"The stone at the Ledge that encases the contaminants appears to be in need of further examination in order to assess its containing capabilities. The undersigned noted that more than one test was cancelled that would have given precision in respect to the geology of the area. Instead, an indirect means of measurement was used. There seemed to be an uncritical assumption that a groundwater flow-through rate in a core north of an inferred East-West (fault?) line would be similar to the rock south of the line, when the report notes that the rock on each side of the line is of a different type. The stone to the south of the line appears to have a notable difference in structural integrity. It should be noted that a geologist from Geotechnical Services (greater Boston area) mentioned a fault line that runs in the vicinity of the Ledge. The stone at depth of exposed sites (Acushnet Quarry) on each side of the line are clearly of a different character, with that to the north highly fissurable. No recognition of this difference seems to be indicated in the report. Specimens of the stone are readily available for inspection, namely, the stone of local churches as well as the curbstone of the city. While it might be difficult to trace the depth at which such stone was extracted, nonetheless the method is very empirical, and simply verifies the adage: "Seeing is believing." I assume the critical acumen of the professional will keep things in place, but at the same time assure a place for the data. The literature of the report gave no reference to the geological evaluation of the city by the cited, when such document is available. It is not mentioned in the references of the report. "

EPA Response

EPA recognizes the advantage of on-site inspection of the quarry rocks, where appropriate. This was done at the bedrock outcrops at Sullivan's Ledge and during well drilling and logging. These techniques enabled the determination of the fractured nature of the rock so that groundwater flow and direction could be determined. The shallow bedrock is referred to as "highly fractured." This is from a groundwater view point and is not meant to indicate that the rock was not suitable for construction purposes.

5.2 Specific Comment 2.

"The depth of the pits is of significance. It is an index to the volume of contaminants in the report. There is conflicting evidence of the depth. From 150 feet up (upper limit about 300 feet plus). The report provides no oral historical testimony in respect to not only the depth, but other physical characteristics of significance in respect to an evaluation of the site. The sources are available. Such evidence remains to be integrated into the report. "

EPA Response

EPA believes the depths of the quarry pits range from 90 feet for the southern pit to 150 feet for the larger pits. These estimates are based on historical information and results of the groundwater sampling program. Predesign pump tests will be designed to determine (to the extent feasible) the depths of the quarry pits. Based in part on the RIs and on the results of the pump tests, EPA anticipates that the extraction wells will be set at a depth of 150-200 feet. This should be adequate for collecting the contaminated groundwater.

5.3 Specific Comment 3.

"No indication of the positive value of a Goodyear product was made, namely its function as a container of a contaminant than as transmissive to groundwater sources. No indication such that not even the type &/or name of a common rubber compound was mentioned in the report, namely carbon black. The material could mat and contour and thus function as a barrier. The hypothesis should be made explicit, since much of the methodology is indirect, and hence has an element of the speculative. But given the volumes of the material, so I was told, then its burial in the pits means pockets of the stuff within the pit, and hence could possibly function as a container. If the material was more prevalent in the early years of the site, and since the vertical of the pit moves to a point with depth (moves to a focus, narrows), then it would mean that any chemical migration by gravity moves to these pockets, and could very well be contained by these granular catch-basins of rubber. I suggest that the chemical firm that manufactured the raw material (carbon black) be contacted to find out the chemical and physical properties of the compound. There may be a sole source."

EPA Response

Significant quantities of carbon black may be present in the pits as suggested by the aforementioned reference. It may be possible that such material could retard the migration of some chemical constituents. However, significant levels of contaminants have been detected hydraulically downgradient of the site indicating that any such " barrier" has not been effective in containing contaminants within the pits. Therefore, in order to mitigate migration off-site and significantly reduce contaminant levels on-site, other controls must be considered (e.g., active pumping, passive collection).

5.4 Specific Comment 4.

"While the following point was not stated by the undersigned, the fire that burned for a considerable period of time in the latter years, had as a consequence the settling of the fill in the pits

by about 10 feet. The fire reduced the volume in the pits, some of which were contaminants. That effect would intense heat have on the type contaminants identified by the chemical testing. Again, while precise figures would be speculative, range estimates can cover a variety of scenarios. Fire and heat do act on toxics. To release, destroy and thus lessen the volume. Since it was apparently the burning of the rubber that sustained the fire, what effect does this compound have on other (volatile) chemicals. "

EPA Response

In the early 1970's, a major fire erupted at the site, primarily involving the mass of tires disposed of in the smaller pit. The description of conditions of the site at this time and the account of the fire indicates the tires smoldered in an oxygen deficient atmosphere. Pyrolysis of tires as likely occurred during the fire may produce oils, solid residues, and gas. Tests conducted by the Bureau of Mines (not at the Sullivan's Ledge site) revealed that pyrolysis converts 50 percent of tire material to oils made up of approximately 50 different chemicals classified as olefins, aromatics, paraffins, and naphthenes (Wang 1980 p. 94-95). Therefore, the fire decreased the volume of tires, but likely increased the quantity of non-aqueous phase contaminants.

(Reference: Wang, Lawrence K. and Norma C. Pereira. Handbook of Environmental Engineering, Volume 2: Solid Waste Processing and Resource Recovery. Humana Press Inc.; Clifton, NJ; 1980.)

5.5 Specific Comment 5.

"The following point was not cited in the oral testimony. There seems to be evidence of the waters at the Ledge functioning as a source of water in a southerly direction, prior to the construction of the interstate highways. Note that south of the site there existed a wetland area. The area seemed to have a stream as a source. The area is the old Parker Street dump, where the new high school is located. It appears that a stream can be traced from there until it reaches the saltwater cove in the southern part of the city, Clark's Cove. The stream, more or less, is in a valley with the westerly peak at Rockdale Avenue and the easterly rise about Shawmut Avenue. There seems to be continuity of the stream in a northerly direction up to or near to the Ledge. The significance of the point is important, if indeed the water did move in the identified direction. For it would mean that the water moved away from the Paskamansett river. The downstream Dartmouth river feeds the aquifiers of the adjacent town. The direction of flow of the New Bedford stream is through areas that no longer draw their potable water from the earth near their location. That direction is decisively away from the town that depends on groundwater sources for its water. It is

a movement opposite to the movement from the site now. That movement is to the Paskamansett river. The construction of the roads was completed about 1967 for route #195, and 1971 for route #140. The question then is: did the roads redirect the flow of water from the Sullivan's Ledge? "

EPA Response

It is possible that the construction of the roads did redirect the flow of surface water for the supposed stream from the Ledge site. In any case, if contamination did enter a stream and flow in a southerly direction they could have contaminated the stream sediments and/or volatilized. The construction of the roads would then have covered these contaminated sediments and as such these sediments are covered by road and pose minimal risk to public health or the environment.

5.6 Specific Comment 6.

Lastly, the EPA should evaluate whether extraction of the chemicals (for treatment) can destabilize the material in the pit. After all, with time the material tends to consolidate. Unconsolidated material, it would seem, is open to movement in unpredictable directions, some of which would be undesirable.

