

Attachment A

265-584-70-01

PROPOSAL FOR PROVIDING  
ENVIRONMENTAL ASSISTANCE TO  
MORSE INDUSTRIAL CORPORATION  
ITHACA, NEW YORK

Prepared for:

Shaw, Pittman, Potts & Trowbridge  
2300 N Street, N.W.  
Washington, D.C. 20037

Prepared by:

Radian Corporation  
7655 Old Springhouse Road  
McLean, Virginia 22102

January 23, 1987

## INTRODUCTION

Radian is pleased to submit this proposal for providing environmental assistance to the Morse Industrial Corporation in Ithaca, New York. The scope of work addressed in this proposal includes providing assistance to Morse in the evaluation and remediation, if necessary, of a 200,000-gallon fire reservoir on their property which, based upon currently available data, is contaminated with trichloroethylene (TCE). A broader study is also proposed to evaluate the overall environmental impact of the TCE in the reservoir, propose any necessary remediation of other media that are adversely affected, and identify other possible sources of the TCE on the property.

## BACKGROUND

Morse Industrial Corporation is a division of Emerson Electric Company and manufactures industrial power transmission products, primarily steel roller chain which is fabricated in a wide range of sizes. Morse has been operating at the site since 1906, and is the original owner of all facilities on the property. Operations at the facility include metal stamping, heat treating, oil quenching, parts washing using both alkaline cleaning solutions and organic solvents (halogenated and nonhalogenated), and final product assembly. Solvents currently used at the facility include mineral spirits purchased from Safety Kleen Company, a Freon degreaser purchased under the trade name TMC, and 1,1,1-trichloroethane. Solvents which were used in the past but have not been used for a number of years include trichloroethylene (TCE) and "safety solvent", a commercially available mixture of

solvents which can contain a variety of chlorinated compounds, possibly including TCE and tetrachloroethene. Past operations at the site under prior ownership included on-site distillation of TCE to remove oil and dirt, thereby rendering the TCE suitable for reuse in cleaning and degreasing operations.

Waste oil is generated in the manufacturing operations at the plant and is removed by a commercial waste oil handling service once per month. The waste oil is periodically analyzed for TCE and other components to ensure that it meets the specifications of the removal service. TCE was detected in Morse's wastewater treatment system over the past several months in concentrations ranging from 39 ppb in the water phase to 2,400 ppm in the oil. This prompted an investigation of the fire reservoir because some of the oil in the batches which contained TCE had been skimmed from the surface of the water in the fire reservoir. Subsequent sampling analysis revealed the presence of TCE in the water in the reservoir.

The fire water reservoir is constructed of concrete (roughly 30 x 60 x 18 feet deep) and divided into two compartments with a combined capacity of approximately 200,000 gallons. One compartment is located beneath a parking deck behind the major manufacturing building and the other is located beneath a small paint shop building. There is a continuous inflow of water into the paint shop side of the reservoir. This inflow consists of stormwater runoff from parking lots and roof drains, as well as seepage from outcropping bedrock upslope. Water flows from the paint shop side compartment to the parking deck side and eventually overflows to an NPDES permitted outfall which discharges

