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MPCA - DULUTH
DULUTH, MN.

PETROLEUM CONTAMINATED SOIL
CORRECTIVE ACTION WORKSHEET

Minnesota Pollution Control Agency
Tanks and Spills Section
May 1991

To be eligible for Petroleum Tank Release Compensation Account (Petrofund) reimbursement of costs incurred up to the point that petroleum contaminated soil corrective action plans are approved, this worksheet must be submitted to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section for review and approval.

Please complete the following:

- 1) Obtain approval for soil treatment from MPCA staff. (As of May 1, 1991, if thermal treatment is the treatment option, then MPCA approval is granted via the thermal treatment facility; however, the procedures in the MPCA document "Thermal Treatment of Petroleum Contaminated Soil" (April 1991) must have been followed and the MPCA-permitted thermal treatment facility must have agreed to accept the soil).
- 2) Adequately complete this worksheet. The worksheet is an integral element of a soil corrective action plan.
- 3) Send a copy of this worksheet to the MPCA project manager for review and approval. If approved, an approval letter will be sent to the responsible party (or volunteer).
- 4) Submit your Petrofund application to the Department of Commerce accompanied by a copy of the MPCA approval letter. Reimbursable costs are limited to those eligible costs incurred up to the date of the MPCA approval letter that you receive in response to this worksheet. (Note: As of October 1, 1991, the Petrofund application can be submitted to the Department of Commerce at the same time that this worksheet is submitted to the MPCA).

Since the information requested in this worksheet does not cover all aspects of the cleanup and investigation, submittal of the appropriate reports and, possibly, additional site work will still be necessary. For sites involving soil excavation, an excavation report should be prepared in accordance with the MPCA document "Excavation Report for Petroleum Release Sites" (May 1, 1991). If the excavation results indicate that additional investigation or corrective action is necessary at your site, you should begin the investigation promptly and the excavation report should not be submitted until the remedial investigation is complete. The excavation report should then be included as a section of the Remedial Investigation (RI) report.

Additional investigation and corrective action should be conducted in accordance with the MPCA document "Petroleum Tank Release Reports" (May 1, 1991). Results of the additional investigation should be submitted to the MPCA no later than 120 days after the date of the MPCA letter that you will receive in response to this worksheet, approving the proposed soil corrective action plans. If you are unable to meet this deadline, contact the MPCA project manager. An extension may be given on a site-specific basis. Failure to proceed in a timely manner with the necessary additional investigation and corrective action may result in a recommendation for reduction of Petrofund reimbursement.

I. SITE INFORMATION

Site: Food - N - Fuel Store
 Street: 5493 Miller Trunk Highway
 City, Zip: Duluth, MN 55811
 County: St Louis

MPCA Site ID#: LEAK0000 3534

Tank owner/operator (or volunteer): Curtis Oil Company
 Street/Box: 4997 Miller Trunk Highway
 City, Zip: Duluth, MN 55811
 Telephone: (218) 729-5501

II. TANK INFORMATION AND COMPLIANCE

A. Underground Storage Tanks. Complete the following information to reflect the status of your underground storage tanks at the time the release was discovered. Refer to the attachments "Do Underground Storage Tank And Piping Requirements Apply to Your Petroleum Tank?" and "What Do You Have To Do?/When Do You Have To Act?" to determine the applicability of registration, leak detection, corrosion protection, and spill/overfill protection. Indicate "YES" or "NO" for the presence or absence of leak detection, corrosion protection and spill/overfill protection.

| Tank | Contents | Capacity | Type Of Tank | Date Installed | Date Registered | Date Tank & Piping Removed |
|------|----------|----------|--------------|----------------|-----------------|----------------------------|
| 1 | Regular | 5,000 | Steel | 7/1/71 | 4/24/86 | 10/16/90 |
| 2 | Unleaded | 10,000 | Fiberglass | 5/15/84 | 4/24/86 | -- |
| 3 | Premium | 4,000 | Steel Strip | 7/27/87 | 5/2/88 | -- |
| 4 | | | | | | |
| 5 | | | | | | |

