CLEAN TECH

Clean Tech Inc.
Environmental Consultants
2700 Capitol Ave
Newark, DE 19711
302•999•0924
FAX 302•999•0925

January 28, 1997

Mr. Jeff Holmes
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington, DE 19899

Re: Limited Site Investigation of the Hydraulic Lift Station in Area N4

Dear Jeff:

Enclosed please find a copy of the Limited Site Investigation of the Hydraulic Lift Station in Area N4 report.

Please do not hesitate to contact our office if you should have any questions.

Yours truly,

Christopher J. Candela
Environmental Scientist
CLEAN TECH

Enclosures

cc: E. Bosetti, P.E.

LIMITED SITE INVESTIGATION OF THE HYDRAULIC LIFT STATION IN THE AREA OF COLUMN N4

PREPARED FOR GENERAL MOTORS - NAO WILMINGTON ASSEMBLY PLANT WILMINGTON, DE

Prepared by
Clean Tech
2700 Capitol Trail
Newark DE 19711
(302) 999-0924

January 1997

Section 1.0 - Introduction

1.1 - Purpose

The purpose of this limited site investigation was to investigate through sampling and analysis, environmental conditions identified during the decommissioning and removal of the hydraulic lifts in area of column N4 of the General Motors Assembly Plant in Wilmington, Delaware.

During the decommissioning and removal of the hydraulic lifts, the following areas of environmental concern were discovered at the site:

- The hydraulic lift system and its associated supply tanks and lines were not fitted with any leak detection devices; and
- During the removal of the lifts and their associated piping and tanks, the demolition contractor noted visible staining and a petroleum odor present in the soils of the excavation.

1.2 - Scope of Work

Based on the area of environmental concern identified during the removal of the hydraulic lift station, Clean Tech completed a Limited Site Investigation of the subject area which included the following tasks:

- Discussions and site inspection with Mr. Gary Charles of DNREC's Underground Storage Tank Division;
- The collection of soil samples from the bottom of the excavation and from the side walls of the excavation; and
- The installation of two additional soil borings to the north of the excavation and the collection of soil samples for TPH analysis, as per the request of Mr. Gary Charles of DNREC. (See Figure 1.)

Section 2.0 - Sampling and Analysis

2.1 - Background

During the decommissioning and removal of the hydraulic lift system and its associated piping and tanks, the demolition contractor noted visible staining and a strong petroleum odor in the soils of the excavation. Further investigation with General Motors personnel revealed that the lift station and its piping and tanks were approximately thirty years old and did not contain any leak detection devices. Based on these observations, it was determined that a possible release of hydraulic oil had occurred. DNREC was notified of the possible release and Mr. Charles of DNREC conducted a site inspection. During his site inspection, Mr. Charles recommended that soil samples be collected from the floor and sidewalls of the excavation. In addition, it was also recommended that two additional soil borings be installed to the north of the excavation. (See Figure 1.)

2.2 - Sampling

2.2.1 - Soil Samples Collected From the Excavation

On November 16, 1996, a total of 11 soil samples were collected from the side walls and floor of the excavation. The first sample (SB-1) was collected from the eastern end of the excavation floor. The soils encountered consisted mainly of fine, silty, clay that varied in color from light gray to dark gray. A soil sample for Total Petroleum Hydrocarbons (TPH) analysis was collected at approximately two feet below the grade of the excavation's floor. The floor of the excavation was approximately eight feet below the grade of the concrete flooring in the plant. A strong petroleum odor was present in the sample.

The second soil sample (SB-2) was collected from the approximate center of the excavation floor. The soils encountered consisted mainly of a moist, light brown, sandy, clay. A soil sample for TPH analysis was collected at approximately two feet below the grade of the excavation floor. The floor of the excavation was approximately eight feet below the grade of the concrete flooring found in the plant. A strong petroleum odor was present in the sample.

The third soil sample (SB-3) was collected from the west end of the excavation floor. The soils encountered consisted mainly of a moist, fill. A soil sample for TPH analysis was collected at approximately two feet below the grade of the excavation floor. The floor of the excavation was approximately eight feet below the grade of the concrete flooring found in the plant. No discernible petroleum odor was present in the sample.

The fourth soil sample (SB-4) was collected from the west wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a very dry, light gray clay. A soil sample for TPH analysis was collected. A strong petroleum odor was present in the sample.

The fifth soil sample (SB-5) was collected from the center of the south wall of the excavation, approximately four feet below the surface of the concrete floor. The soils

encountered consisted mainly of a dry, light gray clay. A soil sample for TPH analysis was collected. A slight petroleum odor was present in the sample.

The sixth soil sample (SB-6) was collected from the east end of the south wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a dry, light gray clay. A soil sample for TPH analysis was collected. A strong petroleum odor was present in the sample.

The seventh soil sample (SB-7) was collected from the west end of the south wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a dry, light brown clay. A soil sample for TPH analysis was collected. A strong petroleum odor was present in the sample.

The eighth soil sample (SB-8) was collected from the east end of the north wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a dry, light gray clay. A soil sample for TPH analysis was collected. A strong petroleum odor was present in the sample.

The ninth soil sample (SB-9) was collected from the center of the north wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a dry, light gray clay. A soil sample for TPH analysis was collected. A slight petroleum odor was present in the sample.

The tenth soil sample (SB-10) was collected from the west end of the north wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a dry, light brown clay. A soil sample for TPH analysis was collected. There was no petroleum odor present in the sample.

The eleventh soil sample (SB-11) was collected from the east wall of the excavation, approximately four feet below the surface of the concrete floor. The soils encountered consisted mainly of a very dry, light gray clay. A soil sample for TPH analysis was collected. A slight petroleum odor was present in the sample.

Figure 1 indicates the approximate locations of where the soil samples were collected.

2.2.2 - Additional Soil Boring Samples

DNREC requested that two additional soil samples be collected from borings upgradient of the north wall of the excavation. On November 16, 1996, Clean Tech installed two soil borings upgradient from the northern edge of the excavation. The first boring (SB-12) was installed approximately 15 feet from the northern edge of the excavation and approximately 15 feet to the west of Column N4. The soils encountered in the boring consisted mainly of a dry, light gray clay. A sample for TPH analysis was collected from the four to five foot interval of the boring. There was no petroleum odor present in the sample.