Morse Industrial 6/12/87

Carl Judd - Morse 292-7220

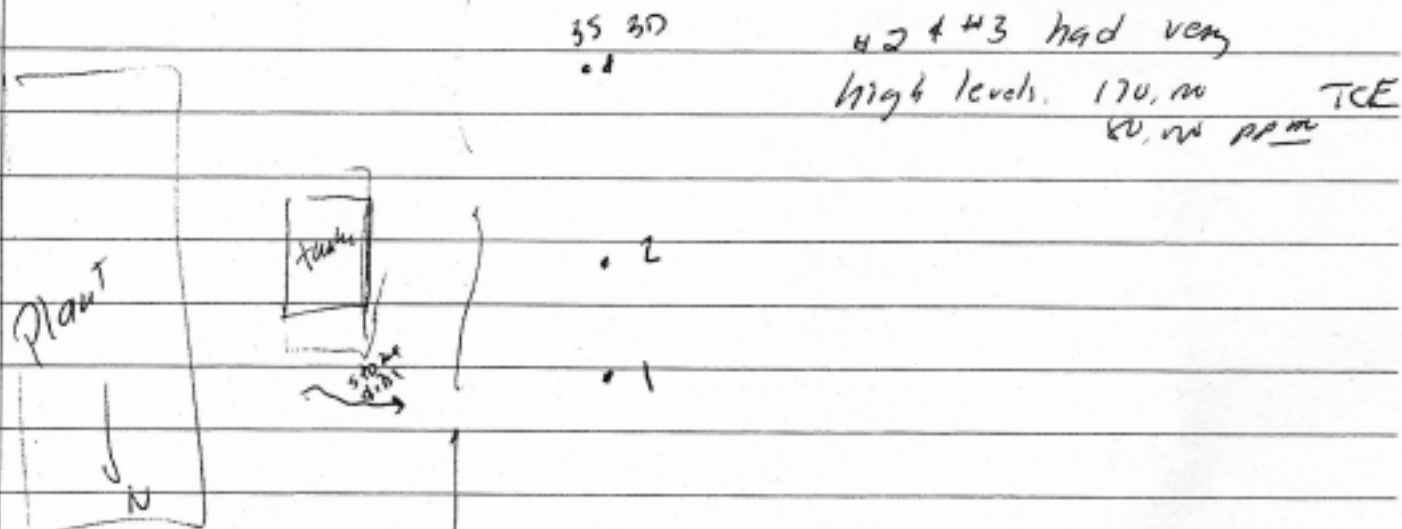
Larry Gross, Jim Kraft

Ron Herken, John Andersson

Bob Hubbard - Morse

Larry discussed placing site onto  
Inactive Waste Site List; Consent  
Order; etc

Carl Judd stated hard copy of  
test results sent out today  
Observed first tank - ~18' available for  
water storage.



Call Bill Gray to get copies of  
storm/sanitary sewer maps

Neighborhood concerns? Possible exposure  
due to vapors in bldg from groundwater  
(if contaminated) or vadose zone over



Attachment C



CHAIN COMPANY A BORG WARNER INDUSTRY  
HIGH QUALITY POWER TRANSMISSION EQUIPMENT SINCE 1893

ITHACA, NEW YORK  
TELEPHONE 4-6471

April 19, 1963

Tompkins County Department of Health  
1285 Trumansburg Road  
Ithaca, New York

Re: Oil Seepage into Six Mile Creek

Attention: Mr. Frank R. Liguori,  
Sanitary Engineer

Dear Mr. Liguori:

Per our discussion of Friday, April 12, three sealed prints of our Drawing #B-118586 are attached and hereby submitted for your examination and approval as the means to collect oil at our scrap dock and thereby eliminate oil seepage into the South Cayuga Street storm drain and subsequent contamination of Six Mile Creek.

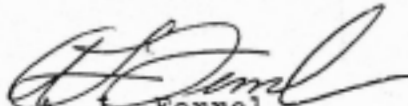
We estimate approximately 300 gallons/day of oil waste to be collected. Under normal conditions, the second compartment of the separation-collection tank will not become full and all compartments will be emptied on a periodic basis by industrial waste oil collection tank truck. The addition of surface water entering the system will have the effect of increased rate of filling the second compartment. Estimated surface water collection is 2,000 gallons for a 1" rain fall.

Please advise if additional information is required. We will be preparing a separate drawing of the two compartment tank, but detailed only to the extent to give sufficient dimensions for fabrication by our own fabricators.

Incidentally, oil seepage has practically stopped at this time as a result of the first phase of work in this program.

Very truly yours,

MORSE CHAIN COMPANY

  
A. L. Ferrel,  
Plant Engineer

ALF/cb

TOMPKINS COUNTY DEPARTMENT OF HEALTH

June 28, 1962

ROBERT H. BROAD, M.D.  
COMMISSIONER OF HEALTH

1285 TRUMANSBURG ROAD  
ITHACA, NEW YORK  
PHONE 2-2424

LEED  
Mr. A. Ferrell  
Plant Engineer  
Morse Chain Company  
Ithaca, N.Y.

Re: Discharge of Cutting Oil Wastes to Storm  
Sewer and Hence to Six Mile Creek  
Ithaca City

Dear Mr. Ferrell:

This will confirm our conversation of June 22 relative to the discharge of cutting oils to a storm sewer which reaches Six Mile Creek near the Cayuga Street bridge.

In answer to a complaint, an investigation was made of a milky waste which was issuing from a South Cayuga Street storm sewer into Six Mile Creek just down stream from the Cayuga Street bridge. Investigation indicated that the waste was an emulsion of water and oil. Further investigation indicated that the storm sewer originates in the vicinity of your plant, normally carries storm water and incidental cooling water from the plant. The oil was found to be coming principally from the scrap metal dock area.

Scrap metal shavings, chips and stampings together with the cutting oil used in the operations is temporarily stored in bins prior to discharge into railroad cars or other means of transportation. Considerable quantities of cutting oil drip from the bins onto the earth dock area and hence seep into the storm sewer. An attempt is made to catch some of the oil by a trough device which is completely ineffective. There is evidence of some sort of a submerged oil holding tank which is apparently completely filled with oils and is therefore ineffective.

The escape of oil to the storm sewer and hence to Six Mile Creek is a violation of the provisions of Article 12 of the Public Health Law in that it contravenes the standards established for Six Mile Creek.