EPA Response

Active groundwater extraction may destabilize materials in the pits somewhat with some resettling likely to occur. Aquifer pump testing performed during remedial design will confirm or deny this postulate. EPA does not anticipate technical or health problems associated with any resettling.

5.7 Specific Comment 7.

While the EPA official mentioned the effects of the chemicals on the biota, and seemed to suggest data for the wetland areas downstream on the golf course, apparently no testing has been done. In view of the radical change to clean up the wetlands, such should be foregone for it would only do more harm than good. Possibly some biota testing near & far away from the site are in order to determine the radii of potential effects.

EPA Response

See response to Comment 2.5.2.

6.0 COMMENT SUBMITTED BY PAUL A. BESSETTE

Paul A. Bessette submits the following comment.

Specific Comment.

Regarding the remediation of Sullivan's Ledge in New Bedford, I concur with EPA's decision that the site poses uncertain engineering challenges and that it is not environmentally necessary to render the water flowing from the site suitable for human consumption. The concentration of PCB, metals, and organic compounds emanating from the site is, in my judgement, not a threat to people living in the area, water supplies, or the microenvironment within the limits of the site. Moreover, it is my contention that our limited ecology dollars could be better spent planting trees in and around the location rather than attempting to excavate an abandoned stone quarry.

EPA Response

EPA acknowledges your concurrence with the decision to waive certain groundwater ARARs because of technical impracticibility. However, based on the risk assessment conducted as part of the Remedial Investigation and discussed in the ROD, EPA has determined that exposure to contaminants in the soils, sediments and the unnamed stream, as well as possible exposure to contaminated groundwater, poses unacceptable risks to human health and/or the environment. EPA believes the selected remedy is cost-effective in achieving the remedial goals at the site. As a further note, planting trees and/or plants may be necessary to restore, to the maximum extent feasible, wetlands impacted by remedial action.

EXHIBIT A

COMMUNITY RELATIONS ACTIVITIES
CONDUCTED AT THE
SULLIVAN'S LEDGE SUPERFUND SITE
IN NEW BEDFORD, MASSACHUSETTS

Community relations activities conducted to date for remedial activities at the Sullivan's Ledge Superfund site include:

- EPA held a public informational meeting to discuss the preliminary findings of the RI and Endangerment Assessment.

- EPA issued a public notice to announce the time and place of the Feasibility Study (FS) public informational meeting for the site and to invite public comment on the FS and Proposed Plan.

- January 1989 - EPA mailed the Proposed Plan announcing EPA's preferred alternative for addressing contamination at the site to all those on the site mailing list.

- February 6, 1989 - EPA held a public informational meeting to discuss the results of the FS and the Proposed Plan.

- February 7 - March 27, 1989 - EPA held a public comment period on the Proposed Plan. The originally scheduled 21-day comment period was extended at the request of the public.

- February 21, 1989 - EPA held an informal public hearing to accept comments on the remedial alternatives evaluated in the FS and Proposed Plan.

EXHIBIT B
TRANSCRIPT OF THE FEBRUARY 21, 1989 INFORMAL PUBLIC HEARING

UNITED STATES OF AMERICA

ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

PUBLIC HEARING RE:

SULLIVANS LEDGE SUPERFUND SITE

Tuesday
February 21, 1989

Days Inn
Hathaway Road
New Bedford, Massachusetts

The above-entitled matter was convened pursuant to Notice at 7:30 p.m.

BEFORE:

RICHARD CAVAGNERO
Massachusetts Superfund Section
U.S. Environmental Protection Agency
JFK Federal Building
HRS-CAN3
Boston, MA 02203-2211

JANE DOWNING
Project Manager
U.S. EPA

P R O C E E D I N G

7:30 p.m.

MR. CAVAGNERO: I thank you for your patience, I guess we are going to get started. My name is Richard Cavagnero, I am the chief of the Massachusetts Superfund Section of EPA. We are here tonight to basically have a public hearing on the proposed plan and feasibility study -- Sullivan's Ledge Superfund site. On my left is Jane Downing, who is the remedial project manager for the site and was down here about two weeks ago to basically explain the results of the remedial investigation feasibility study and the proposed plan.

In the audience in the front row is Sky Valencore from E.C. Jordan who is our contractor that conducted the remedial investigation feasibility study. We also have in the third row back Helen Waldorff, DEQE who has been the states project officer on the project. The purpose of tonights hearing is to formally accept comments on the remedial investigation itself, the endangerment assessment, feasibility study and the proposed plan for the Sullivan's Ledge remediation.

The format of the hearing, I guess, will be as follows. Jane is sort of going to sort of recap the proposed plan that was discussed about two weeks ago just so that you can -- it is some what complicated and she will be giving you

10 or 15 minutes to highlight that. Following Jane's overview, we will be taking formal comments, oral comments for the record. I have received cards thus far and I would ask that anyone who hasn't given me one would give me one and the only purpose of these is so that we do get your name spelled correctly for the record. We will be, obviously, making a transcript here and would like your name and affiliation so that we can get it right for the formal record.

I will be calling the people in the order in which they have given their cards and will feel free to limit people to some reasonable time frame, if there is only three people I don't think we will have that problem. Once the formal oral comments have been given, we will basically close the hearing and we will hang around for a while to answer any questions and answers people may have. This is part of a public comment period which we decided today to grant an extension to the, I believe it was scheduled to close on March 6th and we decided today that we will be extending this to March 27th, which will give us a total of 49 days for the public comment period.

We are taking this action do to a number of circumstances unique to this site, one of the factors considered was the fact that EPA was somewhat late in identifying potentially responsible parties at this site. The searched to identify these parties was not completed until July of 1988 and therefore the PRP's did not receive notice of

their potential responsibility until November giving them basically two months before the post plan was issued and the actual RR report was not available for public review until February 3. So we have received a number of requests, I'm not sure what the exact number is, for extensions of various time frames and the division director decided today that we will be extending this until March 27th and I believe we will be putting some kind of a notice in the paper for those of you who are here tonight.

So you do have chances, I guess if you will. Tonight for those people who wish to make an oral comment and until March 27th we will be taking any comments in writing. They need to be sent Jane Downing at the U.S. Environmental Protection Agency in Boston, the specific address is the Waste Management Division, JFK Federal Building, Mail Code HRS CAN-3, Boston, MA 02203-2211. If you didn't get all that I will have that available up here. If you give oral comments tonight, you can still give written comments again. If you don't feel compelled to give them tonight, feel free to submit them in writing.

We do hope that you will submit comments. We have had a number of public hearings recently on proposed remedies for super fund sites and have not really had too much in the way of comment. The comments do not have to be limited to the proposed plan that was described in detail two weeks ago and

will be recapped tonight. We would also like to hear what -- you have to thing about the remedial investigation, the -- assessment, feasibility study. We of course would like to hear that you support the proposed alternative EPA has chosen for clean up, but we would also like to hear if you don't support it and you think we should pick something else. Once the whole comment period is over, we will be signing what is called the record of decision probably 2 or 3 months later. That will be the regional administrators determination of the remedy of this site in accordance with the stature and as part of that record of decision we will be preparing what's called the responsible summary.