The second boring (SB-13) was installed approximately 15 feet from the northern edge of the excavation and approximately 7 feet to the east of Column N4. The soils encountered in the boring consisted mainly of a dry, light brown, sandy clay. A sample for TPH analysis was collected from the four to five foot interval of the boring. There was no petroleum odor present in the sample.

Figure 1 indicates the approximate locations of the soil borings.

2.3 - Analytical Results

A total of thirteen soil samples were collected for TPH analysis. The soil samples were analyzed for TPH - DRO utilizing EPA Method 8015 (modified). The results of the analyses are presented in the following table:

General Motors Corporation

Wilmington Assembly Plant

Hydraulic Lift Station Soil Boring Results

Soil Boring	TPH Result in mg/Kg
SB-1	1,890*
SB-2	1,420*
SB-3	598
SB-4	1,140*
SB-5	100
SB-6	705
SB-7	75
SB-8	24,300*
SB-9	933
SB-10	U10
SB-11	775
SB-12	145
SB-13	U10
DNREC Action Level	1,000

NOTES: * = Result exceeds DNREC Action Level of 1,000 mg/Kg

The results indicate that the TPH concentrations for SB-1 (1,890 mg/Kg), SB-2 (1,420 mg/Kg), SB-4 (1,140 mg/Kg) and SB-8 (24,300 mg/Kg) exceed the DNREC Action Level of 1,000 mg/Kg. The remaining sample results were all below the DNREC Action Level of 1,000 mg/Kg.

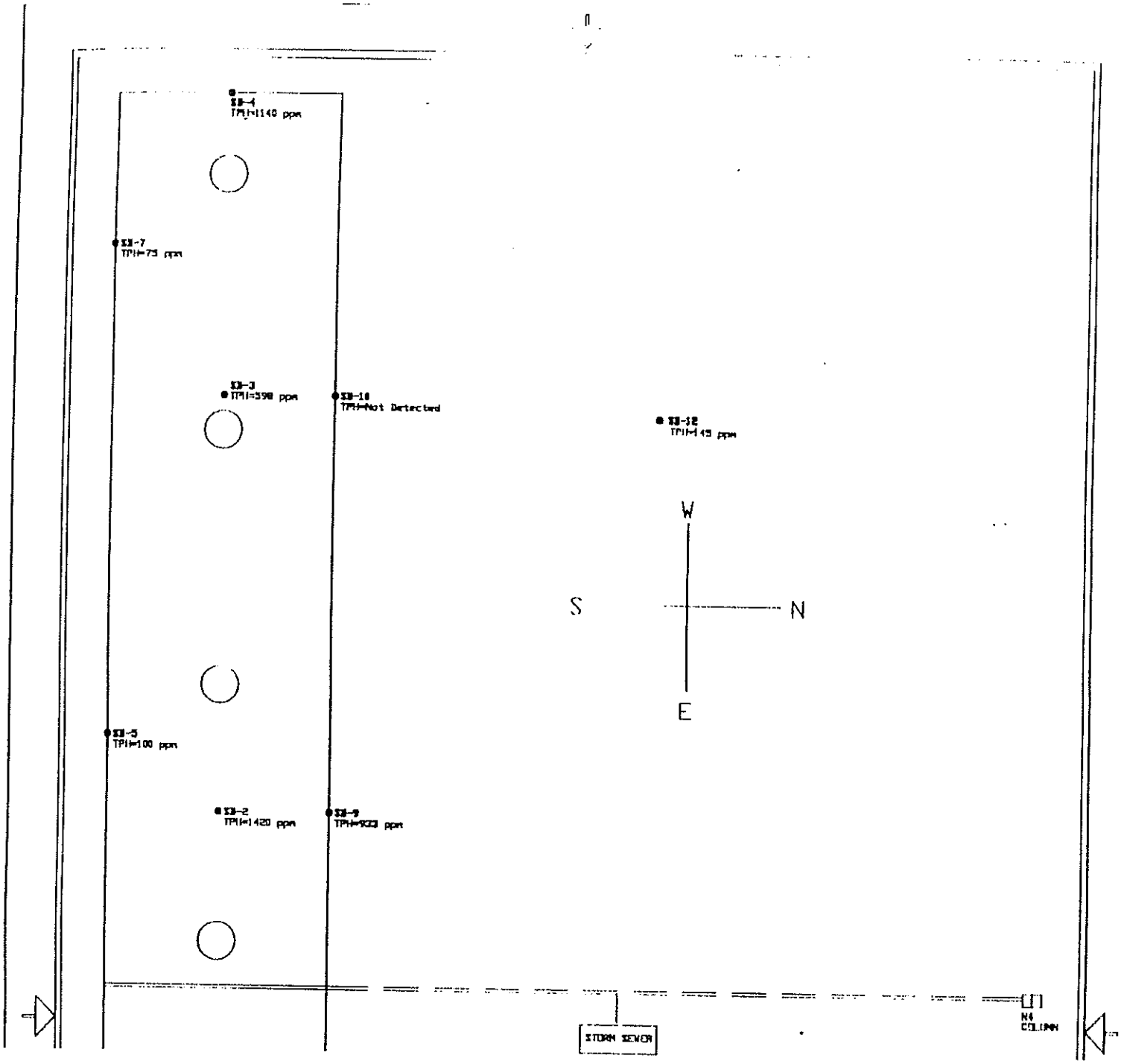
A copy of the analytical results can be found in Attachment 1.

Section 3.0 - Conclusions and Recommendations

The Limited Site Investigation completed by Clean Tech on November 16, 1996, confirmed petroleum hydrocarbon contamination is present in the area of the former hydraulic lift station. The results indicate that contamination above the DNREC Action Level of 1,000 mg/Kg may extend further to the north and northeast, under the building's foundation.

Clean Tech recommends further investigation in order to determine the extent of petroleum hydrocarbon contamination in the area of the former hydraulic lift station. In order to delineate the area of contamination, a series of soil borings with soil samples should be installed and laboratory analyzed for petroleum contaminants. It is further recommended that these borings be installed during one of the plant's designated down times, as to not interfere with the plant's manufacturing operations. Once the full extent of the contamination is known, Clean Tech will be able to provide an evaluation of remedial options for the site soils with emphasis on defining a cost effective approach which does not interfere with the facility's manufacturing operations.

