



O'BRIEN & GERE
ENGINEERS, INC.

February 4, 1997

Mr. Ben Fish
Massachusetts Department of Environmental Protection
Western Region Office
436 Dwight Street
Springfield, MA 01103

Re: **Columbia Manufacturing - Immediate
Response Action (IRA) Status Report -
RTN 1-11449**

File: 6378.001

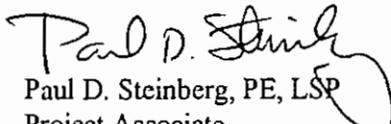
Dear Mr. Fish:

Enclosed please find the second IRA Status Report for the above-referenced site in Westfield, Ma. The IRA Status Report has been completed to convey results of monitoring activities conducted in response to the July 26, 1996 Notice of Responsibility (NOR) letter from MADEP to Columbia Manufacturing. The IRA field activities were completed in accordance with the IRA Plan prepared by O'Brien & Gere dated September 16, 1996.

As always, we appreciate the Department's assistance with this matter and we will keep you posted on the progress of this program. If you have any questions, please call me.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.


Paul D. Steinberg, PE, LSP
Project Associate

Enclosures

cc: Frank Battaglia USEPA Region 1
F.J. Ferreira, CPG O'Brien & Gere Engineers, Inc.
David Hessler, Esq. Wegman, Hessler, Vanderburg & O'Toole
Kenneth Howard Columbia Manufacturing, Inc.
T.A. Jordan, PE, LSP O'Brien & Gere Engineers, Inc.
Roger Zehntner, Esq. Kirkpatrick & Lockhart

DAVID
HERKUNTON, ESQ.



IMMEDIATE RESPONSE ACTION (IRA)

TRANSMITTAL FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

1 - 11449

A. RELEASE OR THREAT OF RELEASE LOCATION:

Release Name: (optional) COLUMBIA MANUFACTURING COMPANY
Street: ONE CYCLE ST. Location Aid: SOUTH MEADOW RD.
City/Town: WESTFIELD ZIP Code: 01086

- Check here if a Tier Classification Submittal has been provided to DEP for this Release Tracking Number.
Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.
Specify Program: CERCLA HSWA Corrective Action Solid Waste Management RCRA State Program (21C Facilities)

Related Release Tracking Numbers That This IRA Addresses:

B. THIS FORM IS BEING USED TO: (check all that apply)

- Submit an IRA Plan (complete Sections A, B, C, D, E, H, I, J and K).
Submit an Imminent Hazard Evaluation (complete Sections A, B, C, F, H, I, J and K).
Submit an IRA Status Report (complete Sections A, B, C, E, H, I, J and K).
Submit a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard (complete Sections A, B, C, D, E, H, I, J and K).
Submit an IRA Completion Statement (complete Sections A, B, C, D, E, G, H, I, J and K).

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

Identify Media and Receptors Affected: (check all that apply) Air Groundwater Surface Water Sediments Soil
Wetland Storm Drain Paved Surface Private Well Public Water Supply Zone 2 Residence
School Unknown Other Specify:

Identify Conditions That Require IRA, Pursuant to 310 CMR 40.0412: (check all that apply) 2 Hour Reporting Condition(s)

- 72 Hour Reporting Condition(s) Substantial Release Migration Other Condition(s)

Describe:

Identify Oils and Hazardous Materials Released: (check all that apply) Oils Chlorinated Solvents Heavy Metals

Others Specify: # 4 FUEL OIL / LUBE OIL

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

- Assessment and/or Monitoring Only
Excavation of Contaminated Soils
Re-use, Recycling or Treatment
Store
Landfill
Removal of Drums, Tanks or Containers
Deployment of Absorbent or Containment Materials
Temporary Covers or Caps
Bioremediation
Soil Vapor Extraction
Structure Venting System
Product or NAPL Recovery
Groundwater Treatment Systems
Air Sparging
Temporary Water Supplies

SECTION D IS CONTINUED ON THE NEXT PAGE.