(Tanks Continued)

| Tank | Tank | | | Piping | | |
|------|-------------------|----------------------|---------------------------|----------------|----------------|----------------------|
| | Leak Detection | Corrosion Protection | Spill/Overfill Protection | Type of Piping | Leak Detection | Corrosion Protection |
| 1 | Inventory Control | Asphalt Coated | No | Galv Steel | Inv Control | No |
| 2 | Inventory Control | Fiberglass | No | Galv Steel | Inv Control | No |
| 3 | Inventory Control | Strips | No | Galv Steel | Inv Control | No |
| 4 | | | | | | |
| 5 | | | | | | |

Date 10-day tank removal notice given to MPCA: 10/3/90

If the tank(s) involved in the release were removed after July 9, 1990, complete the following:

Removal Contractor: B & D Pump, Inc
Certification Number: 0233

If the tank(s) involved in the release were installed after July 9, 1990, complete the following:

Installation Contractor: B & D Pump
Certification Number: 0233

B. Aboveground Storage Tanks. Complete the following information to reflect the status of your aboveground storage tanks at the time the release was discovered. The registration requirements for aboveground storage tanks are based on the same criteria as the registration requirements for underground storage tanks--refer to the attachments "Do Underground Storage Tank And Piping Requirements Apply to Your Petroleum Tank?" In describing your secondary containment, specify the materials used in the construction of both the base and the walls.

| Tank | Contents | Capacity | Date Installed | Date Registered | Description of Secondary Containment |
|------|----------|----------|----------------|-----------------|--------------------------------------|
| 1 | _____ | _____ | _____ | _____ | _____ _____ |
| 2 | _____ | _____ | _____ | _____ | _____ _____ |
| 3 | _____ | _____ | _____ | _____ | _____ _____ |
| 4 | _____ | _____ | _____ | _____ | _____ _____ |
| 5 | _____ | _____ | _____ | _____ | _____ _____ |

III. SOIL TREATMENT APPROVAL INFORMATION

Treatment used/proposed: ("X" the option)

- Landfarming
- Thermal Treatment (indicate treatment facility Dust Coating Inc)
- Other (Specify _____)

Date MPCA approved soil treatment* : 7/19/91

*If thermal treatment was used/proposed after May 1, 1991, indicate date that the MPCA-permitted thermal treatment facility agreed to accept the soil. Also, unless previously submitted, attach a copy of the thermal treatment application signed by the thermal treatment facility.

IV. PRELIMINARY SITE INVESTIGATION RESULTS

1. Was all soil contaminated above action levels removed from the base and side walls of the excavation? (Soil action levels are described in the MPCA document "Excavation of Petroleum Contaminated Soil" (May 1, 1991))

YES NO

2. Have petroleum vapors been noticed in utilities or buildings?

YES NO

If ground water has not been encountered up to this point in the investigation, go to section V; If ground water has been encountered, continue.

3. Was free product observed on ground water (including perched ground water) in the excavation, soil borings, or in monitoring wells?

YES NO

If free product is found, it must be reported to the MPCA within 24 hours as described in the MPCA document "Petroleum Tank Release Reports" (May 1, 1991). If more than 0.1 foot (approximately one inch) of product is present you will most likely be required to install a product recovery system. Preparations for a product recovery system should begin immediately. All recoverable free product should be removed from the excavation and properly disposed of. Notify the MPCA Tanks and Spills staff of the design and installation of the product recovery system, but do not wait to start the system--it is crucial to begin product recovery as soon as possible. If less than 0.1 foot of product is found, the need for recovery will be based on the results of the Remedial Investigation.