Figure One - Hydraulic Lift Station N4


SB-4
TPH=1140 ppm
SB-7
TPH=75 ppm
SB-3
TPH=598 ppm
SB-10
TPH=Not Detected
SB-12
TPH=145 ppm
W
S
N
E
SB-5
TPH=100 ppm
SB-2
TPH=1420 ppm
SB-9
TPH=933 ppm
STORM SEWER
N4
COLLINN

Attachment 1 - Analytical Results

ARTESIAN LABORATORIES

Artesian Laboratories, Inc.
630 Churchmans Road
Newark, Delaware 19702
(302) 453-6920 • 453-6986 (FAX)

REPORT OF ANALYSIS

Clean Technologies
2700 Capitol Trail
Newark, DE 19711

Attn: Ms. Deborah Buniski

Purchase Order: 954
Invoice Number:

Acct:1870267

Order #: 96-11-317
Date: 12/05/96 13:45
Work ID: GM Lift UST's 11/16/96 954
Date Received: 11/18/96
Date Completed: 12/05/96

Client Code: CLEAN_TECH

SAMPLE IDENTIFICATION

Sample Number	Sample Description
01	SB-1
02	SB-2
03	SB-3
04	SB-4
05	SB-5
06	SB-6
07	SB-7
08	SB-8
09	SB-9
10	SB-10
11	SB-11
12	SB-13
13	SB-12

This cover page is an integral part of the analytical report that follows.

Certified By
Warren Van Arsdall

TO: JEFF HOLMES-GM
FROM: CHRIS CANDELA-CT

6 pages

Order # 96-11-317
12/03/96 13:25

TEST RESULTS BY SAMPLE

Sample: 01A SB-1
Collected: 11/06/96 07:30

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	1890	10	PPM	ATL	12/03/96 08:00

Sample: 02A SB-2
Collected: 11/06/96 07:45

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	1420	10	PPM	ATL	12/03/96 08:00

Sample: 03A SB-3
Collected: 11/06/96 08:00

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	598	10	PPM	ATL	12/03/96 08:00

Sample: 04A SB-4
Collected: 11/06/96 08:15

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	1140	10	PPM	ATL	12/03/96 08:00

Sample: 05A SB-5
Collected: 11/06/96 08:30

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	100	10	PPM	ATL	12/03/96 08:00

Sample: 06A Sb-6
Collected: 11/06/96 08:45

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	705	10	PPM	ATL	12/03/96 08:00

Sample: 07A SB-7
Collected: 11/06/96 09:00

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	75	10	PPM	ATL	12/03/96 08:00

Sample: 08A SB-8
Collected: 11/06/96 09:15

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	24300	10	PPM	ATL	12/03/96 08:00

Order # 96-11-317
12/05/96 13:25

TEST RESULTS BY SAMPLE

Sample: 09A SB-9
Collected: 11/06/96 09:30

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	933	10	PPM	ATL	12/03/96 08:00

Sample: 10A SB-10
Collected: 11/06/96 09:45

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	ND	10	PPM	ATL	12/03/96 08:00

Sample: 11A SB-11
Collected: 11/06/96 10:00

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	775	10	PPM	ATL	12/03/96 08:00

Sample: 12A SB-13
Collected: 11/06/96 10:15

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	165	10	PPM	ATL	12/03/96 08:00

Sample: 13A SB-12
Collected: 11/06/96 10:30

Category: SOIL

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TPH, Soils, DRO	ND	10	PPM	ATL	12/03/96 08:00

Order # 96-11-317
12/05/96 13:25

TEST METHODOLOGIES

Total Petroleum Hydrocarbons-Diesel Range Organics (TPH/DRO)

SW-846 Method 8015 (modified)

LAB CODE# ART

2nd Capitol Trail • NEWARK, DELAWARE 19711
PHONE: (302) 999-0924 • FAX: (302) 999-0925

POR
(Do Not Process Without Purchase Order Number)
961137

CHAIN OF CUSTODY RECORD

PROJECT
GH- Lift UST'S 11/16/96

SAMPLERS (Signature) CCF

SAMPLE NAME	ANALYSIS REQUIRED	TIME START	TIME END	DATE	TIME	MATRIX: Water	Sediment	Other	Air	Oil	Other	NO. OF CONTAINERS	REMARKS
SB-1	TPH-DRO +		11/16		0730		✓						
SB-2					745								
SB-3					800								
SB-4					815								
SB-5					830								
SB-6					845								
SB-7					900								
SB-8					915								
SB-9					930								
SB-10					945								

Relinquished by: CCF

Relinquished by:

Relinquished by:

Relinquished by:

Dispatched by: Date

Method of Shipment:

Received by:

Received by:

Received by:

Received by Mobile Laboratory for field analysis:

Time

Received for Laboratory by: B.D. Dowty

Date	Time
11/18/96	1426

Distribution: Orig. - Accompany Shipment
1 Copy - Survey Coordinator Field Files

LAB CODE# ACT

CLEAN TECHNOLOGIES

2700 Capitol Trail • NEWARK, DELAWARE 19711
PHONE: (302) 999-0924 • FAX: (302) 999-0925

PO# 957
(Do Not Process Without Purchase Order Number)

CHAIN OF CUSTODY RECORD

PROJECT: GM-Lift Usts

SAMPLERS: CCA

SAMPLE NAME	ANALYSIS REQUIRED	DATE BEGIN	DATE END	TIME BEGIN	TIME END	MATRIX: Water	Sediment	Other	Air	Oil	Other	NO. OF CONTAINERS	REMARKS
SB-11	TVH -DEO 1	11/8	11/10		1000		1						
SB-13	↓		↓		1015								
SB-12	↓		↓		1030								

Relinquished by: CCA

Relinquished by:

Relinquished by:

Relinquished by:

Inspected by: Date

Method of Shipment:

Received by:

Received by:

Received by:

Received by Mobile Laboratory for field analysis:

Time

Received for Laboratory by: B.J. Dewey

Date: 11/18/96 Time: 1420

Date Time

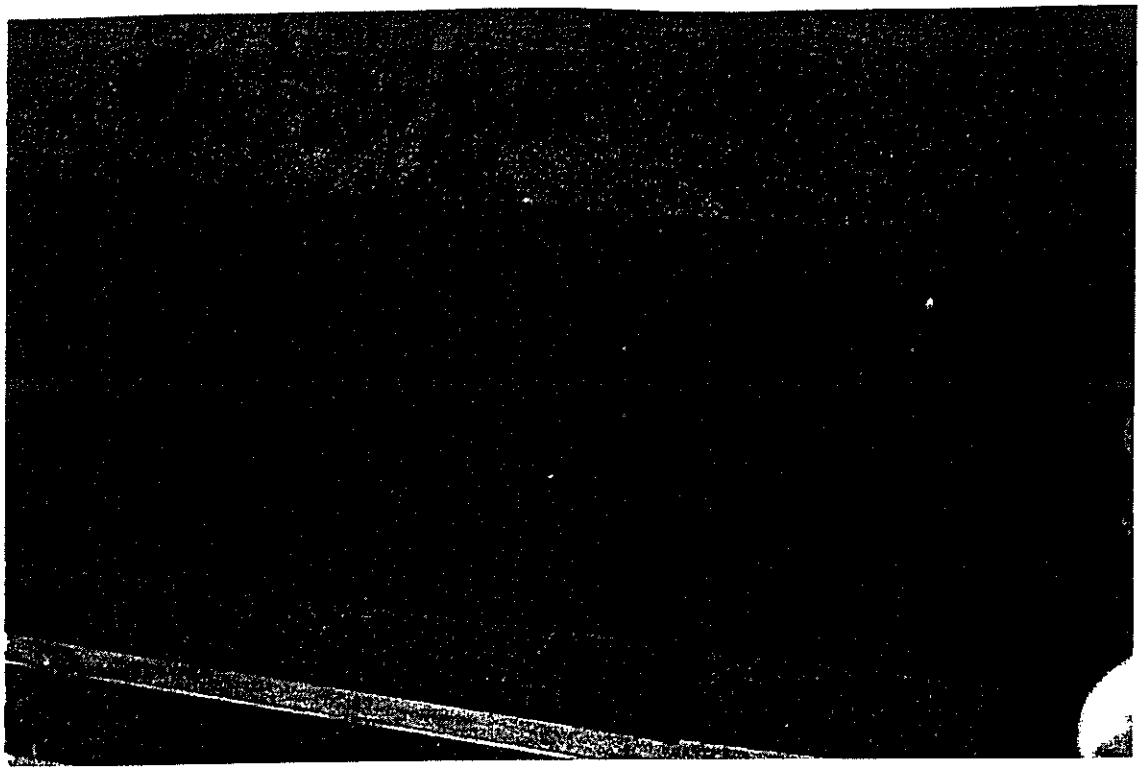
Distribution: Orig. - Accompany Shipment
1 Copy - Survey Coordinator Field File



PHOTOGRAPH #1:
View of soil borings SB-1 and SB-8.



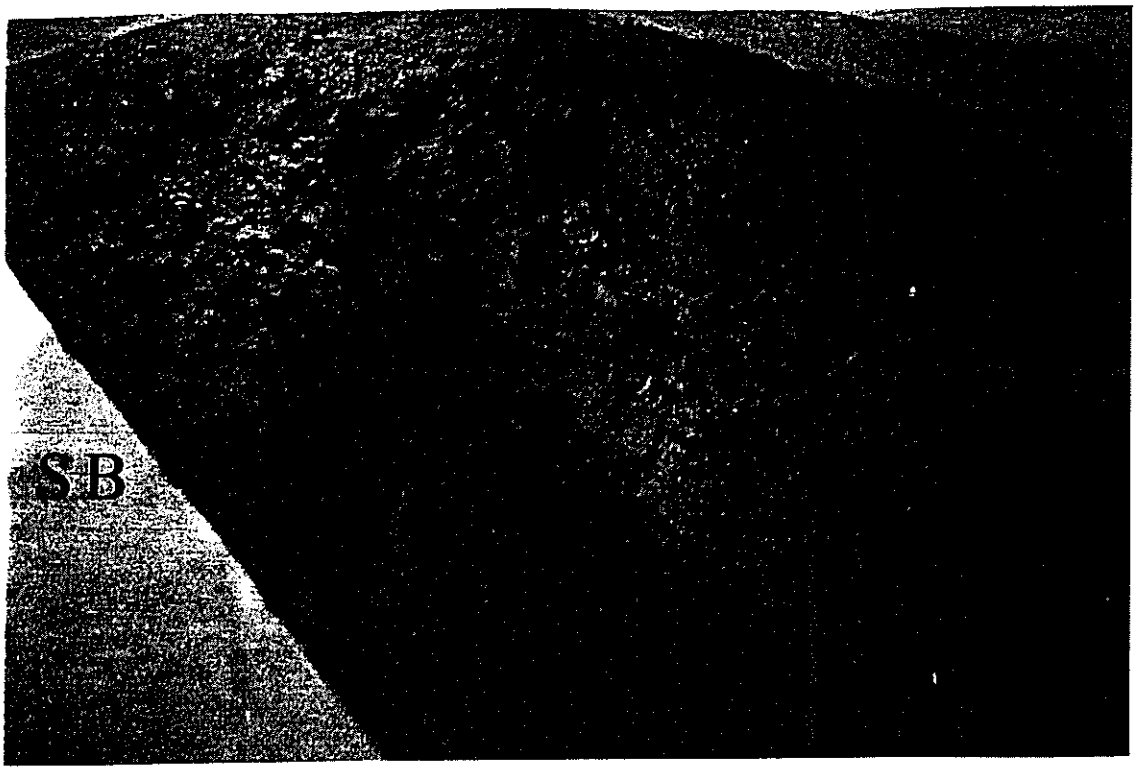
PHOTOGRAPH #2:
View of soil boring SB-3.