**IMMEDIATE RESPONSE ACTION (IRA)
TRANSMITTAL FORM** Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

1 - 11449

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

- Removal of Other Contaminated Media Temporary Evacuation or Relocation of Residents
- Specify Type and Volume: _____ Fencing and Sign Posting
- Other Response Actions Describe: _____
- Check here if this IRA involves the use of Innovative Technologies (DEP is interested in using this information to aid in creating an Innovative Technologies Clearinghouse).
- Describe Technologies: _____

E. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste has been sent to an off-site facility, answer the following questions)

Name of Facility: N/A

Town and State: N/A

Quantity of Remediation Waste Transported to Date: N/A

F. IMMINENT HAZARD EVALUATION SUMMARY: (check one of the following)

- Based upon an evaluation, an Imminent Hazard exists in connection with this Release or Threat of Release.
- Based upon an evaluation, an Imminent Hazard does not exist in connection with this Release or Threat of Release.
- Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
- Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

G. IRA COMPLETION STATEMENT:

- Check here if future response actions addressing this Release or Threat of Release will be conducted as part of the Response Actions planned for a Site that has already been Tier Classified under a different Release Tracking Number, or a Site that is identified on the Transition List as described in 310 CMR 40.0600 (i. e., a Transition Site, which includes Sites with approved Waivers). These additional response actions must occur according to the deadlines applicable to the earlier Release Tracking Number (i. e., Site ID Number).

State Release Tracking Number (i. e., Site ID Number) of Tier Classified Site or Transition Site: _____

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement, you must submit either a Release Abatement Measure (RAM) Plan or a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the IRA Completion Statement.

H. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

- if Section B of this form indicates that an Immediate Response Action Plan is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

- if Section B of this form indicates that an Imminent Hazard Evaluation is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and all assessment activities(y) undertaken to support this Imminent Hazard Evaluation complies(y) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

- if Section B of this form indicates that an Immediate Response Status Report is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

- if Section B of this form indicates that an Immediate Response Action Completion Statement or a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

SECTION H IS CONTINUED ON THE NEXT PAGE.



IMMEDIATE RESPONSE ACTION (IRA)

TRANSMITTAL FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

1 - 1449

H. LSP Opinion (continued):

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

LSP Name: THOMAS A. JORDAN LSP #: 3370 Stamp:
Telephone: (617) 479-1313 Ext.: N/A
FAX: (optional) (617) 479-1397
Signature: [Signature]
Date: 2/6/07



I. PERSON UNDERTAKING IRA:

Name of Organization: COLUMBIA MANUFACTURING COMPANY
Name of Contact: KENNETH HOWARD Title: PRESIDENT & CEO
Street: DNE CYCLE ST.
City/Town: WESTFIELD State: MA ZIP Code: 01086
Telephone: (413) 562-3664 Ext.: _____ FAX: (optional) (413) 562-5345

Check here if there has been a change in the person undertaking the IRA.

J. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA: (check one)

- RP or PRP Specify: Owner Operator Generator Transporter Other RP or PRP: _____
- Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- Any Other Person Undertaking IRA Specify Relationship: _____

K. CERTIFICATION OF PERSON UNDERTAKING IRA:

I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/its aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: [Signature] Title: PRESIDENT & CEO
(signature)
For: _____ Date: _____
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

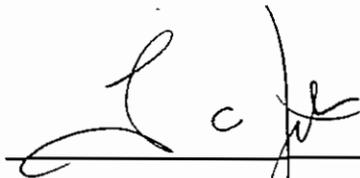
Street: SAME AS SECTION I
City/Town: _____ State: _____ ZIP Code: _____
Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Report

Second IRA Status Report, RTN 1-11449

*Columbia Manufacturing Company
1 Cycle Street
Westfield, Massachusetts*



Thomas A. Jordan, PE, LSP
Vice President

February 1997



1200 Crown Colony Drive
Quincy, Massachusetts 02169

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Figures

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- 2 Inferred free phase product map
- 3 Free phase product fluctuations

1. Purpose and objectives

The purpose of this IRA Status Report is to convey the status of data gathering efforts associated with the identified release of oil and/or hazardous materials (OHMs) to the subsurface at the Columbia Manufacturing facility in Westfield, Massachusetts.

Data gathering efforts are currently ongoing and have been completed in accordance with the scope set forth in the conditionally approved IRA Plan prepared by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) dated September 16, 1996.

The objective of this status report is to inform MADEP and other interested parties of the status of work completed to date as outlined in the IRA Plan and describe the nature and schedule of additional efforts required as described in the IRA Plan.

2. IRA field activities

Field activities associated with the IRA were initiated on July 17, 1996 after well gauging efforts noted separate phase petroleum product at monitoring well MW-20S. This monitoring well is located approximately 10 feet to the southeast of the facilities aboveground petroleum storage tanks. Field activities have included a gauging and bailing program, a preliminary evaluation on the integrity of the above ground tank system, and assessment of soil and ground water data collected in the vicinity of this area from the recently completed Phase IIA RCRA Facility Investigation (RFI). These activities have been conducted in accordance with requirements set forth in the Notice of Responsibility (NOR) letter from MADEP to the facility, dated July 26, 1996.

