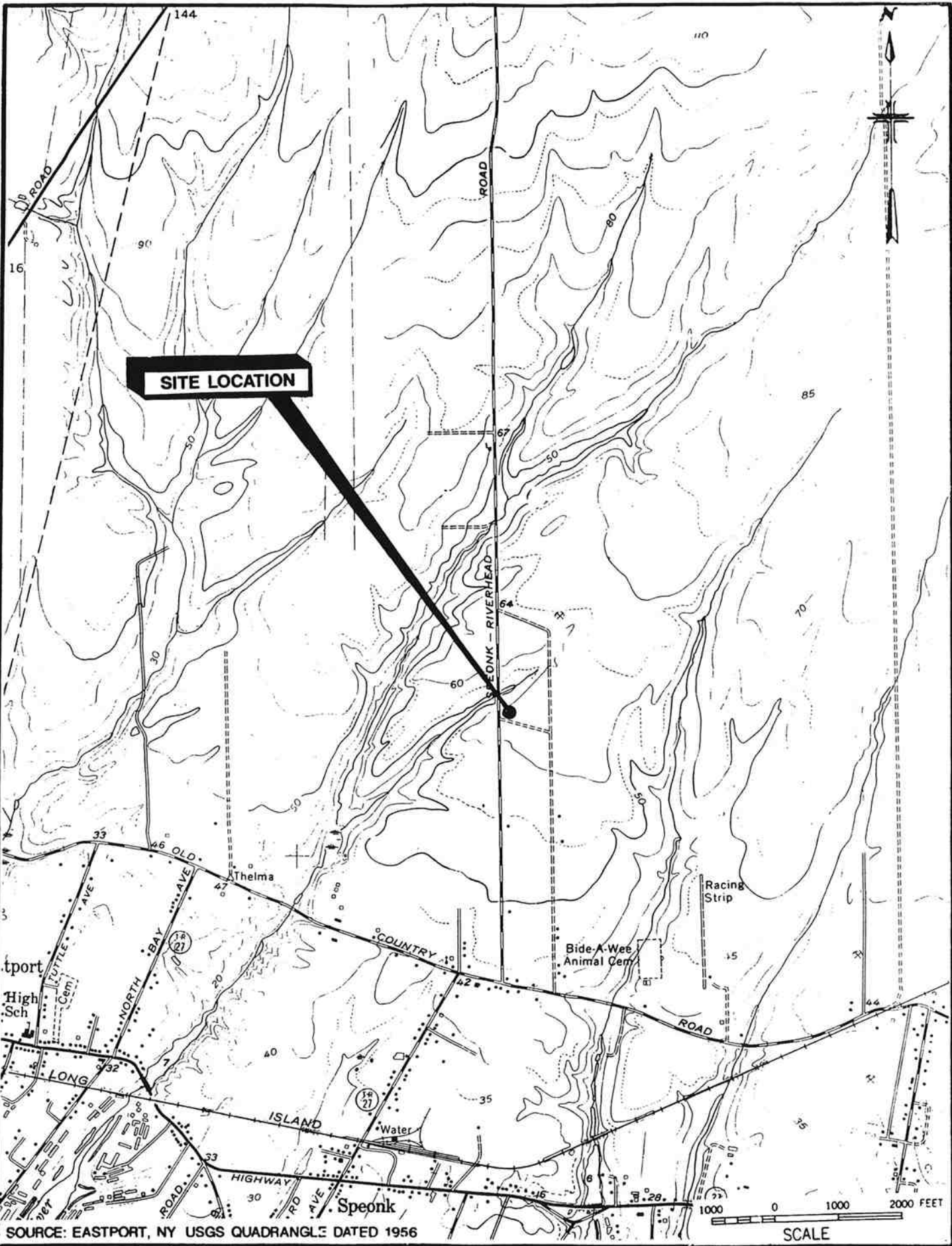
1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The New York State Department of Environmental Conservation (NYSDEC), Division of Hazardous Waste Remediation, has assigned to Malcolm Pirnie, Inc. (Work Assignment #D002852-15) a Remedial Investigation/Feasibility Study (RI/FS) at the BB&S Treated Lumber Corporation (Site No. 1-52-123), Speonk-Riverhead Road, Town of Speonk, Long Island, New York (Figure 1). The BB&S Treated Lumber Corporation is an active lumber preserving facility that has been in operation for over 12 years. The treatment procedure uses chromate copper arsenate (CCA) as a wood preservative. Discharges of CCA to the ground have contaminated the groundwater in excess of drinking water standards for arsenic (detected at concentration greater than 1,200 parts per billion) and total chromium (detected at concentrations greater than 11,000 parts per billion).