This essentially will be a response to any comments given either orally at the public hearing or submitted in writing so that you will know how we addressed any comments you provided. So with that I would like to turn it over to Jane and again, she will be recapping the proposed plan, because we are transcribing this as a formal hearing as required by the stature, we are not really open to a question and answer period. As I said, after the formal comments have been given, we will be glad to stay around and answer questions if people have such. So I thank you for baring with us and I turn it over to Jane.

MS. DOWNING: Thank you. Again, --- about two weeks ago, but just as a recap I would like to talk about some of

the site conditions and some of the contaminants that we are looking at. Again, basically we are taking about a 12 acre site. The significant features are, of course, the quarry pits, the sources of contamination are the on site soils, basically the chemicals that we are talking about are the PCB and the PAH. We also have sediments that -- continue on into some of these wet land areas and these sediments are essentially contaminated with the PCB.

We have some ground water on the site and also off the site and the chemical concerns in the ground water are primarily the V.O.S.'s, the Volatile organic compounds. So those essentially a very quick outline of the chemicals of concern as a result of the remedial investigation. The risks that came to light as being the most important risks were of course the risks dealing contact with PCB contaminated soils. There was also a significant risk dealing with the pathway of ingestion of contaminated ground water. Fortunately at this point we do not believe that anybody is actually ingesting the contaminated ground water, but there could be a future use in area that we need to protect for.

As far as the preferred alternative, again, we are talking about a fairly comprehensive program. We have nine separate components that we have outlined. Initially we begin with the site preparation and I think that essentially speaks for itself. For the soils where we are dealing with the

PCB's, we are proposing excavation, --- and on site disposal for those soils and the same thing would be true of the sediments. The only additional thing that we would need would be the dewatering of the sediments before we dispose of it on site.

There is also an impermeable cap that will go over the 12 acre site, actually it is going to be 11 acres of the 12 acres and that will over lay the solidified soils and sediments. For the streams, there is a portion of the stream along the eastern border of the site which we need to line with concrete and for the contaminated ground water we are proposing a two component collection system. One is essentially a passage system for the seeps and for the shallow bedrock. There is also an active system that will focus on the bedrock contamination.

Again, after the collection of the ground water, we need to treat the ground water in the -- treatment system is the Uviosiation for the organic removal and chemical perception for the metals removal. Because of some of the 404 guidelines, the wet lands guidelines, we need to restore any wet lands that are impacted by our remediation and because we have waste that will remain on site there will be one term environmental module. Finally, there will be a need for institutional controls essentially because the ground water will not be cleaned up to drinking water standards.

We talked about that at the public meeting where we need to ask for a waiver from cleaning it up to drinking water standings and we asked for a particular comments on that waiver application. So there will be institutional controls to deal with basically future use of the site and to protect any possibility of ingestion of the contaminated ground water. Finally the anticipated cost for the 9 components is 10 million dollars. At that point, I will hand it over to Rich.

MR. CAVAGNERO: Okay, at this time we will start taking the oral comments. The first person listed is Michael F. Sommerville, no affiliation given.

MR. SOMMERVILLE: I'll pass.

MR. CAVAGNERO: Next is Craig Campbell, Esquire, Boston, Mass.

MR. CAMPBELL: I actually thought we were doing that for persons registering our presence here.

MR. CAVAGNERO: No, it wasn't a sign up sheet---

MR. CAMPBELL: I don't affiliate -- I wanted to let you know I was here.

MR. CAVAGNERO: Antonio M. Carreiro, of Teledyne Rodney Metals.

MR. CARREIRO: I will also pass.

MR. CAVAGNERO: Well does that mean that no one wants to make an oral comment?

MR. DAVIS: My name is Robert Davis and I am

speaking --- I tried to -- this afternoon and the last time I was here --- to the extent that I felt I should -- had a fellow named Dale in 1910 who was a -- configuration at the quarry and dump of the quarries. He wrote us also in 1933 a quote of the Standard Times a man named Denault, and one of the quarries was named after him, Denault Quarries. He estimated the depth to be 300 feet. The fellow Dole I think was a treasurer for the USGS and was talking about commercial quarries throughout the state, one of which was -- and he estimated the depth to be 150 feet.

It says right in the record that there is a discrepancy between the two. What I found somewhat surprising in reading it, that there was no effort -- and I got this from your last meeting too, there was no effort on your part to interview anybody who worked at the site to get from them, at least their impression on the depth on the site and the condition of the rock, the sidewall. You can ask questions like the flow of water through the sidewall were there and fissures and water burning through. I think that is a major -- in it and I think some time should be spent trying to contact these people, because there are some still around.

I remember myself, and I tried to estimate my age, I swam in that hole. I don't think I was out of high school, so that was probably about 1947. I remember the wall, the kids were diving off, like the ledge up in Dartmouth, they would

dive from a high spot and so on, but I remember the wall, it was almost a 90 degree angle. I remember the texture of that stone. I recall it up to my mind to this day. I worked for the city at one time and I was involved in, what was called a strategic patrol and reserve, the city at one time was a potential site for an underground cavern. I took a geologist around the city in assessing the quality of the stone and it was from geotechnical service and they -- work on it. He surmised that there was a fault line that ran through the city and --- the stone was highly --- he went there and he looked at it -- the quarry pit in Anesta you could see a difference in the texture of the stone at the quarry pit.

That is an enormous pit, it goes to great depths I was overwhelmed by it when I saw it. What you saw was water coming through the cracks in the stone. It was a dark gray, almost a sense of --- that stone with my impression there, is a -- contrast to the stone I experienced when I was a youngster. The stone at Sullivans Ledge was more light than I would imagine where they proposed to put the caverns in which caverns had a stone was -- to be a cavern, it's non fission stone. I think this is significant in that at the ledge if you have a stone with integrity, it can function as a container, a much better container than a highly fissioned stone.

I noticed in trying to assess the geology of the

area, you had two tests on line and you cancelled two of them. Then you tried another test by means of stereoscopic means to locate where you thought there was a fracture area. You thought that this was a probably fracture area A. Just a little mark of Hathaway Road and you had a line there, with an arrow thing, probable fracture area A. You had two others, but you didn't think that they were significant, that this one could be significant, so you drilled a well, MW-8. You went 50 to 55 feet down, you got 9 gallons per minute of water coming through which indicated to you indeed we found a fractured area.

I went and tracked down, and I just did this before I came here, where this MW-8 was. If that well was over Sullivans Ledge or near Sullivans Ledge, to me it was very significant, because then it would indicate that the stone was fractured. Well that well was not of another line in a --- we call bedrock geology and there was a long dash line. On one side of it you have stone called PE ga, now on the other side of the line you have a stone called PE gs and the one on the other side is called gneiss shiest -- I'm not quite sure, I'm not a geologist, but I am working with the impressions that this geologist that I went around with.

I am working with my visual memory of the contrast between the two stones. On that side I have the PE gs which is on the north side, this is where you put this well in. On

the other side you have a different kind of stone and let me read you the description. It is called loscatic granite. This is the stone typical of Sullivan Ledge now. Loscatic granite, light gray, flesh colored medium gray. Flesh colored, that fits my memory of the stone which I saw when I swam at Sullivans Ledge.