Gauging and bailing efforts were completed twice weekly from July through September when field efforts associated with the RCRA Phase IIA program were completed. Data is now being collected on a weekly basis and was last collected on February 5, 1997.

On September 17, 1996, free phase product greater than ½-inch was also noted in monitoring well MW-18S which is located approximately 175 feet to the northeast of MW-20S. Figure 1 presents the location of MW-18S and MW-20S. Verbal notification of this condition was made to Bob Terrenzi of MADEP on September 20, 1996. Following discussions with MADEP, this monitoring well was added to the approved IRA Plan for MW-20S. Results of gauging/bailing efforts at this location are also included in this status report.

Gauging efforts at MW-18S and MW-20S are being completed using an ORS electric petroleum hydrocarbon product and water level resistivity probe accurate to one hundredth of an inch. For each gauging event, the depth to product and depth to water are measured at these two points. Corrected ground water elevations from depth to fluid measurements are then calculated based on wellhead elevations and specific gravity of the product.

Bailing/product recovery was completed with stainless steel bailers dedicated to these two points. Product recovered from the two wells is being temporarily stored in 55-gal drums on-site and will be disposed of under waste manifestation. The drums are stored in an area where investigation derived waste (IDW) generated during Phase IIA activities were previously stored and are labeled and covered with 6 ml poly sheeting.

3. Evaluation of data

Data collected from the gauging and bailing program at MW-18S and MW-20S has been entered into a computer data base for subsequent data compilation and analysis as tabulated in Table 1. It should be noted that volumes purged are estimates only and represent an oil/water mixture.

Gauging/bailing program

Initial readings collected on July 16, 1996 indicated a 1.29 ft layer of separate phase product at MW-20S. This layer has been reduced since bailing activities associated with this IRA began and currently ranges from 0.36 inches to 3 inches thick. Product thickness readings collected during the months of December, January and February have indicated a range from 0.36 to 1.08 inches of separate phase oil accumulation.

Based on gauging efforts from July 1996 through February 1997, it appears that the free phase product layer in MW-20S is from 0.5 to 1.25 inches thick. This estimate is based on data collected since July and bail down test completed during gauging activities. The apparent product thickness in MW-20S may differ slightly from the true thickness of product in the surrounding formation due different physical factors including the characteristics of the product and surrounding soil.

MW-20S continues to be the only monitoring well of five in the vicinity of the petroleum storage facilities with free phase oil accumulation indicating a localized "hot spot". Gauging efforts at the four other wells in the immediate area have not exhibited free phase oil accumulation. Slight petroleum sheens have been noted in select well surrounding MW-20S.

Initial gauging efforts at MW-18S indicated 1.07 ft of separate phase product as noted on September 17, 1996. The separate phase layer at MW-18S has continued to range from 5.88 to 10.44 inches thick since gauging activities began at this well in September. The average product thickness for the months of December, January and February has been approximately 8.5 inches at MW-18S.

This area also appears to be a localized "hot spot" for oil accumulation based on gauging efforts completed at other wells in the immediate area of MW-18S.

On September 24, 1996, an oil fingerprint analysis was completed on a sample collected from MW-18S. Results of this analysis indicates that the sample exhibited the GC/FID characteristics of a heavier weighted lube oil, which may be attributed to historical metal tubing operations in this building (rim room) where lubricating oils were used. This area is scheduled for further assessment during the up-coming RCRA Phase IIB program.

Figure 2 depicts an approximate area of localized free phase petroleum "hot spots" and approximate extents of petroleum sheens as noted during the implementation of the Phase IIA program. Figure 3 graphically presents fluctuations in product thickness at MW-18S and MW-20S.

Product recovery

Approximately 22 gal of product/water has been recovered from MW-20S since the IRA Plan was implemented in late July. Approximately 0.5 gals of product/water is now being recovered weekly during gauging efforts at this location.

Since separate phase oil accumulation was noted MW-18S on September 17, 1996, approximately 35 gals of product/water has been recovered and stored in the 55-gal drums dedicated for this purpose. Anywhere from 1.5 to 2.5 gals of product/water is now being recovered weekly during gauging efforts.