I realize that to properly correct the situation will involve considerable expense but I am sure you appreciate that correction of the problem is long over due and that it is a necessary step in the overall pollution abatement of streams in the county. It would appear that in order to satisfactorily correct the problem, it will be necessary to deck the whole scrap iron dock area with an impervious

June 28, 1962

concrete slab to form an impervious basin to collect the dripping oil. A short curb around the periphery of the concrete deck would be worth while. Suitably placed catch basins or drains would serve to collect the oil which could then be directed to a large oil separation tank. Since the dock area will also be subject to water runoff from precipitation, it will be necessary to design the holding tank so that it serves to permit passage of storm water but at the same time, retaining the oil. Since your cutting oils appear to emulsify quite readily, the design of the oil separation tank will be critical. As a matter of fact it might be more economical in the long run to roof over the dock area to eliminate precipitation and the inherent problems of oil separation. Periodically, the oil must be removed from the sump for inoffensive disposal.

In order that we may be assured that such steps as you may take will effectively control the problem, I am asking that you submit engineering plans showing the proposed methods of abatement. It is expected that these plans will be submitted by August 31, 1962 and that construction will proceed soon thereafter. I am enclosing the standard application which must accompany the plans.

You are of course entitled to a hearing on the abatement procedure and if you wish, I shall be glad to arrange for a hearing. However, I got the impression that you have given prior consideration to the problem and are prepared to take abatement steps.

Sincerely,

Frank R. Liguori, P.E.  
Sanitary Engineer

FRL:kh  
CC: Fred Zollner  
Frank Laverty



Attachment E

April 25, 1963

Mr. A.L. Ferrell, Plant Engineer  
Morse Chain Company  
Ithaca, New York

Dear Mr. Ferrell:

[ The Board of Public Works has received a formal complaint concerning the presence of oil in Six Mile Creek and the Inlet. This oil is causing considerable damage to the boats and boating interests.

Under date of last June 28, the local Health Department requested you to submit plans for the abatement of this situation prior to August 31, 1962.

Now that this matter is before the Board I would appreciate your advice on the subject.

Very truly yours,

F.J. Lavery  
Supt. Pub. Wks.

FJL:r  
cc: Frank Liguori

RECEIVED  
APR 26 1963  
TOMPKINS COUNTY  
HEALTH DEPT.

① DR. BROOD ✓  
② FRL ✓

Attachment F

May 13, 1966

Mr. Howard Gates, P.E.  
Project Engineer  
Syracuse Regional Office  
New York State Dept. of Health  
Room 245, State Office Building  
333 East Washington Street  
Syracuse, New York 13202

RE: Oil Wastes, Morse Chain Company, Ithaca City, Tompkins  
County

Dear Mr. Gates:

The Morse Chain Company, located in the City of Ithaca, has a rather serious problem involving the storage of metal shavings, chips and stampings, which are impregnated with cutting oils. The oils drain from the hopper storage tank and collection troughs attempt to catch the oil. However, much oil is lost and finds its way into the shale rock in the vicinity and is outcropping in the valley below where it reaches a small stream and hence the Cayuga Inlet Creek, creating nuisances and contravention of the water pollution standards. A few years ago the collection system was somewhat improved by installing new oil-collection and storage tanks but this has not proved to be adequate. The problem is aggravated by precipitation which helps to carry the oil into the ground and overloads the collection facility.

The Morse Chain Company is presently constructing an additional building and it is proposed to move the bulk of the metal chip operation into this new building. Planning is under way for a completely new system of handling the metal chips and the oil which drains from them in an enclosed structure possibly be reclaiming the oil after extraction from the metal. In the meantime, the company will improve the existing storage facility by installing a complete new, impervious

Howard Gates, P.E.  
May 13, 1966  
Page Two

concrete pad in the railroad docking area and improve the drainage pattern to facilitate better collection of oil at that point.

To insure proper corrective measures, I have asked the company to supply me with a letter of intent indicating what they intend to do and the completion dates. I am enclosing a copy of a letter received from the plant engineer, Michael Connors. The proposals seem to be reasonable. The concrete pad to improve the existing situation will be completed by July 1, 1966. Planning on the new facility will be completed by September 1, with completion of the new oil-waste collection facilities at the new building in the summer of 1967.

If you have any additional recommendation, please let me know.

Sincerely,

Frank R. Liguori, P.E.  
Sanitary Engineer

FRL:mlk

Enclosure

## Attachment G

**MORSE**

A BORG-WARNER INDUSTRY

**MORSE CHAIN COMPANY**

Quality Power Transmission Equipment Since 1893

AREA CODE 607 • TELEPHONE AR 2-7220 • ITHACA, NEW YORK

May 10, 1966

Mr. Frank Liguori  
Sanitary Engineer  
Tompkins County Health Department  
Trumansburg Road  
Ithaca, New York

Dear Mr. Liguori:

We have observed the condition, that you called to our attention, whereby the oil from our punching scrap has seeped through the ledge rock and is collecting in the gutters along Spencer and Wood streets.