5. Was there a petroleum sheen on the ground water?

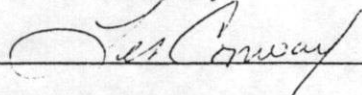
YES NO

6. Are there any shallow wells on the site or adjoining properties?

YES NO

V. INDIVIDUAL PREPARING THIS WORKSHEET

Company Name: Twin City Testing Corp
Street/Box: 4444 Airpark Blvd
City, Zip: Duluth, MN 55811
Telephone: (218) 722-8433
Contact: Les Cowanay

Signature 

Date: 1/10/92

Please mail this worksheet and all necessary attachments to:

(Project Manager)
Minnesota Pollution Control Agency
Hazardous Waste Division
Tanks and Spills Section
520 Lafayette Road North
Saint Paul, Minnesota 55155

MINNESOTA POLLUTION CONTROL AGENCY
APPLICATION TO TREAT PETROLEUM CONTAMINATED SOIL
May 1991

I. Minnesota Pollution Control Agency (MPCA) Site ID Number: LEAK# 3534

II. MPCA Project Manager: Chris Zadak

III. Source of Soil:

Facility Name: Food - N - Fuel
Street Address: 5493 Miller Trunk Highway
City, State, Zip: Duluth, MN 55811
Contact Name: Jack Curtis
Telephone: (218) 729-5501

IV. Contamination Details:

Weight of Soil (tons): (One cubic yard of soil is approximately equivalent to 1.4 tons.) 560 tons

Type Petroleum Contamination: Gasoline, diesel fuel, No. 2 fuel oil, waste oil* (circle one)

Contaminant Concentrations (parts per million)

| | | | | | |
|-----------------------------------|-------------|-----|-----|-----|-----|
| Benzene: | <u>70</u> | ___ | ___ | ___ | ___ |
| Toluene: | <u>430</u> | ___ | ___ | ___ | ___ |
| Ethyl Benzene: | <u>110</u> | ___ | ___ | ___ | ___ |
| Xylene: | <u>560</u> | ___ | ___ | ___ | ___ |
| Total Lead: | <u>24</u> | ___ | ___ | ___ | ___ |
| Total Hydrocarbons as Gasoline | <u>4800</u> | ___ | ___ | ___ | ___ |

Soil Type (sand, silt, clay, etc.) Sand and silty sand

*Note: If the petroleum contamination is waste oil, chromium, cadmium and polychlorinated biphenyls analyses will also be necessary.

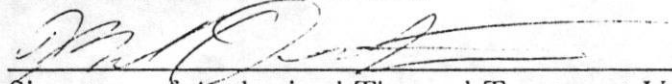
V. Thermal Treatment Unit

Name: Dust Coating Inc
Address: 6925 D'Chene Lane
(if portable, where will plant be located)
City, State, Zip: Maple Plain, MN 55350

Plant Number or Model: Gencor 232
(if portable, separation distance in feet from nearest residence(s): 1200')

Contact Name: Mark Deutsch Title: Vice President Glacer Paving
Telephone: (218) 879-5473 Site Telephone: _____
Air Quality Permit Number: 2353-90-OT-1

1/10/91
Date


Signature of Authorized Thermal Treatment Unit Representative
Accepting Soil

VI. Date treatment will be completed: OCT 16, 1992 (If stockpiled before being treated, all petroleum contaminated soil must be properly managed, handled, and protected from run-on, infiltration and run-off). POST BURN TESTING IS REQUIRED.

VII. Final Disposition of Treated Soil: (how used, location)

Material to be stockpiled and used as clean fill

VIII. Individual Submitting Request:

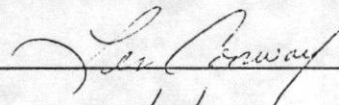
Company Name: Twin City Testing Corporation

Address: 4444 Airpark Blvd Date Inspected: _____

City, State, Zip: Duluth, MN 55811

Contact Name: Les Conway

Telephone: (218) 722-8433

Signature: 

Date: 1/10/92

Mail to: Project Manager
Minnesota Pollution Control Agency
Hazardous Waste Division
Tanks and Spills Section
520 Lafayette Road
St Paul, Minnesota 55155
Fax No: (612) 642-0465

REPORT OF LABORATORY ANALYSIS

GME Consultants, Inc.
 314 Garfield Avenue
 Duluth, MN 55802

November 07, 1990
 PACE Project
 Number: 901020501

Attn: Ms. Marsha Meinders

Food& Fuel 30-153-01

| | | | | |
|---------------------|-------|------------|------------|------------|
| PACE Sample Number: | | 10 0412015 | 10 0412023 | 10 0412031 |
| Date Collected: | | By Client | By Client | By Client |
| Date Received: | | 10/20/90 | 10/20/90 | 10/20/90 |
| Parameter | Units | MDL | FF-SA-1 | FF-SA-3-16 |
| | | | FF-SA-4 | |