4. Conclusions

The following conclusions have been developed based on IRA activities completed during this reporting period:

- Separate phase oil accumulation greater than ½-inch continues to be noted in monitoring wells MW-18S and MW-20S.
- Results of the gauging and bailing program indicates product thickness of approximately 0.5 to 1 inch and 6 to 10 inches at MW-20S and MW-18S, respectively. These apparent product thickness layers were determined as a result of continued bailing of product/gauging efforts conducted during this reporting period.
- Results of soil and ground water laboratory data collected during the Phase IIA RFI from the vicinity of these two wells indicates some impacts from petroleum residuals to these media from the identified releases. The source of oil accumulation at MW-20S appears to be petroleum storage facilities adjacent to this point. The source of oil accumulation at MW-18S has not been determined, but appears to be related to past practices inside this building where metal tubing operations were conducted. This area is scheduled for further evaluation during the Phase IIB program.
- Approximately 55 gals of free phase oil has been removed from monitoring wells MW-18S and MW-20S. This product is being stored in 55-gal drums on-site and will be removed for disposal under waste manifestation when full.
- The integrity of the above ground tank farm and associated piping is being evaluated under a proposed interim measure to remove and replace the existing system. A conceptual approach for this proposed interim measure is currently being prepared.
- Additional monitoring actions associated with the IRA will continue weekly through the month of February.

Table 1

IRA Status Report
Free Product Monitoring Activities at Columbia Mfg., Westfield, MA
Phase IIA