At this time, we plan to alleviate this condition by revising the gutter system on the scrap dock and installing a concrete pad under the railroad track where the freight car is stationed for collecting the scrap. This concrete pad will direct the oil into the oil collecting tanks previously installed for this purpose. This work is to be completed by July 1, 1966. In addition, we will apply a daily continued maintenance to this area. *Completed 8/66*

For future, we plan to store all scrap turnings and punchings in a manner that will be enclosed from the weather. The oil drippings will be collected in oil tight containers and may possibly be reclaimed. This is a major task requiring thorough investigation and planning and of necessity must be closely coordinated with our new 160,000 square feet plant addition which will be completed about March of 1967. The plans for this scrap and oil collecting system are to be complete about September 1, 1966. The acquisition and installation of equipment is estimated to be completed during the summer of 1967.

Thank you for your considerate cooperation.

Very truly yours,

MORSE CHAIN COMPANY

*M. Conner*  
Michael Conner  
Plant Engineer

MC/lr

cc: R. C. Curran, Manufacturing Manager

RECEIVED  
MAY 11 1966

f. L. Broad - R H 15  
SW 34  
Morse Chain Co.



TOMPKINS COUNTY DEPARTMENT OF HEALTH

ROBERT H. BROAD, M.D.  
COMMISSIONER OF HEALTH

December 17, 1969

1287 TRUMANSBURG ROAD  
ITHACA, NEW YORK  
PHONE AR 3-7272

Mr. Eric Turrki  
New York State Department of Health  
Syracuse Regional Office  
677 South Salina Street  
Syracuse, New York

Re: Morse Chain Company  
Ithaca (C)  
Tompkins County

Dear Mr. Turrki:

An inspection was made on December 12, 1969 at Morse Chain Company. My findings are listed below.

Scrap Metal Railroad Car Area

This area is in excellent condition; it reflects a growing interest on the part of Morse Chain Company and the men doing the supervision and work. The railroad car through today did not appear to be an oil tight car. *There*

Retaining Wall Area

The base of the wall is generally about the same as the time of your last inspection. Just a very slight tinge of oil in an occasional area. We have had heavy rain and moisture conditions and it is probably due to leaching.

Flume

The flume discharge is still slightly milky appearing, about the same as the last inspection.

Six Mile Creek

I could not determine anything there as the Creek has a high water flow and it is quite muddy. I would assume it to be, in light of the above, about the same.

Mr. Eric Turrki  
Page 2  
December 17, 1969

Oil Retaining Tanks

Tanks are being pumped out usually twice a week. The pumper was pumping tanks at the time of my inspection.

Rock Outcrop Area at South Cayuga Street

This area does not appear to show any fresh oil flow and does appear to be slowly improving, however, there were traces of oil in the ditch water. Again, I feel this is due to the heavy rain and moisture influence of late. We have received no complaints from this area.

I did not inquire as to the status of inside plant changes that Morse Chain indicated they would make in the handling and degreasing of the scrap metal as I have no reason to believe that they will not proceed as they stated.

I am enclosing an extra copy of this letter should you wish to advise Morse Chain Company of my report.

Very truly yours,

George W. Guest, Sanitarian  
Acting Director of Environmental Health

nkW

Enclosure

JUN 3 - 1968

Attachment I

SSW-4

MORSE

CHAIN

TOMPKINS COUNTY HEALTH DEPT.

Sampling Points for water testing

Sheet I

Refer to drawing

Object:

To determine source of water that was passing through garage of Mrs. Chanconna on 125 S. Hill Lane, the complainant.

- #1 Large clay tile - coming from the direction of Morse Chain parking area.
- #2 Concrete spillway - large amt. of water.
- #3 Concrete manhole - steel cover - 2-1" pipes going to lower bldg. No water but shows signs of lots of water coming through concrete openings by pipes.
- #4 N.W. corner of steel shed - small amt. of clear water.
- #5 20 ft. below steel shed. No water flowing at the time but there is a large tile drain near top of bank. There is signs of a tremendous amt. of water coming down this bank at times. Very dirty - grass dead both sides. Signs of rats - paper & etc.
- #6 Large - 2'x2' sluiceway coming out of center of bank. A lot of clear water flowing. Green moss growing on rocks - No dead grass on edges.
- #7 3'x6' dead opening in side of bank - Approx. 2" pipe & small 4" pipe. No signs of any great amt. of water coming from above - small seepage through rocks - not enough to get sample. This seems to be best place for water to travel under the railroad tracks as there is a large channel that has been cut through the rock under tracks.
- #8 4" steel pipe by a 4" vertical pipe. Very rusty water - not much water at this time. This water can easily get across tracks because of track switch & ties. Signs of much water passing across tracks at this point.
- #9 At foot of failed slab - just a few feet down from #8. Large amt. of hot water coming from 8" pipe by foot of bank. Rocks have grayish white deposits with brownish deposit on sides.
- #10 A robed up culvert that seems to be plugged with roots & vegetation debris - A small amt. of very clear water coming out.
- #11 This seems to be a series of several small and one large streams coming down from through rock & shale from very high up on bank - where a very large amt. of water is coming down. Grass dead - brown deposits on rock - slightly milky water at times.