What I find fundamental -- ont he part of the geologist is that they had available to them by observation, by -- needs ways of observing the actual stone. Thus much of the curbing in the city is built using the stone from Sullivans Ledge. Many of the churches used the stone from Sullivan's Ledge, I would think from actually observing that stone you could make a good -- judgement about the integrity of that stone and it's proneness to fracture and let water run through it. Letting water run through it is very significant. If you have a stone which is less apt to do it, that would appear to be a desirable container.

So my conception of it is, is that in a sense you have the ideal container if you have a wall container with good integrity. What is unfortunate is down in the depths you have breached something where you have an active source coming in and it appears to be a spring. I noticed that in the geological analysis they say that below --- we are not going to test in terms of the vertical pass through of water, from 0 feet to 80 feet we are going to test in terms of the fracture

ability of this rock in terms of the water seeping through the bedrock, but as we go deeper and deeper, below the 100 feet we are not going to test for that. I think that is another thing. I think the interpreting of the integrity of the stone relative to the pass through of ground water in terms of the current -- of actually observing air --- going over to the Acushnet Quarry, going to the churches and interviewing the people that who work there I think that is a major omission.

I note that the document in which the strategic patrolling of -- caverns in which the technical assessment of the of the stone was made. That this literature is not in your literature. Apparently you missed it in terms of your assessment of the geology of the ---. I know that this geologist that I was taking around said, gee, there is a fault line running through the city, the impression I got when I read this tonight and I looked for that well, well son of a gun that fault line seems to be just north, maybe. The significance of it is, just north of Sullivans Ledge and on that side you have a highly fission stone and on this side you don't, you have a stone of integrity, which then I think is a much more positive way of looking at the potential impact of any water in there in terms of going down deep, in terms of being released into the surrounding environment.

At least you have got a relatively better container then with the stone from the other area. That's the major

comment that I would like to make. Another comment is in respect to one of your solutions is to extract the chemicals -- then you treat it and then you would discharge it down the stream and it would end up in the Paskemanset River. A question I raise is, and you should make a critical evaluation in terms of the site as is in containing relative to anything that is passing out laterally. If you extract it could possibly be you could disturb an equilibrium which exists there. You can make things worse than before.

I think that there should be some evaluation of that there --- I note in respect to the marsh area and at the last meeting Ms. Downing commented on the effect on aquatic life. I noticed, what I read tonight, it says the -- any living organisms in the marsh area. So you don't have any idea whether there has been any piece of the up take or any chemical up take in terms of any living organism at the marsh area. In terms of if you were to remove material and try to replace it, it would seem by doing such as a remedy that you would make things worse then before, because I doubt you could ever duplicate in terms of cleaning up.

So it would seem right now the best thing is to leave things as they are and monitor critically levels as they begin to approach the Paskemanset River and see what those levels are. I know from reading the text, it says as you move away from the site the -- decrease to a very low level. One

other point I would like to bring out is at one time I got involved in this site and I brought the question up at the last meeting and I don't thing you pay any attention to it. You don't really identify a product that went in there with precision. You talk about rubber tires that went in there, there was a -- that went in there like a black powder and it was called carbon black and from my understanding there was an awful lot of it that went in there.

I think the timing of when that stuff went in, that you had an idea of the chronology of when it went in, you may have the possibility, it's remote, but you could have this stuff, this carbon black which seems to me not to be a contaminate, but a possible container. ----maybe with this carbon black it can form like a shield in which any of your solvents can't pass through and thus you have something in there functioning to contain. This is why I worry if you do extract, you do disturb the balance and where you don't have something passing through vertically, you may create a fracture so to speak in whatever is containing and then accelerate the vertical ---

So there may be a positive way of looking at some of the chemicals that went in there and there is a possibility that some of them could function as a shield to contain. There is a positive way of looking at the thing may be beneficial. That's it.

MR. CAVAGNERO: Thank you Mr. Davis. Well I guess if there is no more statements we will close the record, but we would like to stay around for questions and answers if anyone has any.

(Whereupon the hearing was closed at 7:50 p.m.)

CERTIFICATE OF REPORTER AND TRANSCRIBER

This is to certify that the attached proceedings before: THE U.S. ENVIRONMENTAL PROTECTION AGENCY in the Matter of:

Sullivans Ledge Superfund Site

Place: New Bedford, Massachusetts

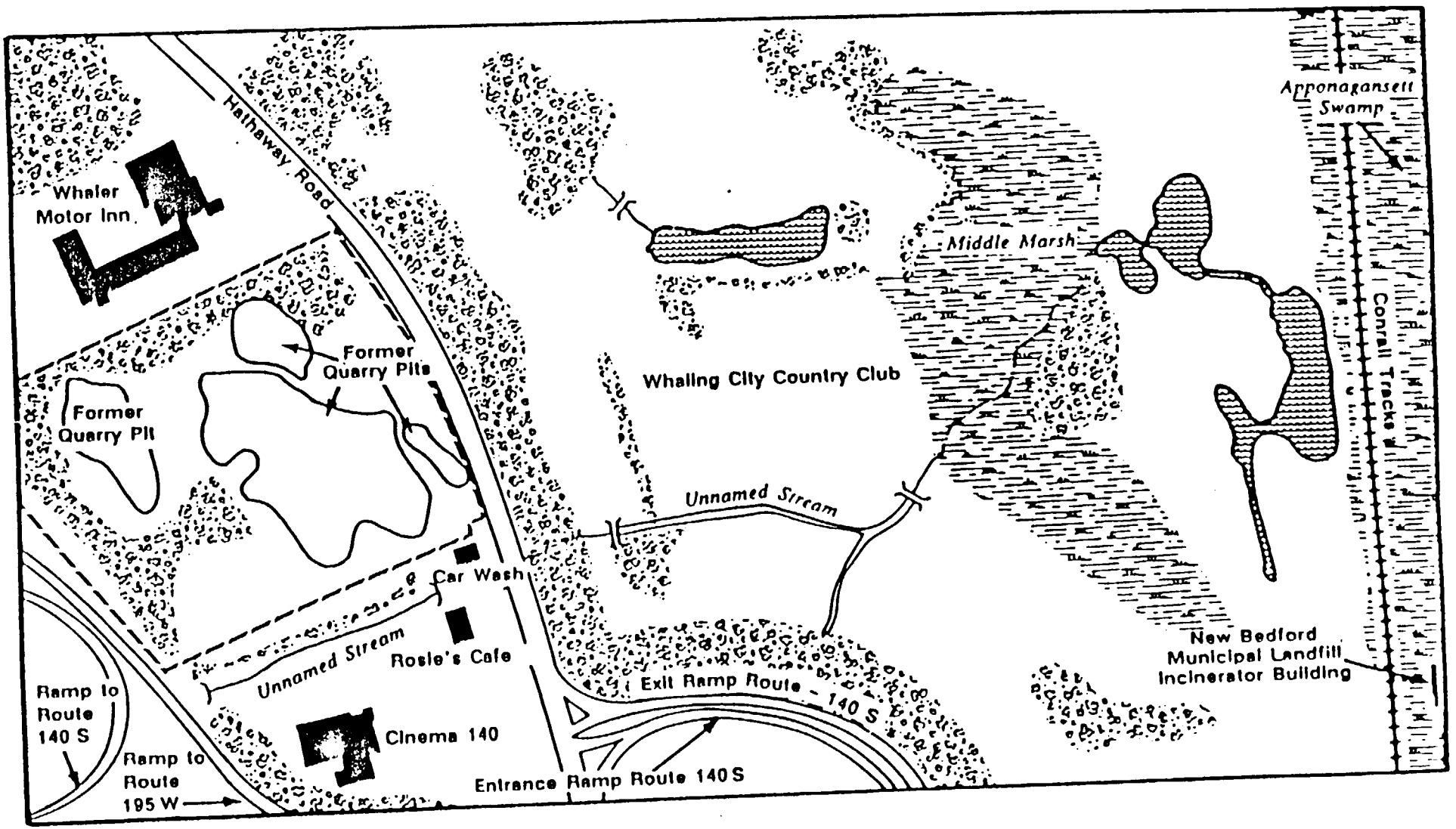
Date: February 21, 1989

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.

Reporter D. Swift Date 3/1/89

Transcriber E. Scannell Date 3/1/89

Exhibit C Map of Study Area Sullivan's Ledge Site,
New Bedford, Massachusetts



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APPENDIX B
ADMINISTRATIVE RECORD INDEX
SULLIVAN'S LEDGE

Sullivan's Ledge

NPL Site Administrative Record

Index

Compiled: February 1, 1989
ROD Signed: June 29, 1989

Prepared for

Region I
Waste Management Division
U.S. Environmental Protection Agency

With Assistance from

AMERICAN MANAGEMENT SYSTEMS, INC.
One Kendall Square, Suite 2200 • Cambridge, Massachusetts 02139 • (617) 577-9915

Introduction

This document is the Index to the Administrative Record for the Sullivan's Ledge National Priorities List (NPL) site. Section I of the Index cites site-specific documents, and Section II cites guidance documents used by 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 New Bedford Free Public Library, 613 Pleasant Street, New Bedford, Massachusetts, 02740. 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

Sullivan's Ledge NPL Site

1.0 Pre-Remedial

1.6 Hazard Ranking System (HRS)

1. Cross-Reference: "New Bedford Environmental Investigation - Assessment of Groundwater Quality in the Vicinity of the Municipal Landfill and Sullivan's Ledge, New Bedford, Massachusetts - Draft Final Report," GCA Corporation (June 1983) [Filed ahd cited as entry number 1 in 17.7 Reference Documents].
2. Cross-Reference: "New Bedford Environmental Investigation - Ambient Monitoring Program - Final Report," GCA Corporation (April 1984) [Filed and cited as entry number 2 in 17.7 Reference Documents].

1.18 FIT Technical Direction Documents (TDDs) and Associated Records

1. Letter from Larry J. Dziuk, Roy F. Weston, Inc. to Bruce Marshall, EPA Region I (May 6, 1986). Concerning the attached Technical Direction Document #01-8403-09.

2.0 Removal Response

2.1 Correspondence

1. Letter from Cynthia Kruger, City of New Bedford to Gerard Sotolongo, EPA Region I (January 18, 1984). Concerning opposition to the proposed capping at the Sullivan's Ledge site.
2. Letter from Gerard Sotolongo, EPA Region I to Cynthia Kruger, City of New Bedford (January 30, 1984). Concerning response to January 18, 1984 letter.
3. Letter from Cynthia Kruger, City of New Bedford to Gerard Sotolongo, EPA Region I (February 14, 1984). Concerning support for the no-capping alternative at Sullivan's Ledge.
4. Memorandum from Robert B. Davis, City of New Bedford Planning Department to Cynthia Kruger, City of New Bedford (February 1984). Concerning support for the capping of Sullivan's Ledge.
5. Memorandum from Georgi A. Jones, U.S. Department of Health and Human Services Public Health Service Centers for Disease Control to John E. Figler, EPA Region I (May 22, 1984). Concerning health evaluation.
6. Letter from Brian J. Lawler, Mayor of the City of New Bedford to Merrill S. Hohman, EPA Region I (October 18, 1984). Concerning construction of a fence.
7. Letter from Merrill S. Hohman, EPA Region I to Brian J. Lawler, Mayor of the City of New Bedford (November 20, 1984). Concerning approval of city plan to erect a fence.
8. Letter from David A. Kennedy, City of New Bedford to Camille Connick, EPA Region I (January 29, 1985). Concerning progress of fence construction.
9. Letter from Merrill S. Hohman, EPA Region I to Brian J. Lawler, Mayor of the City of New Bedford (May 15, 1985). Concerning compliance with Administrative Order for erection of a fence.

2.1 Correspondence (cont'd.)

10. Letter from Merrill S. Hohman, EPA Region I to Brian J. Lawler, Mayor of the City of New Bedford (October 1, 1985). Concerning results of second inspection of fence erected at Sullivan's Ledge site.
11. Memorandum from Phillip Thurman, EPA Region I to Camille Connick, EPA Region I (November 18, 1985). Concerning site visit to Sullivan's Ledge.
12. Letter from Merrill S. Hohman, EPA Region I to John K. Bullard, Mayor of the City of New Bedford (March 12, 1986). Concerning necessity for fence repair at the Sullivan's Ledge site.

2.9 Action Memoranda

1. Memorandum from Donald F. Berger, EPA Region I to Merrill S. Hohman, EPA Region I (June 15, 1984). Concerning recommendation for a removal action.

3.0 Remedial Investigation (RI)

3.1 Correspondence

1. Memorandum from David Chin, EPA Region I to Gerard Sotolongo, EPA Region I (April 1, 1983). Concerning potential impacts on drinking water supplies.
2. Memorandum from David Chin, EPA Region I to Gerard Sotolongo, EPA Region I (June 6, 1983). Concerning potential impacts on drinking water supplies.
3. Memorandum from David Chin, EPA Region I to Jane Downing, EPA Region I (January 4, 1988). Concerning potential impacts on drinking water supplies.
4. Memorandum from Lisa Giannetti, Commonwealth of Massachusetts Department of Environmental Quality Engineering to File (April 8, 1988). Concerning meeting to brief the Mayor of the City of New Bedford on the status of the Sullivan's Ledge site.

3.2 Sampling and Analysis Data

The Sampling and Analysis Data for the Remedial Investigation (RI) may be reviewed, by appointment only, at EPA Region I, Boston, Massachusetts.

3.4 Interim Deliverables

Reports

1. "Field Operations Plan," E.C. Jordan Co. for EBASCO Services Incorporated (October 1987).
2. "Fracture Trace Analysis," EPIC (September 1988).

Comments

3. Comments Dated October 12, 1988 from Guy Wm.Vaillancourt, E.C. Jordan Co. on the September 1988 "Fracture Trace Analysis," EPIC.