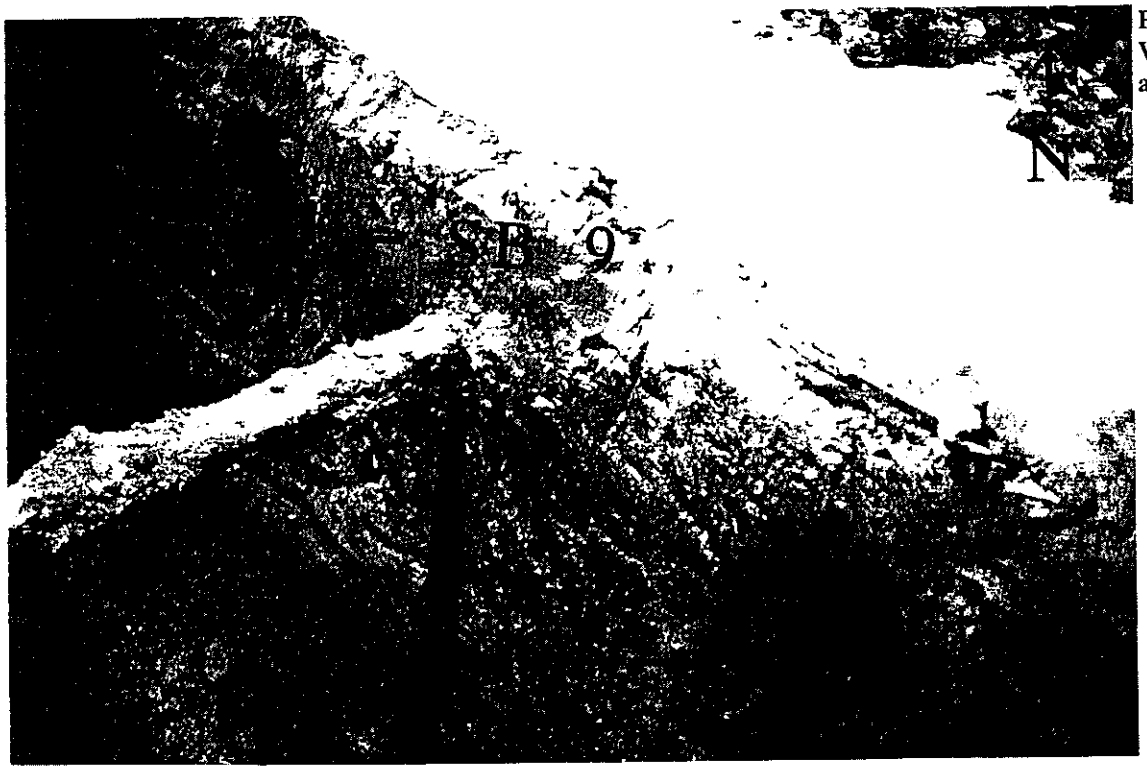
PHOTOGRAPH #3:
View of soil boring SB-2.



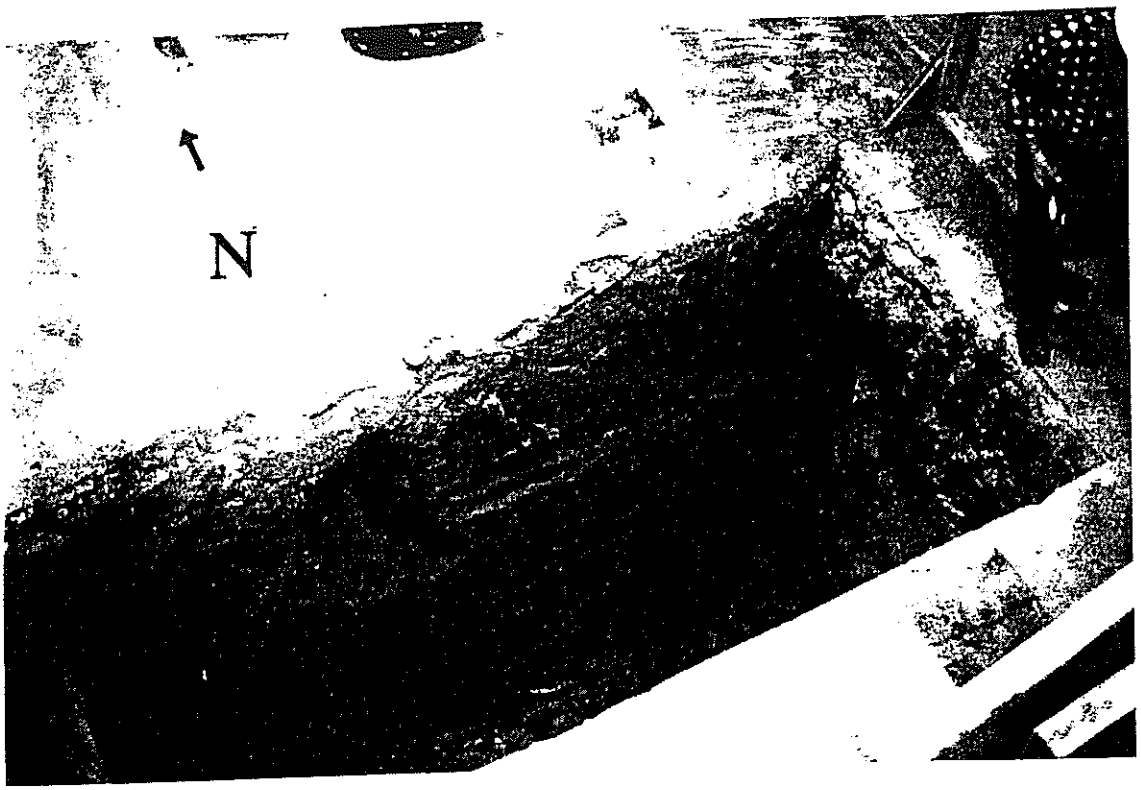
PHOTOGRAPH #4:
View of soil borings SB-5, SB-6 and SB-7.



PHOTOGRAPH #5:
View of soil borings SB-4 and SB-10.



PHOTOGRAPH #6:
View of soil borings SB-8 and SB-9.