### Sampling Points Sheet II

for water testing - Continued - Refer to drawings

Mr. Chanconna - 125 S. Hill Terrace - Complainant

#12 This is a large concrete culvert in creek bed that diverts all water under tracks and down east side of S. Cayuga St.

#13 Just below #12 is a large area of oil seepage through bank. Observed about several days ago but none today (5/20/68)

#14 This water is running down walkway alongside of concrete walls, spillway & culvert where a congregate of the above sampling points pass under S. Hill Terrace and into Six Mile Creek on the west side of South Cayuga St., just below Moss Chain's raw water pump station.

#16 City fire hydrant - used as a control along with the City Filtration plant Chlorine Offluent water etc.

#17 A collection hole was dug in the back of vacant lot where a considerable amt of water is coming out all along bank.

#18 Garage of 125 S. Hill Terrace - where water is coming down through opening in garage from S.W. corner of garage.

#19 The water going through garage of 125 S. Hill Terrace was traced back to the S.E. corner of back lot of 123 S. Hill Terrace where a continuous stream of water and oil was observed coming out of bank just below Moss Chain parking lot.

#20 Moss Chain fire hydrant that was observed on 5/10/68. to be leaking internally & externally.

This water was proved to be city water and same was proved to be a major part of water flowing from bank of 123 S. Hill Terrace. Moss Chain repaired hydrant 5/15/68 whereby about 80 gals of total flow at 125 S. Hill Terrace was stopped.

#21 This is a steel shed attached to Moss Chain bldg. #21 that houses what appears to be a oil filter assembly. A sample of oil taken at this point appears to be of the same texture as that observed at sampling point #19.

#22 At this point in the boiler room there are two large Permutit water softeners. these softeners are recharged nearly every day with a very strong (MCL) salt brine. This salt brine residue (CaCl<sub>2</sub>) is then dumped out two times per day out bank through sampling point pipe #8. The chloride content of this brine is very thousands of mg/L known as no tests were run of it.



Attachment J

QUESTIONNAIRE FOR MORSE INDUSTRIES AREA RESIDENTS

Name: Kristen Schaffer + Chris Otto

Date/Time 7/2/87-2:00

Address: 411 Turner Place

Completed by Karen

Telephone No.: (Home) 272-4068 (Work) None

If renting, landlord's name \_\_\_\_\_

address \_\_\_\_\_

telephone no. \_\_\_\_\_

Is there a water well on this property? NO Is it in use? \_\_\_\_\_

How many living units in the building? 1

How many people in your household? 2

What are their ages? Chris Otto - 47 + Schaffer - 35 1/2

Do you care for young children in your home? Not at present How many? \_\_\_\_\_

Do you have a basement in your unit? yes

Is your basement generally dry, or is it damp? Damp

Can the basement be ventilated if necessary? yes

Do you have a foundation drain sump in the basement? No

Is there usually water in it? \_\_\_\_\_

Have you noticed seeps or water coming through the basement walls or floors? Dirt section gets very damp  
Is this occurring now? Yes

- How do you use your basement?
- Storage only
  - Workshop
  - Laundry
  - Children's play area
  - Family room
  - Sleeping
  - Other \_\_\_\_\_

Have you ever noticed solvent or other strange odors in your home? NO

Where in the home? \_\_\_\_\_

If yes, when and how often? Storm sewer outlet (intake) at crnr. of Hillview + Turner + smells like toxic chemicals (They have complained to city previously) is not going on at the moment.

Memorandum for the Record

Cutting and Stamping Oil Disposal, Morse Chain Company

On July 30, 1968, I conferred with Richard Curran and John Bebbington relative to the waste oil problem at Morse Chain. I pointed out to them that another spill had occurred within the past week or so, causing oil pollution in Six Mile Creek.

Mr. Bebbington stated that the engineering investigations into oil reclamation system indicated a cost of between \$700,000 and \$800,000. They asked if I would give consideration to a contractual arrangement with salvage company such as Wallace to handle all of their chippings. The proposal was as follows: Chippings would be conveyed to a double bottom Demster dumpster under protective covering to keep out the rain. The initial drainage of oil would collect in the false bottom of the container and would be drawn off by Morse Chain into a sealed tank for re-use. Chippings would then be shipped to Wallace Junk Yard for handling. I stated that Wallace Junk Yard already has a problem handling Smith-Corona and National Cash Register chippings, and that the material is simply deposited on the ground creating oil pollution of the ground and occasionally reaching Cayuga Inlet. I stated that any such arrangement must include provisions at Wallace Junk Yard for proper collection and control of oil waste. Something approaching 500,000 tons of chippings and stampings are involved each year.