3.5 Applicable or Relevant and Appropriate Requirements (ARARs)

1. Letter from Anne Heffron, Commonwealth of Massachusetts Department of Environmental Quality Engineering to John George, NUS Corporation (July 7, 1986). Concerning a list of the applicable state regulations and approvals required for remediation.

3.6 Remedial Investigation (RI) Reports

Reports

1. "Phase I - Remedial Investigation Report - Volume I - Narrative," NUS Corporation for EBASCO Services Incorporated (September 1987).
2. "Final Phase I - Remedial Investigation Report - Volume II - Appendices A, B, C," NUS Corporation for EBASCO Services Incorporated (September 1987).
3. "Final Phase I - Remedial Investigation Report - Volume III - Appendix D," NUS Corporation for EBASCO Services Incorporated (September 1987).
4. "Final Phase I - Remedial Investigation Report - Volume IV - Appendices E, F, G, H, I, J," NUS Corporation for EBASCO Services Incorporated (September 1987).
5. "Volume I - Draft Final - Remedial Investigation," E.C. Jordan Co. for EBASCO Services Incorporated (January 1989).

Comments

Comments on the Remedial Investigation (RI) received by EPA Region I during the formal public comment period are filed and cited in 5.3 Responsiveness Summaries.

3.7 Work Plans and Progress Reports

1. "Final Work Plan - Phase II Remedial Investigation and Feasibility Study," E.C. Jordan Co. for EBASCO Services Incorporated (October 1987).

3.9 Health Assessments

1. "Health Assessment for Sullivan's Ledge," Commonwealth of Massachusetts Department of Public Health for U.S. Department of Health and Human Services Public Health Service Agency for Toxic Substances and Disease Registry (ATSDR) (April 10, 1989).

4.0 Feasibility Study (FS)

4.1 Correspondence

1. Memorandum from Jane Downing, EPA Region I to File (March 9, 1989). Concerning development of groundwater target concentrations.

4.5 Applicable or Relevant and Appropriate Requirements (ARARs)

1. Cross-Reference: Letter from Anne Heffron, Commonwealth of Massachusetts Department of Environmental Quality Engineering to John George, NUS Corporation (July 7, 1986). Concerning a list of the applicable state regulations and approvals required for remediation [Filed and cited as entry number 1 in 3.5 Applicable or Relevant and Appropriate Requirements (ARARs)].

4.6 Feasibility Study (FS) Reports

Reports

1. "Volume II - Draft Final Feasibility Study Report," E.C. Jordan Co. for EBASCO Services Incorporated (January 1989).
2. "Volume II - Draft Final Feasibility Study Report - Appendices," E.C. Jordan Co. for EBASCO Services Incorporated (January 1989).

Comments

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

4.9 Proposed Plans for Selected Remedial Action

Reports

1. "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I (January 1989).

Comments

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

5.0 Record of Decision (ROD)

5.1 Correspondence

1. Letter from Kenneth Carr, U.S. Department of the Interior Fish and Wildlife Service to Jane Downing, EPA Region I (December 8, 1988). Concerning recommended remedial action in wetlands areas.
2. Letter from Daniel S. Greenbaum, Commonwealth of Massachusetts Department of Environmental Quality Engineering to Michael R. Deland, EPA Region I (May 23, 1989). Concerning concurrence with selection of the preferred alternative.
3. Letter from Beth Ryan, E.C. Jordan Co. to Jane Downing, EPA Region I (June 15, 1989). Concerning off-site target levels.

5.2 Applicable or Relevant and Appropriate Requirements (ARARS)

1. Cross Reference: Applicable or Relevant and Appropriate Requirements (ARARS) for the Record of Decision are in Section 11.B and listed in Table 3 of the Record of Decision [Filed and cited as entry number 1 in 5.4 Record of Decision (ROD)].

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)].

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

2. Comments Dated January 25, 1989 from Philip T. Gidley, Gidley Laboratories, Inc. on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
3. Comments Dated February 7, 1989 from Philip T. Gidley, Gidley Laboratories, Inc. on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
4. Comments Dated February 23, 1989 from Helen Waldorf, Commonwealth of Massachusetts Department of Environmental Quality Engineering on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I with attached Letter from Jim Mahala, Commonwealth of Massachusetts Department of Environmental Quality Engineering to Jane Downing, EPA Region I (December 20, 1988). Concerning proposed wetlands remediation.
5. Comments Dated March 1, 1989 from Stephen P. Krchma, Monsanto Company on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
6. Comments Dated March 16, 1989 from Paul A. Bessette on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
7. Comments Dated March 22, 1989 from Balsam Environmental Consultants, Inc. on the January 1989 "Volume I - Draft Final - Remedial Investigation," E.C. Jordan for EBASCO Services Incorporated and the January 1989 "Volume II - Draft Final Feasibility Study Report," E.C. Jordan for EBASCO Services Incorporated.
8. Comments Dated March 27, 1989 from Armand Fernandes Jr., City of New Bedford Office of the City Solicitor on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
9. Comments Dated March 27, 1989 from Robert B. Davis on the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.
10. Comments Dated March 27, 1989 from Rizzo Associates, Inc. on the January 1989 "Volume I - Draft Final - Remedial Investigation," E.C. Jordan for EBASCO Services Incorporated and the January 1989 "Volume II - Draft Final Feasibility Study Report," E.C. Jordan for EBASCO Services Incorporated.
11. Comments Dated March 27, 1989 from Balsam Environmental Consultants, Inc. and Rizzo Associates, Inc. through Craig H. Campbell, Gaston & Snow (On behalf of Acushnet Company; Brittany Dyeing & Printing Corporation; Commonwealth Electric Company; Emhart Corporation; Goodyear Tire and Rubber Co. and Teledyne Industries, Inc.) on the January 1989 "Volume I - Draft Final - Remedial Investigation," E.C. Jordan for EBASCO Services Incorporated; the January 1989 "Volume II - Draft Final Feasibility Study Report," E.C. Jordan for EBASCO Services Incorporated; and the January 1989 "EPA Proposes Cleanup Plan for the Sullivan's Ledge Site," EPA Region I.