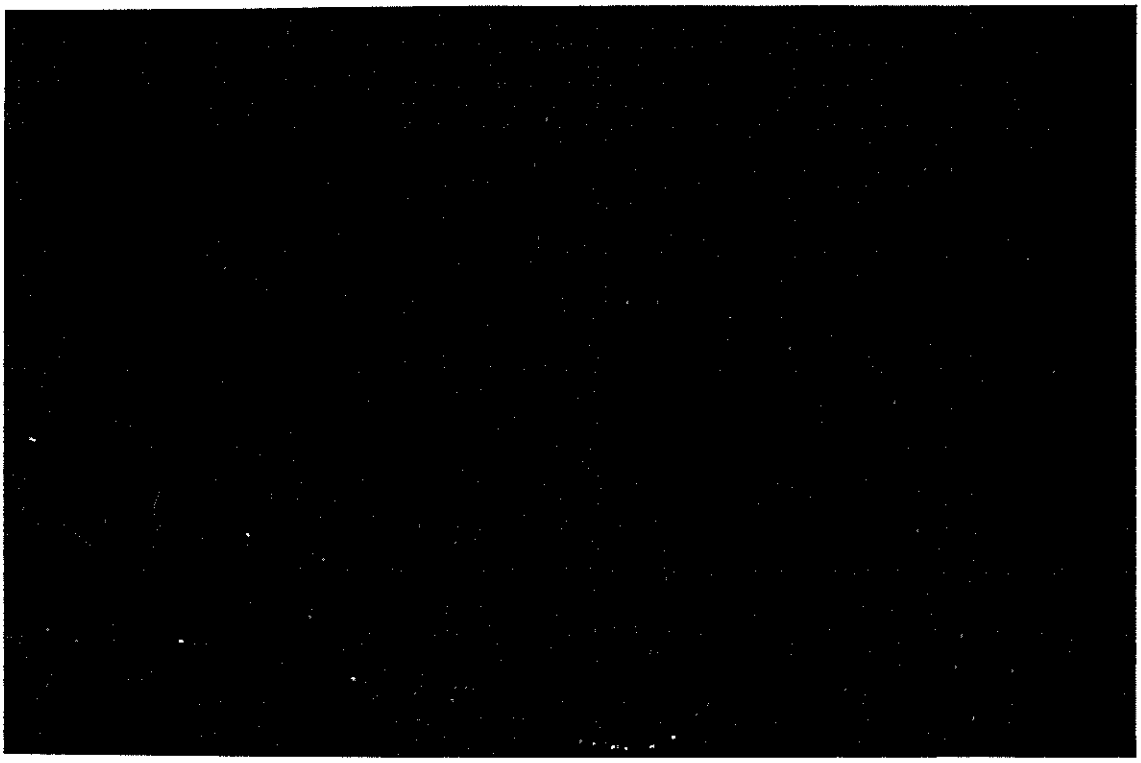
PHOTOGRAPH #7:
View of soil borings SB-8 and SB-11.



PHOTOGRAPH #8:
View of soil borings SB-5, SB-6 and SB-11.



PHOTOGRAPH #9:
View of soil boring SB-12.



PHOTOGRAPH #10:
View of soil boring SB-13.

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
715 GRANTHAM LANE
NEW CASTLE, DE 19720-4801

WASTE MANAGEMENT SECTION
UNDERGROUND STORAGE TANK BRANCH
TEL: (302) 323-4588
FAX: (302) 323-4561

August 5, 1997

Jeffrey A. Holmes
Environmental Engineer
BOC Lansing Automotive
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, DE 19899

RE: Hydraulic Lift Station Limited Investigation Area of Column N4
General Motors Corporation — Facility ID #3-000169
Boxwood Road — Project ID #N9707108
Wilmington, DE — File Code 30

Dear Mr. Holmes:

The Department of Natural Resources and Environmental Control, Underground Storage Tank Branch has reviewed the Limited Site Investigation of the Hydraulic Lift Station in the Area of Column N4 prepared by Clean Tech and dated January 1997. The report documents environmental conditions identified during the decommissioning and removal of hydraulic lifts at the General Motors Assembly Plant.

During the lift removal, petroleum odors and visible staining were observed in the excavation. Some of the soil samples collected from the walls and floor of the excavation confirmed petroleum hydrocarbon contamination above the DNREC Action Level of 1000 mg/kg. At the direction of the Department, two additional soil samples were collected adjacent to the excavation. The additional samples were below DNREC Action Levels. Although soils with elevated levels of hydrocarbons remain in the vicinity of the former lifts, the limited extent of the contamination and location beneath an industrial facility minimizes any possible risks from the soils. No further investigation or remediation will be required by the Department.

Based on the information provided for our review, it appears that the levels of contamination near the former hydraulic lifts should pose no threat to human health or the environment and no further action is required at the present time *as long as the residual contamination onsite remains undisturbed.*

If not already completed, the area of the former lifts should be repaved. Any plans for future digging, boring or excavating in this area must include a contingency plan, approved by the Department *in advance*, to properly manage any contaminated soils that may be encountered.

If you have any questions, please contact me at 302-323-4588.

Sincerely,

Patricia Ellis

Patricia Ellis
Hydrologist
Underground Storage Tank Branch.

EDM:PME\tlc
PME97062.doc

Facsimile Cover Sheet

To: Fred Rhindage
Company: Gm
Phone:
Fax:

From: Jeff Holmes
Company: LAD - WILMINGTON PLANT
Phone: 8-438-7421
Fax: 8-438-7246 OR 302-428-7246

Date: 2/10/97
Pages including this cover page: 8

Comments:

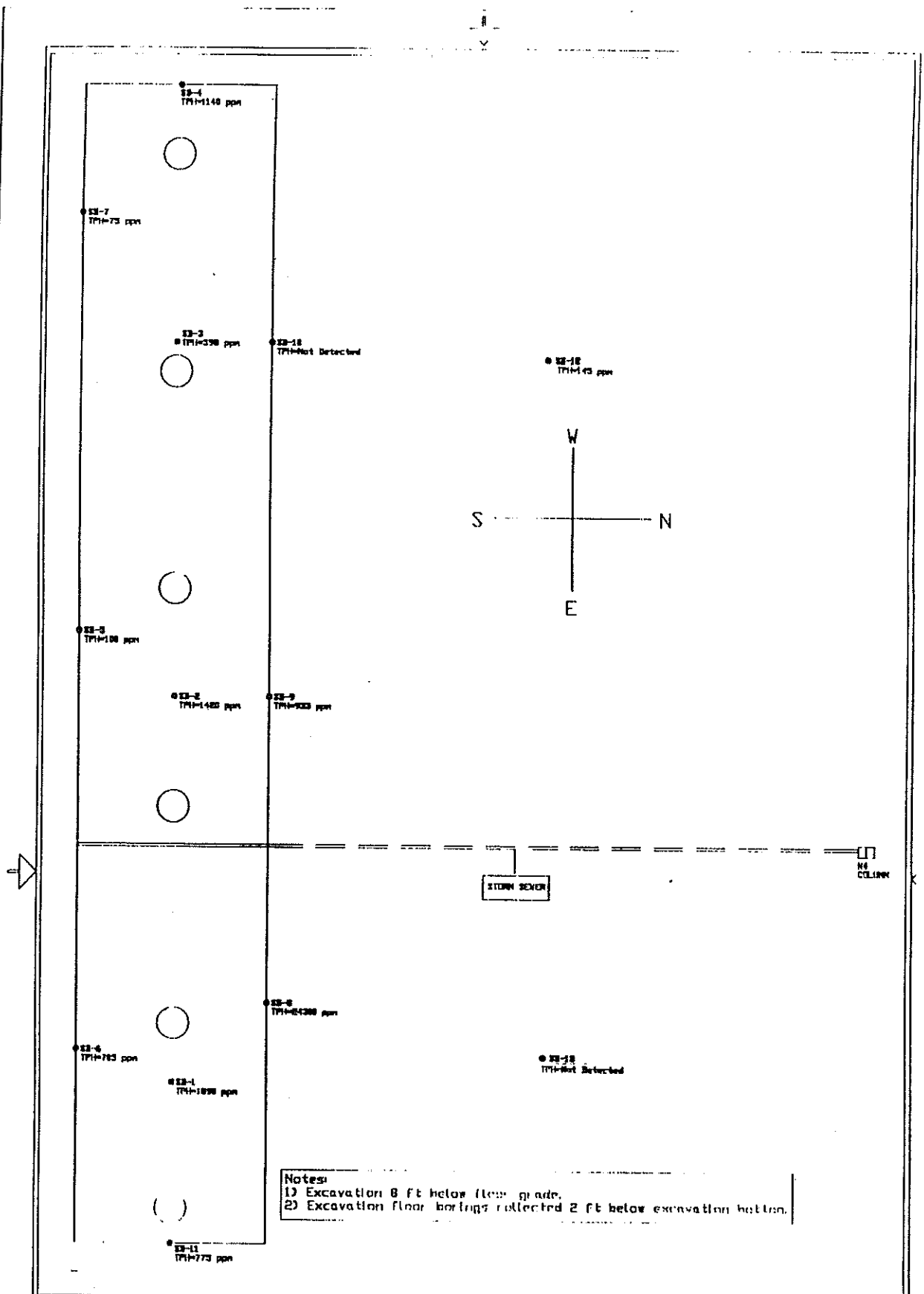
~~This is a test of the fax~~

Fred,

Call me when you receive these. Thanks

JH

8-438-7421



CLEAN TECH
2700 CAPITOL TRAIL
NEWARK, DE 19711

Hydraulic Lift Station N4
CLIENT: General Motors
LOCATION: Wilmington, DE Assembly Plant
DRAWN BY: P. Schwartz
DESIGNED BY: C. Candela
APPROVED BY:
FILE NAME: GM1.DWG SCALE: 1/4"=1'

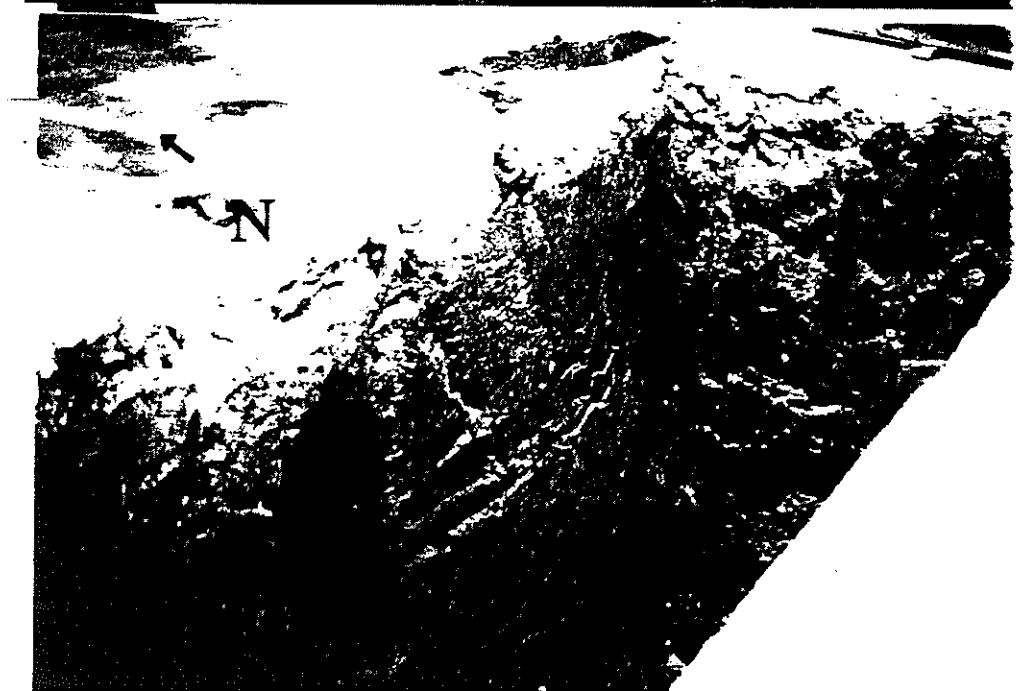
SB 8
SB 1

N

SB
N →
SB
S
N


SB 6
5
N
SB




N

N
N
SB 9
N

SB 11
N

SB 12




13

CLEAN TECH

Clean Tech Inc.
Environmental Consultants
2700 Capitol Ave
Newark, DE 19711
302•999•0924
FAX 302•999•0925

January 28, 1997

Mr. Jeff Holmes
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington, DE 19899

Re: Limited Site Investigation of the Hydraulic Lift Station in Area N4

Dear Jeff:

Enclosed please find a copy of the Limited Site Investigation of the Hydraulic Lift Station in Area N4 report.