Mr. Bebbington indicated that he thought that he might be able to make arrangements with Smith-Corona and with National Cash Register to work out jointly a satisfactory solution with Wallace Company. I suggested that he pursue the proposal, but that he advise Wallace Junk Company that the material must be handled in a manner approved by this Department.

The problem relating to the stampings was not considered at this time. Mr. Bebbington stated that it might be possible to wash the stampings prior to loading on railroad cars for shipment to other salvage operators. The value of the stampings is such that Morse Chain wishes to remain in a competitive market for disposal of this material. I stated that there would have to be an arrangement made to prevent loss of oil on the railroad siding.

Mr. Bebbington and Mr. Curran assured me that they would send me a letter confirming our meeting and summing up their proposal.

FRL:mlk  
8/6/68

2 -

MEMORANDUM FOR THE RECORD  
WALLACE STEEL, INCORPORATED

On January 31, 1969, I conferred with Harold Wallace at the Wallace Steel Company relative to the following:

Handling of Waste Lubricants from Morse Chain Company. Waste chips, shavings, and other metal scraps from the Morse Chain Company in Ithaca are stored at the Morse Chain Company site in sealed, steel transfer containers which have been specially designed with a drain at the low point, provided with a plug. These containers are serviced by the Wallace Steel Company wherein they are transported to the site of the Company on Clinton Street in the City of Ithaca. The containers are placed on a rather crude but adequate rack which places them at an angle sloping toward the drain. The plug is removed, allowing the waste oils to drain into a steel channel and hence into an 8,080-gallon steel holding tank which, in reality, is an old railroad car liquid tank. The containers are allowed to drain about a half a day. The scrap metal, chips, and filings are then deposited on the ground at the yard site remote from any streams. There was no significant accumulation of oil in the vicinity of the scrap dump. At the time of my visit the storage container was approximately three-quarters full, which I estimated to be about 6,000 gallons. Some of this, of course, would be water from precipitation and collected either at the Morse Chain site or ~~at the Morse Chain site or~~ at the Wallace Steel Yard. The 6,000 gallons represents about four months of operation

Mr. Wallace stated that any outfit from Syracuse will come to Ithaca and pump the contents from the tank for a fee of \$.04 a gallon. The Wallace Steel Company would have to pay this fee. The waste oil is then transported to a Buffalo refinery for reprocessing.

Mr. Wallace is experimenting with a device to burn the waste oils on the

① Dr. B - B # 05  
② ~~Don~~ RAC  
③ file

SSW-4  
Morse Chain

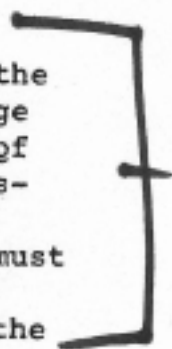
Another potential site?  
↓

August 6, 1968

Mr. Ralph Carpenter  
Carpenter's Backhoe and  
Dozer Service, Inc.  
Sheffield Road  
Ithaca, New York 14850

Dear Mr. Carpenter:

It has come to my attention that you have an arrangement with the Morse Chain Company for the removal and disposal of rather large quantities of waste cutting oil and that this oil is disposed of on land off the Bostwick Road. It is my understanding that disposal of the waste oil is dumped into excavated trenches from which the oil percolates into the ground. I am sure that you must realize that there is a real potential hazard in polluting the ground waters in violation of the provisions of Article 12 of the Public Health Law.



In order to evaluate the operation, it is requested that you submit to me a report indicating the volume of material handled, the exact location of the site, the nature of the disposal, the character of the subsoil, the depth to rock, and the location of all habitable buildings within a half mile of the site. After receipt of this information, other investigations will be made as to determine whether or not the method of disposal does or does not contravene the requirements of Article 12 of the law.

Your cooperation in this matter is expected.

Sincerely,

Frank R. Liguori, P.E.  
Sanitary Engineer

FRL:mlk



STATE OF NEW YORK DEPARTMENT OF HEALTH

Center for Environmental Health

2 University Place

Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., M.P.H. Commissioner
Paula Wilson Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Lloyd F. Novick, M.D., M.P.H. Director
Diana Jones Ritter Executive Deputy Director
William N. Stasiuk, P.E., Ph.D. Center Director

December 23, 1994

Mr. Michael O'Toole, P.E., Director
NYS Dept. of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road, Room 212
Albany, NY 12233

RE: Record of Decision
Morse Industrial Corporation
Site ID #755010
City of Ithaca, Tompkins Co.

Dear Mr. O'Toole:

My staff have reviewed the Record of Decision for the Morse Industrial Corporation. I find that the ROD is consistent with the Proposed Remedial Action Plan for this site, presenting a selected remedy which includes Two Phase SVE enhanced groundwater recovery and treatment, vadose monitoring with provisions for mitigative measures, if needed, to protect residences, and a soil removal and asphalt cap action. A comprehensive monitoring program will be developed and implemented during the remedial program.

With this information, I concur with the content of the Record of Decision.