5.4 Record of Decision (ROD)

1. Record of Decision, EPA Region I (June 29, 1989).

11.0 Potentially Responsible Party (PRP)

11.9 PRP-Specific Correspondence

1. Letter from Merrill S. Hohman, EPA Region I to John T. Ludes, Acushnet Company with attached list of PRPs receiving general notice letters. Concerning notice of potential liability and request for information.
2. Letter from Richard J. Morrison, Commonwealth Energy System to Margery Adams, EPA Region I (January 11, 1989). Concerning response to EPA request for information.
3. Letter from Linda M. Murphy for Merrill S. Hohman, EPA Region I to George S. Goodrich (Attorney for Emhart Corporation) (January 27, 1989) with attached list of companies receiving information request letters. Concerning issuance of Proposed Plan and invitation to add information to the Administrative Record.
4. Letter from Robert E. Langer, Chadbourne & Parke (Attorney for Acushnet Company) to Jane Downing, EPA Region I (February 10, 1989). Concerning request for extension of public comment period.
5. Letter from Martin C. Pentz, Nutter, McClennen & Fish (Attorney for AVX Corporation) to Margery Adams, EPA Region I (February 10, 1989). Concerning request for extension of public comment period.
6. Letter from Timothy N. Cronin, Commonwealth Electric Company to Margery Adams, EPA Region I (February 14, 1989). Concerning request for extension of public comment period.
7. Letter from Barry Malter, Swidler & Berlin (Attorney for Emhart Industries, Inc.) to Margery Adams, EPA Region I (February 15, 1989). Concerning request for extension of public comment period.
8. Letter from Armand Fernandes Jr., City of New Bedford Office of the City Solicitor to Margery Adams, EPA Region I (February 16, 1989). Concerning request for extension of public comment period.
9. Letter from Stephen Kaprelian (Attorney for Revere Copper Products, Inc.) to Jane Downing, EPA Region I (February 17, 1989). Concerning request for extension of public comment period.
10. Letter from Margery Adams, EPA Region I to Barry Malter, Swidler & Berlin (Attorney for Emhart Industries, Inc.) (February 21, 1989). Concerning public availability of information.
11. Letter from Barry Malter, Swidler & Berlin (Attorney for Emhart Industries, Inc.) to Margery Adams, EPA Region I (February 28, 1989). Concerning length of public comment period.
12. Letter from Robin L. Moroz, Harvey B. Mickelson & Associates (Attorney for Fibre Leather Mfg. Corp.) to Margery Adams, EPA Region I (March 3, 1989). Concerning request for extension of public comment period.

13.0 Community Relations

13.2 Community Relations Plans

1. "Community Relations Plan," NUS Corporation (September 1986).

13.3 News Clippings/Press Releases

1. "Quarry Pools Carry Threat To Swimmers," New Bedford Standard Times - New Bedford, MA (April 8, 1934).
2. "Quarry May Become Cemetery for Autos; Residents Seek Council Action on Sullivan's Ledge Dump; Petition Asks End of Rubbish Dumping; Sullivan's Ledge Rezoning for Business Issue Revived," New Bedford Standard Times - New Bedford, MA (February 1, 1935; February 10, 1947; February 12, 1947; September 28, 1965).

13.3 News Clippings/Press Releases (cont'd.)

3. "Environmental News - City of New Bedford Ordered to Fence Sullivan's Ledge," EPA Region I (October 2, 1984).
4. "U.S. EPA Invites Public Comment on the Feasibility Study and Proposed Plan for the Sullivan's Ledge Superfund Site in New Bedford, Massachusetts," New Bedford Standard Times - New Bedford, MA (January 23, 1989). Includes notice of availability of Administrative Record.
5. "Environmental News - Public Meeting to Explain Proposed Cleanup Plan for the Sullivan's Ledge Superfund Site," EPA Region I (January 27, 1989).
6. "Environmental News - Extension to Public Comment Period on Proposed Plan for Sullivan's Ledge Superfund Site," EPA Region I (February 23, 1989). Concerning extension of public comment period until March 27, 1989 for a total of 49 days.
7. "Environmental News - EPA Announces Cleanup Plans for the Sullivan's Ledge Superfund Site," EPA Region I (June 30, 1989).

13.4 Public Meetings

1. "Response to Comments - Fairhaven, MA - Public Meeting" (June 18, 1984).
2. EPA Region I Meeting Agenda, City Government of New Bedford Public Meeting (March 28, 1988).
3. EPA Region I Meeting Agenda, Remedial Investigation Public Meeting (July 20, 1988).
4. Cross Reference: Transcript, Public Hearing for the Sullivan's Ledge Proposed Plan, (February 21, 1989) is contained in Appendix A of the Record of Decision. [Filed and cited as entry number 1 in 5.4 Record of Decision (ROD)].

13.5 Fact Sheets

1. "Superfund Program: EPA Progress and Plans," EPA Region I (February 1986). Concerning a brief background of the findings to date.
2. "Superfund Program Fact Sheet - EPA Releases Results of Phase I Study and Outlines Plans for Phase II Study," EPA Region I (January 1988).

16.0 Natural Resource Trustee

16.4 Trustee Notification Form and Selection Guide

1. Letter from Merrill S. Hohman, EPA Region I to William Patterson, U.S. Department of the Interior with attached trustee notification (June 29, 1987) . Concerning EPA notifying the appropriate trustee of potential natural resource damages.
2. Letter from Merrill S. Hohman, EPA Region I to Sharon Christopherson, U.S. Department of Commerce National Oceanic and Atmospheric Administration with attached trustee notification (July 1, 1987). Concerning EPA notifying the appropriate trustee of potential natural resource damages.

17.0 Site Management Records

17.4 Site Photographs/Maps

The Record cited in entry number 1 may be reviewed, by appointment only, at EPA Region I, Boston, Massachusetts.

1. "Historical Site Analysis - Municipal Landfill," EPIC (June 1982).

17.7 Reference Documents

1. "New Bedford Environmental Investigation - Assessment of Groundwater Quality in the Vicinity of the Municipal Landfill and Sullivan's Ledge, New Bedford, Massachusetts - Draft Final Report," GCA Corporation (June 1983).
2. "New Bedford Environmental Investigation - Ambient Monitoring Program - Final Report," GCA Corporation (April 1984).
3. "Review of Previous Studies and Recommendations for Additional Investigations, New Bedford Municipal Landfill - New Bedford Site," NUS Corporation (June 1986).
4. "Sullivan's Ledge Update," Gidley Laboratories, Inc. (August 6, 1988).

Section II

Guidance Documents

GUIDANCE DOCUMENTS

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

General EPA Guidance Documents

1. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, amended October 17, 1986.

2. "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Final Rule and Interim Final Rule and Proposed Rule" (40 CFR Part 136), Federal Register, October 26, 1984.

3. Letter from Lee M. Thomas to James J. Florio, Chairman, Subcommittee on Consumer Protection and Competitiveness, Committee on Energy and Commerce, U.S. House of Representatives, May 21, 1987 (discussing EPA's implementation of the Superfund Amendments and Reauthorization Act of 1986).

4. Memorandum from Gene Lucero to the U.S. Environmental Protection Agency, August 28, 1985 (discussing community relations at Superfund Enforcement sites).

5. Memorandum from J. Winston Porter to Addressees ("Regional Administrators, Regions I-X; Regional Counsel, 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, Region IX; Director, Hazardous Waste Division, Region X; Environmental Services Division Directors, Region I, VI, and VII"), July 9, 1987 (discussing interim guidance on compliance with applicable or relevant and appropriate requirements).

6. "National Oil and Hazardous Substances Pollution Contingency Plan," Code of Federal Regulations (Title 40, Part 300), 1985.

7. U.S. Department of Health and Human Services. National Institute for Occupational Safety and Health, and Occupational Safety and Health Administration. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.

8. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Community Relations in Superfund: A Handbook (Interim Version) (EPA/HW-6), September 1983.

9. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. A Compendium of Superfund Field Operations Methods (EPA/540/P-87/001, OSWER Directive 9355.0-14), December 1987.

10. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), September 20, 1986.

11. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Personnel Protection and Safety.

12. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Hazardous Response Support Division. Standard Operating Safety Guides, November 1984.

13. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Federal-Lead Remedial Project Management Handbook (EPA/540/G-87/001, OSWER Directive 9355.1-1), December 1986.

14. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Public Health Evaluation Manual (OSWER Directive 9285.4-1), October 1986.

15. U.S. Environmental Protection Agency. Office of Ground-Water Protection. Ground-Water Protection Strategy, August 1984.

16. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Handbook: Remedial Action at Waste Disposal Sites (Revised) (EPA/625/6-85/006), October 1985.

17. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Technology Briefs: Data Requirements for Selecting Remedial Action Technology (EPA/600/2-87/001), January 1987.

18. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Treatment Technology Briefs: Alternatives to Hazardous Waste Landfills (EPA/600/8-86/017), July 1986.

19. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Biodegradation and Treatability of Specific Pollutants (EPA-600/9-79-034), October 1979.

20. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Carbon Adsorption Isotherms for Toxic Organics (EPA-600/8-80-023), April 1980.

21. U.S. Environmental Protection Agency. Office of Research and Development. Municipal Environmental Research Laboratory. Handbook for Evaluating Remedial Action Technology Plans (EPA-600/2-83-076), August 1983.

22. 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.

23. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Feasibility Studies under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/003), June 1985.

24. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Remedial Investigations under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/002), June 1985.

25. 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.

26. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response and Office of Emergency and Remedial Response. Mobile Treatment Technologies for Superfund Wastes (EPA 540/2-86/003 (f)), September 1986.

27. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response, Office of Emergency and Remedial Response, and Office of Research and Development. Review of In-Place Treatment Techniques for Contaminated Surface Soils - Volume 1: Technical Evaluation (EPA-540/2-84-003a), September 1984.

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APPENDIX C
STATE CONCURRENCE LETTER
SULLIVAN'S LEDGE

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

Daniel S. Greenbaum
Commissioner

May 23, 1989

Michael R. Deland
Regional Administator
U.S. EPA
JFK Federal Building
Boston, Massachusetts 02203

Re: New Bedford Concurrence with ROD for Sullivan's Ledge Federal Superfund Site

Dear Mr. Deland:

The Department of Environmental Quality Engineering (The Department) has reviewed the preferred remedial action alternative recommended by EPA for source control and management of migration at the Sullivan's Ledge Federal Superfund Site. The Department concurs with the selection of the preferred alternative for the site.

The Department has evaluated EPA's preferred alternative for consistency with MGL Chapter 21E, as amended, and the Massachusetts Contingency Plan (MCP). The preferred alternative addresses groundwater, surface water, soil and sediment contamination in all areas, except for wetland areas which have been split from the site as a separate operable unit. The remedial action has nine components:

1) Site preparation
2) Excavation, solidification and on-site disposal of contaminated soils
3) Excavation, dewatering, solidification and on-site disposal of contaminated sediments from the unnamed stream and city golf course water hazards
4) Construction of an impermeable cap
5) Diversion and lining of the unnamed stream
6) Collection and treatment of groundwater from the on-site overburden an shallow bedrock
7) Wetlands restoration and enhancement
8) Long-term environmental monitoring and five-year reviews
9) Institutional controls

The Department has determined that the preferred alternative is a temporary solution for all portions of the site except the wetlands. The wetlands will be addressed at a later time. MGL Chapter 21E encourages the implementation of remedies on portions of a disposal site.

This is a temporary solution as defined in MGL Chapter 21E and the MCP due to the need for institutional controls. These controls are required to prevent exposure to deep bedrock groundwater and to restrict development and use of the capped on-site areas. All other portions of the remedial actions reduce significant risk as defined in the MCP, except in some wetland areas on the golf course (Middle Marsh) now being evaluated as an operable unit.

As a temporary solution, the MCP requires that a Final Remedial Response Plan (FRRP) be completed. The feasibility study and proposed plan have been reviewed in some detail and contain all of the elements described for the FRRP in section 40.546(5) of the MCP. As part of implementing the FRRP, the Department anticipates evaluating the effectiveness of the institutional controls, the groundwater and surface water monitoring programs and the 5-year reviews of the effectiveness of the preferred remedy. These programs may, in time, indicate the need for further remedial action or that a permanent solution has been achieved. It may be possible to achieve a reduction of total site risk for any foreseeable period of time if the temporary solution, including groundwater treatment, combined with the institutional controls are demonstrated to meet the MCP risk limits.

The proposed remedy appears to meet all ARARs except for the deep bedrock groundwater. EPA is proposing to waive the maximum contaminant levels for drinking water, since it is not feasible to locate and treat the deep bedrock groundwater contamination which has migrated off-site. The Department will continue to evaluate the ARARs as remedial design progresses and during implementation and operation of the remedy.

You should be aware that the EPA's project manager, Jane Downing, should be commended for a superb job in managing this complex and sometimes frustrating project. Her efforts to include the state in the superfund process at this site are greatly appreciated.

The Department looks forward to working with you in implementing the preferred alternative. If you have any questions, please contact Helen Waldorf at 292-5819.

Very truly yours,

Daniel S. Greenbaum, Commissioner
Department of Environmental Quality
Engineering

DSG/HW/sc:lgw

utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable, and is cost-effective. Except for the attainment of Safe Drinking Water Act Maximum Contaminant Levels (MCLs), Massachusetts Drinking Water Standards and Massachusetts Groundwater Quality Standards, the selected remedy attains federal and state requirements that are applicable or relevant and appropriate (ARARs).

Finding under Section 121(d)(4)(C)

As discussed in more detail in the summary document to this Record of Decision, the attainment of MCL ARARs in the on-site and immediately off-site groundwater has been found to be technically impracticable. The determination of technical impracticability is based primarily on the nature of the wastes and contaminants within the pits and along the bedrock fractures, and the geology of the site. Specifically, the bedrock fractures are irregular both in length and orientation and as such cannot be accurately located, especially at depths greater than 100 feet. In addition, the pockets of highly contaminated wastes located within the pits and along fractures cannot be cleaned up by conventional excavation and pumping methods as it is technically not possible to locate and extract all the contaminated pockets. For further discussion, please see Chapters 4, 5 and 7 of the Phase I Remedial Investigation (Ebasco, 1987), Chapters 4 and 5 of the Phases II Remedial Investigation (Ebasco, 1989) and Chapter 11 of the Feasibility Study (Ebasco, 1989) and Sections X.B.3 and XI.B. of the summary document to this Record of Decision.

Date

Michael R. Deland
Regional Administrator, EPA Region I

CONCURRENCES

SYMBOL	HRS	HRS	HPR	HDA	RLC	PME	RAC	PAC	PAC
SURNAME	Downing	RCwagner							DEA
DATE	6/29/89	6-29-89	6/29	6/29/89	6/ /89	6/29/89	6/29/89		6-29

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