Malcolm Pirnie has prepared this Remedial Investigation/Feasibility Study (RI/FS) Work Plan based upon information provided in the NYSDEC Work Assignment dated September 29, 1995; site visits on October 16 and 26, 1995; and the October 25, 1995 scoping session between NYSDEC and Malcolm Pirnie.

This Work Plan is organized as follows: Section 2 presents a site description including the site history and geology, Section 3 contains the Proposed Scope and describes the major tasks and subtasks that will be completed; Section 4 presents the preliminary estimate of the Work Assignment progress schedule, including milestones and deliverables for the RI/FS; Section 5 provides the Project Staffing Plan, which identifies key management and technical staff members and a listing of their areas of responsibility; and, Section 6 presents the project cost estimate. The Work Plan also includes a Quality Assurance Plan (QAPP - Appendix A), a Health and Safety Plan (HASP - Appendix B), Malcolm Pirnie Inc.'s Standard Operating Procedures (SOP's - Appendix C), a M/WBE Utilization Plan (Appendix D), and a Citizen's Participation Plan (Appendix E).



SOURCE: EASTPORT, NY USGS QUADRANGLE DATED 1956

SCALE

**MALCOLM
PIRNIE**

**BB & S TREATED LUMBER
SPEONK, NEW YORK
SITE LOCATION MAP**

MALCOLM PIRNIE, INC.
0266-323-100
FIGURE 1

148884

1.2 PURPOSE AND OBJECTIVES

This Work Plan provides background information on the BB&S Treated Lumber Site, and defines the level of effort and specific activities to be performed as part of the RI/FS. Its purpose is to describe the proposed work in sufficient detail to ensure that the RI/FS is conducted in accordance with NYSDEC guidelines and meets the Agency's objectives. The Work Plan also identifies the health and safety requirements (See Appendix B) for on-site personnel and quality assurance/quality control (See Appendix A) procedures which ensure the gathering of representative and usable data.

The overall objective of the work is to determine the horizontal and vertical extent of soil and groundwater contamination to provide adequate, reliable data for the evaluation of potential remedial technologies. First, historical research will be conducted to formulate a conceptual model of the distribution and migration of site contaminants. Second, RI field work will be conducted to fill data gaps in the existing site characteristics data. Third, an Engineering Evaluation of the existing RO system will be conducted to evaluate the effectiveness of this system in remediating the site. An engineering Feasibility Study will then be performed to evaluate potentially applicable alternative technologies.

1.3 SCOPE

The scope of this work plan includes the following major components:

- **Remedial Investigation/Feasibility Plan** which describes proposed field and investigation activities, sampling and analytical procedures, as well as site mapping and supplemental historical data review.
- **Project Schedule** which identifies both the major milestones to be completed during the conduct of the RI/FS and estimates of the time required to perform project tasks.
- **Project Organization** which identifies the project team members and the proposed responsibility of each team member.

- **Quality Assurance Plans** which presents the policies, objectives, functional activities, and specific QA and QC activities that will be implemented to assure the quality and validity of data generated during the RI/FS. The Quality Assurance Plan is presented in Appendix A of this work plan.
- **Health and Safety Plan** which addresses site-specific considerations for both on-site personnel conducting the RI/FS as well as the community, including potential on-site hazards, decontamination procedures, and emergency procedures. The Health and Safety Plan is presented in Appendix B of this work plan.
- **M/WBE Utilization Plan** which identifies the subtasks to be completed by minority businesses. The M/WBE Utilization Plan is presented in Appendix D of this work plan.
- **Citizens Participation Plan** which identifies the repositories for site-specific information available for public review. In addition, it provides a list of interested parties and background information for these parties as well as the key points during the project at which public input will be solicited. The Citizen's Participation Plan is presented in Appendix E of this Work Plan.