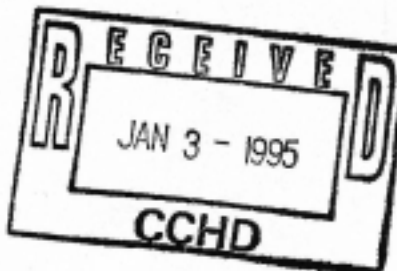
Thank you for the opportunity to comment. Should you have any questions, please call Mr. Gary Litwin at 518-458-6306.

Sincerely,

[Handwritten signature of G. Anders Carlson]

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure Investigation

#43480044



STATE OF NEW YORK  
DEPARTMENT OF HEALTH



Attachment O

OFFICE OF PUBLIC HEALTH

SYRACUSE REGIONAL OFFICE

677 SOUTH SALINA STREET

SYRACUSE, N.Y. 13202-3592

DAVID AXELROD, M.D.  
Commissioner

LINDA A. RANDOLPH M.D., M.P.H.  
Director, OPH

WILLIAM F. LEAVY  
Executive Deputy Director

December 8, 1989

Ms. Susan McCormick  
NYS Department of Environmental Conservation  
Bureau of Eastern Remedial Action  
50 Wolf Road  
Albany, N.Y. 12233

RE: Emerson Power Transmission  
Site ID#755010  
City of Ithaca, Tompkins County

Dear Sue:

I have reviewed Radian's correspondence regarding vadose and indoor air investigations as a component of the RI/FS to be completed at the above site. They have amended aspects of their proposal and these changes should help to develop a comprehensive approach to evaluating potential exposures via the vadose route. The issue of health based criteria for determining the need for indoor air sampling remains an issue however. We have detailed our position regarding the development and use of such criteria in writing and at the July meeting with company representatives. Our position regarding the use of background and ambient air concentrations as a basis for evaluating vadose air and/or indoor air impacts remains unchanged.

The purpose of the investigation ought to be to determine whether elevated levels of site related contaminants exist within the vadose and if so whether elevated levels of the same contaminants may exist in nearby homes. Given the variables associated with such gas transport, the approach should really entail a monitoring effort. The heterogeneous nature of the shallow soil/ bedrock association introduces a further variable. The original proposal contained a variety of criteria which would have terminated efforts with one or two samplings. The use of health based criteria especially over the short term sampling proposed is especially problematic.

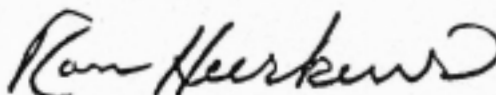
[ We are concerned that, due to the local geology, remediation may not be easy or be accomplished quickly. If this is the case, a monitoring program will be especially important. If contaminants are absent from vadose gases that is one thing. If contaminants are present, then ranges of concentrations must be established and this would include seasonal variations within the home setting. If elevated levels can exist within a given home, it may be that simple remedial efforts may eliminate such an exposure altogether.

There are understandable difficulties associated with setting standards for residential indoor air quality. While the potential effects of a given concentration of indoor air contaminants may be discussed as a part of the risk assessment, the acceptance of health based criteria may amount to standard setting. The homeowner in this situation has the right to expect that the air within their home will not be affected by contaminants from a neighboring hazardous waste site and we do not wish to interfere with that right. ]

I will review the draft RI/FS prepared by Radian as soon as possible; and, based on the data, we will determine a course of action relative to air quality in homes near the site and will begin to design a sampling program of our own shortly. Unless EPT takes a broader approach to the indoor air question however, we will be forced to consider the RI/FS and the risk assessment therein incomplete.

I will provide comments on the other aspects of the RI/FS document shortly.

Sincerely,



Ronald H. Heerkens  
Program Research Specialist  
Regional Toxics Coordinator

PAC/#93340850

cc: Mr. Andersson  
Mr. Branagh  
Mr. Slack  
Mr. Bifera  
Dr. Kim  
Dr. Hawley  
Mr. Tramontano  
Mr. Litwin

STATE OF NEW YORK  
DEPARTMENT OF HEALTH



Attachment P

SIHW-4

OFFICE OF PUBLIC HEALTH

SYRACUSE REGIONAL OFFICE  
DAVID AXELROD, M.D.  
Commissioner

677 SOUTH SALINA STREET

SYRACUSE, N.Y. 13202-3592  
LINDA A. RANDOLPH M.D., M.P.H.  
Director, OPH

WILLIAM F. LEAVY  
Executive Deputy Director

January 2, 1990

RECEIVED

JAN 8 1990

Mr. Carl Cuipyllo  
NYS Department of Environmental Conservation  
Region 7  
615 Erie Blvd. West  
Syracuse, N.Y. 13204

Tompkins County Health Dept.