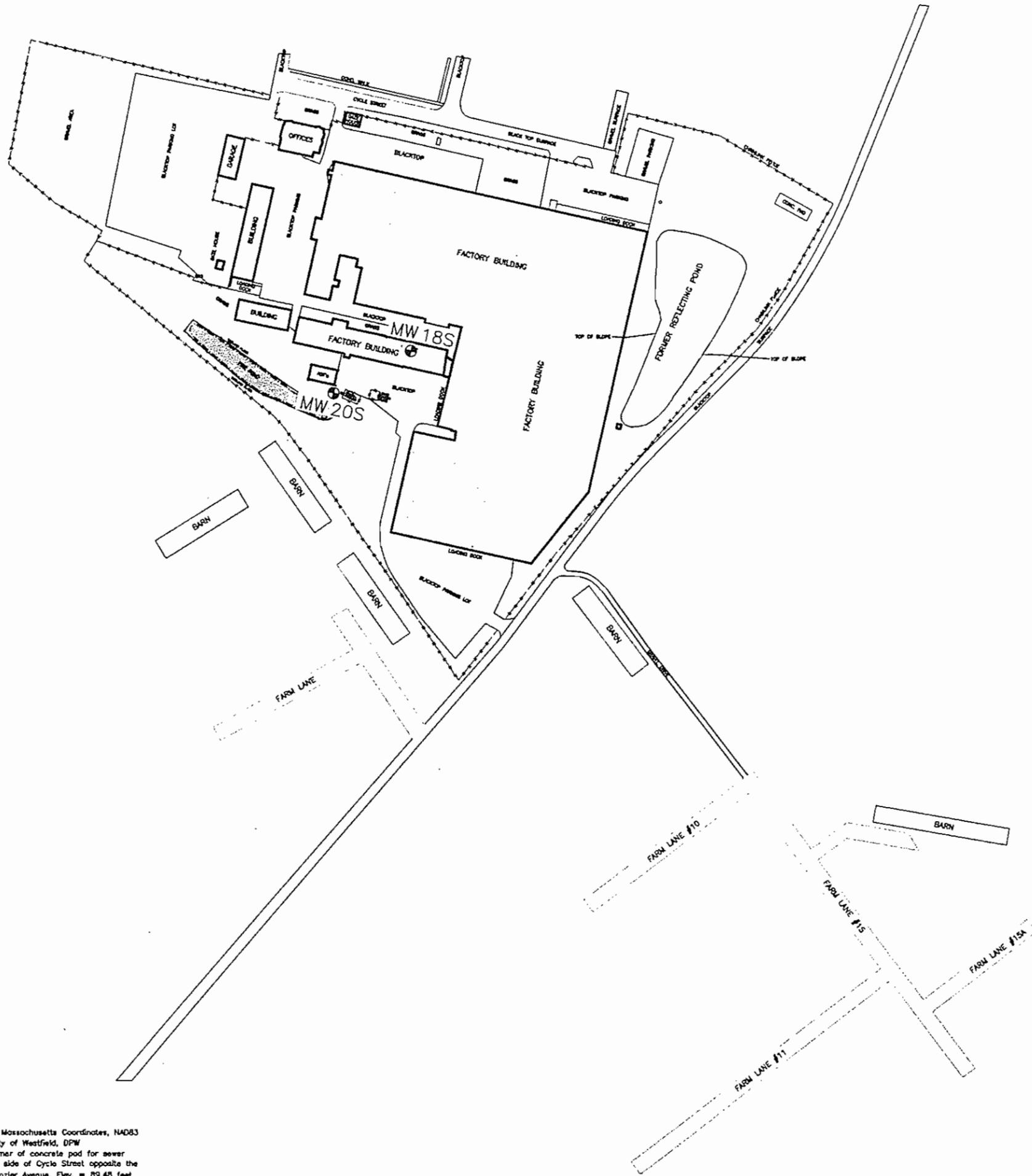
Date	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Purged (gal)
MW20S					
07/16/96	12:30	9.50	10.79	1.29	—
07/23/96	09:00	9.51	10.90	1.39	2.00
07/26/96	07:30	9.60	10.10	0.50	5.00
07/29/96	09:15	9.60	9.65	0.05	—
07/29/96	16:15	9.62	9.66	0.04	—
07/30/96	08:00	9.82	9.85	0.03	—
07/31/96	07:45	9.78	9.80	0.02	—
07/31/96	14:30	9.76	9.78	0.02	—
08/01/96	08:15	9.79	9.81	0.02	—
08/02/96	08:20	9.91	9.95	0.04	—
08/05/96	09:30	10.07	10.20	0.13	—
08/06/96	07:15	10.11	10.30	0.19	—
08/07/96	08:30	10.18	10.37	0.19	—
08/08/96	08:00	10.20	10.41	0.21	—
08/09/96	08:15	10.25	10.48	0.23	—
08/12/96	08:00	10.43	10.68	0.25	—
08/13/96	07:45	10.48	10.73	0.25	1.00
08/14/96	07:45	10.63	10.71	0.08	—
08/15/96	08:00	10.65	10.79	0.14	—
08/16/96	08:30	10.69	10.90	0.21	—
08/20/96	09:00	10.70	10.94	0.24	—
08/26/96	09:15	10.71	10.94	0.23	—
08/30/96	08:00	10.42	10.62	0.20	—
09/05/96	07:15	10.74	10.94	0.20	—
09/12/96	17:00	10.72	10.91	0.19	—
09/13/96	07:30	10.72	10.93	0.21	—
09/23/96	10:00	10.73	10.95	0.22	—
10/08/96	13:30	9.85	10.01	0.16	1.00
10/16/96	16:00	9.55	9.63	0.08	1.00
10/24/96	14:00	9.16	9.24	0.08	2.00
10/31/96	15:30	9.51	9.66	0.15	1.00
11/07/96	09:30	9.79	9.84	0.05	1.00
11/13/96	09:30	9.33	9.36	0.03	1.00
11/22/96	09:30	9.64	9.69	0.05	1.50
11/27/96	09:30	9.50	9.56	0.06	0.50
12/06/96	11:45	8.79	8.82	0.03	1.00
12/13/96		8.22	8.26	0.04	1.00
12/18/96		7.72	7.76	0.04	1.00
12/31/96		8.33	8.39	0.06	1.00
01/09/97	14:00	8.6	8.65	0.05	0.50
01/17/97	08:00	8.51	8.56	0.05	0.50
01/24/97	15:00	9.03	9.12	0.09	0.5
MW18S					
09/17/96	10:30	6.18	7.25	1.07	—
09/18/96	11:45	6.17	7.29	1.12	—
10/08/96	13:30	5.95	6.77	0.82	2.00
10/16/96	16:00	5.83	6.70	0.87	2.00
10/24/96	16:00	5.62	6.44	0.82	4.00
10/31/96	15:00	5.65	6.47	0.82	1.00
11/07/96	11:00	6.04	6.84	0.80	3.50
11/13/96	10:30	5.78	6.48	0.70	2.50
11/22/96	11:00	6.06	6.68	0.62	3.00
11/27/96	10:30	6.03	6.66	0.63	2.00
12/06/96	12:30	5.57	6.21	0.64	2.50
12/13/96		5.02	5.51	0.49	2.50
12/18/96		5.00	5.64	0.64	2.50
12/31/96		5.42	6.12	0.70	2.00
01/09/97	14:30	5.52	6.14	0.62	2.50
01/17/97	08:45	5.42	6.01	0.59	1.50
01/24/97	15:45	5.52	6.15	0.63	1.50

Figure 1



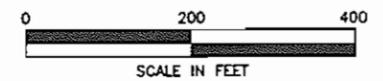
LEGEND

MW-18S  MONITORING WELL LOCATION



COLUMBIA
MANUFACTURING COMPANY
ONE CYCLE STREET
WESTFIELD, MASSACHUSETTS

SITE PLAN



FILE NO. 6378.001-002



Horizontal Datum: Massachusetts Coordinates, NAD83
Vertical Datum: City of Westfield, DPW
B.M.: Southwest corner of concrete pad for sewer manhole on south side of Cycle Street opposite the intersection with Lozier Avenue. Elev. = 89.48 feet

Figure 3

Product Thickness Monitoring Results (MW-18S and MW-20S)