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

| | | | | | |
|------------------|-------|------|----|-----|----|
| Lead | mg/kg | 5.0 | 24 | 5.8 | ND |
| Molsture content | % | 0.01 | 12 | 13 | 10 |

ORGANIC ANALYSIS

VOLATILE PETROLEUM RELATED CMPDS IN SOIL

| | | | | | |
|--------------------------------|-------|------|----------|----------|----------|
| Date Analyzed | | | 10/26/90 | 10/26/90 | 10/26/90 |
| Benzene | mg/kg | 0.12 | - | ND | ND |
| Benzene | mg/kg | 0.60 | 70 | - | - |
| Toluene | mg/kg | 0.12 | - | 0.15 | 0.33 |
| Toluene | mg/kg | 0.60 | 430 | - | - |
| Ethyl benzene | mg/kg | 0.12 | - | ND | 0.24 |
| Ethyl benzene | mg/kg | 0.60 | 110 | - | - |
| Xylene | mg/kg | 0.12 | - | 040 | 1.6 |
| Xylene | mg/kg | 0.60 | 560 | - | - |
| Total Hydrocarbons as gasoline | mg/kg | 1.0 | - | 3.4 | 13 |
| Total Hydrocarbons as gasoline | mg/kg | 5.0 | 4800 | - | - |

MDL Method Detection Limit
 ND Not detected at or above the MDL.



03845

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client GAME Consultants
 Address P.O. Box 16070
Duluth, MN 55816
 Phone 218-722-4323

Report To: Marsha
 Bill To: GAME Consultants
 P.O. # / Billing Reference
 Project Name / No. Food & Fuel / 30-153-01

Pace Client No. 070129
 Pace Project Manager JLS
 Pace Project No. 901126501
 *Requested Due Date: 11/12

Sampled By (PRINT): Marsha Meinders
 Sampler Signature: Marsha Meinders Date Sampled: 10/190

| NO. OF CONTAINERS | PRESERVATIVES | | | | ANALYSES REQUEST | REMARKS |
|-------------------|---------------|--------------------------------|------------------|-----|---|---------|
| | UNPRESERVED | H ₂ SO ₄ | HNO ₃ | VOA | | |
| | | | | | <u>BETX</u> <u>TPHC</u> <u>Lead</u> | |

| ITEM NO. | SAMPLE DESCRIPTION | TIME | MATRIX | PAGE NO. | NO. OF CONTAINERS | UNPRESERVED | H ₂ SO ₄ | HNO ₃ | VOA | ANALYSES REQUEST | REMARKS |
|----------|--------------------|------|--------|----------|-------------------|-------------|--------------------------------|------------------|-----|------------------|-----------|
| 1 | FF-SA-1 | | Soil | 41201.5 | 3 | | | | | / / / | |
| 2 | FF-SA-3-16 | | Soil | 41207.3 | 2 | | | | | / / / | |
| 3 | FF-SA-4 | | Soil | 41203.1 | 3 | | | | | / / / | |
| 4 | FF-SA-5 | | Soil | 41204.0 | 3 | | | | | / / / | JV broken |
| 5 | FF-SA-6 | | Soil | 41205.8 | 3 | | | | | / / / | GS broken |
| 6 | FF-WA-1 | | Water | 41206.6 | 3 | | | | | / / / | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |

| COOLER NO. | BAGS | SHIPMENT METHOD | ITEM | RELINQUISHED BY / AFFILIATION | ACCEPTED BY / AFFILIATION | DATE | TIME |
|------------|------|-----------------|------|-------------------------------|---------------------------|--------------|-------------|
| | | | | <u>Marsha Meinders / GAME</u> | <u>MEL - PACE</u> | <u>11/12</u> | <u>1:30</u> |

Additional Comments