RE: Morse Industrial Corporation  
Site ID#755010  
City of Ithaca, Tompkins County

Dear Carl:

I have reviewed the document covering stages 1 and 2 of the RI implemented by Morse's consultant Radian Corporation. The following comments cover concerns related to the evaluation of possible human exposure pathways and the persistence of contaminants in the environment. The consensus of opinion at our meeting of 12/12/89 was that additional investigation was necessary and that an interim remedial measure in the form of a groundwater recovery system was needed. Significant concentrations of contaminants remain inground, contaminant migration pathways have not been comprehensively evaluated and so a complete exposure assessment cannot be made.

The following specific recommendations should be implemented:

1. A groundwater remediation program should be implemented at the areas of greatest contamination near the plant to remove as much of the trichloroethene and related compounds as soon as possible and thereby mitigate further migration and potential exposure.
2. Additional data points should be developed to determine where the discharge of groundwater from the plant site may be taking place. The nearly uniform concentration of contaminants over time and in terms of vertical distribution at MW 5, for example, indicates the possibility of a continual source and little attenuation in the bedrock regime. This scenario, plus the identification of open fractures and bedding plane separations down to roughly 150' indicates the potential for vertical migration as is discussed in the document. Only 2 downgradient test wells exist. More wells should be developed to track discharge at the base of the hill and in the valley.



[ 3. Seeps along Six-mile Creek should be sampled. On 12/22/89 I observed evidence of groundwater seepage at a bedrock outcrop along the creek just upstream of the Spencer St. bridge. These should be located and mapped and should be sampled for site related contaminants.

f 4. Migration of contaminant vapors via the vadose zone is still considered to be a significant potential pathway for human exposure through residential basements. My letter of 12/8/89 discusses the Department's concerns. Efforts must be made to better define the exposure potential associated with vadose gases and a reasonable approach to this problem would be the development of a network of permanent vadose monitoring wells in the vicinity of the homes around the plant. Past data from soil gas surveys conducted by Radian indicate that migration of gases is occurring and that concentrations are variable. These higher concentrations are likely due to the proximity of fractures and bedding planes to the areas of highest chemical concentration and the degree of "openness" of a given fracture or plane separation. A home located on or near such an open fracture may be more vulnerable to gas entry than one not so located.

Given the mix of soil, talus, bedrock and paved areas around the hill, properly constructed wells would allow for more reliable data than would grab samples collected through a probe introduced at the moment of sampling. Wells can be bored to predetermined depth, they can be screened, grouted and sealed from atmospheric interference and would provide a uniform data point over time. In this locale, probed sample points cannot.

Past soil data discussed in the report have established background for vadose gases as less than 1 ppb for the volatiles in question. Detection levels for future gas monitoring should utilize similar low detection levels. Data collection should include ambient air sampling and measurement of weather conditions and the program should be tied in with the groundwater remedial effort discussed in item #1 above. Data from the past soil gas work could be used as guidelines however, the location of homes should be taken as the criterion in placing wells. Given the heterogeneous nature of the hillside, each residential lot should be evaluated separately and at least two data points per lot should be installed.

[ If positive values are detected near a given home, it may be possible to institute some relatively inexpensive remedial steps to eliminate the entry of gases into the home. The problem could then be approached from the standpoint of an interim remedial measure.

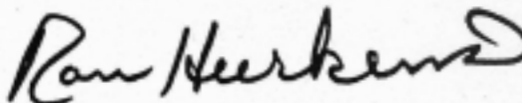
We would like an opportunity to discuss this proposal with company representatives and I must stress that we cannot consider the RI/FS efforts complete without an examination and appropriate

resolution of this issue. My 12/8/89 letter is appended for reference.

5. The company must develop a monitoring schedule to determine the efficacy of the groundwater remedial efforts, to determine whether seasonal variations in contaminant concentrations and migration pathways may exist and to better define potential exposure pathways such as vadose gases. Sampling of seeps, monitoring wells, and soil gas should begin at monthly intervals and could then be modified to quarterly. Compounds of concern in groundwater and vadose would be the volatiles known to originate at the site.
6. The possibility that there are higher concentrations under the plant should be explored. The location and removal of hot spots may greatly facilitate the groundwater remediation effort.
7. On pg. 1-7, Sec. 1.2 the company takes issue with GA groundwater standards/drinking water MCLs as being appropriate cleanup criteria. The values outlined in Table 1-1 are largely out of date in that most of the organics now have MCLs of 5 ppb or less. This issue needs to be re-emphasized and resolved.

Should you have any questions, feel free to call me at 315-426-7613. Your cooperation is appreciated.

Sincerely,



Ronald H. Heerkens  
Program Research Specialist  
Regional Toxics Coordinator

PAC/#00020732

Attachment

cc: Dr. Kim  
Mr. Tramontano  
Dr. Hawley  
Mr. Litwin  
Mr. Hudson  
Mr. Branagh

Mr. Slack  
Ms. McCormick  
Mr. Hammond  
Mr. Belmore  
Mr. Allen  
Mr. Andersson