Please do not hesitate to contact our office if you should have any questions.

Yours truly,

Christopher J. Candela
Environmental Scientist
CLEAN TECH

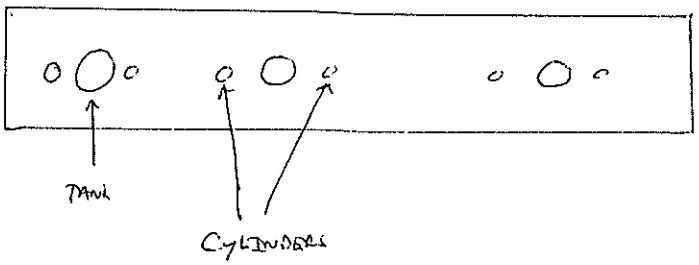
Enclosures

cc: E. Bosetti, P.E.

↑
N

M3
I

N4
I

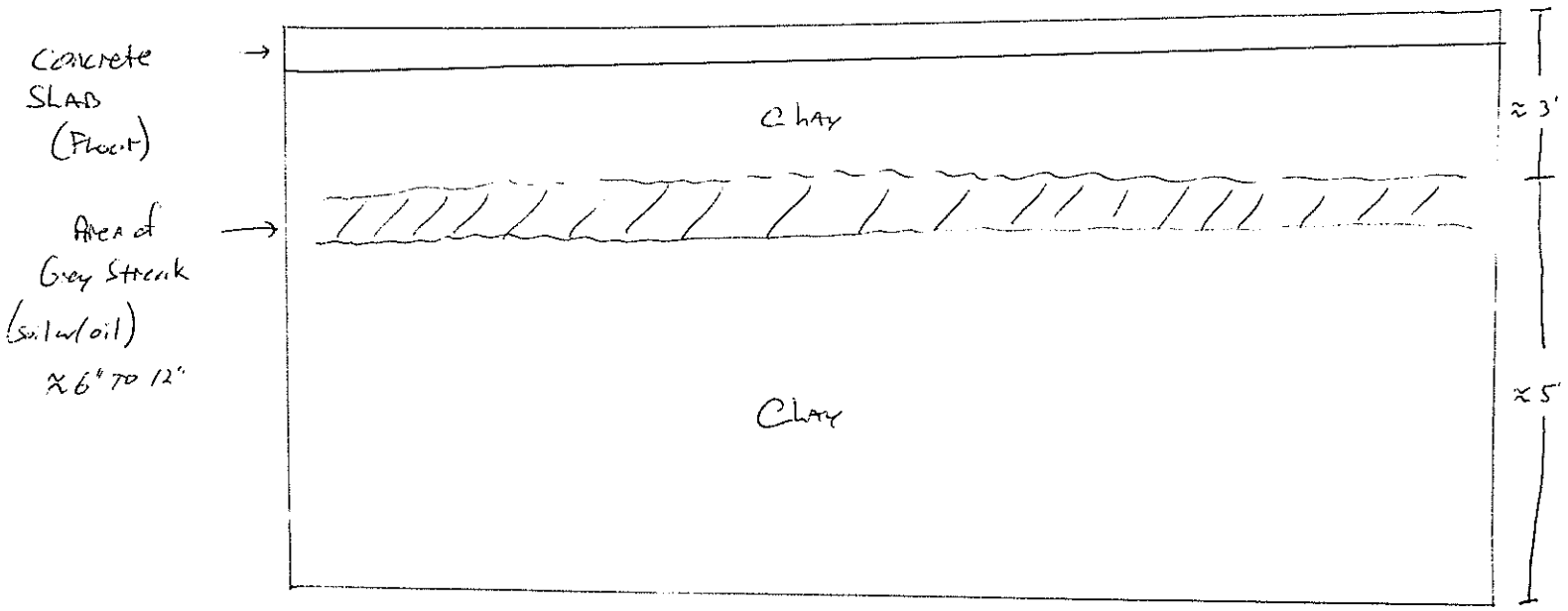


I
M3

I
N#3

Previous Location
of Tanks & Cylinders
Rectangle is outline of
EXCAVATION

Edge of Plant



Soil (Pit) Profile

Looking NORTH

6 TOTES ?

BM #2

1) EAST SIDE WALL Sample SPOT SB4 SB10

2) WEST " " " & West most sample of North wall

3) NORTH & EAST core hole

4) North + West core hole

10) NORTH + EAST core hole (no flash)

11) NORTH & West core hole (no flash)

12) } NORTH + EAST

13) }

14) } NORTH & WEST

15) }

Gary Charles

40°F or Below
CHAIN of CUSTODY RUN DRO
OR
DRO PLUS — Preferred

TAKE SAMPLES & A PLOT PLAN

Samples
6 or 8 ft. NORTH -

PICTURES of Pit & Hole bores

1, 2 & 3 - EAST Bottom Sample (NORTH IS on left) ← SB 1
4 - West Bottom Sample " " (NORTH IS on RIGHT) → SB 4
5 - Middle Bottom " " (NORTH IS TOP) ↑ SB 2
6 - " South Side wall " " (" " Left) ← SB 5
7 - EAST " " " " (" " Left) ← SB 6
8 - West SIDE wall Sample (NORTH IS RIGHT) → SB 3
9 - West SOUTH Side wall " " (" ") → SB 7
10 - All South " Samples (NORTH IS Right → SB6 SB5, SB 3
11 - Taking NORTH wall middle Sample (" " ") → SB7
12 - All three NORTH wall Samples (" " ") → SB SB9 SB8

13 - EAST most NORTH wall Sample SB8
14 West Sample on NORTH wall
15 - Middle SB4 & EAST SB8 Samples ON NORTH wall
No Plan
16 - EAST Bottom SAMPLE - SOUTH West SB6 ← SB1
17 - EAST most Sample NORTH wall SB8
18 - Middle SB5 & EAST SB6 Samples SPOT on SOUTH wall

14.00

15.3 lbs.
K1500 Gals.
22,950 lbs.

19) Middle EAST—SB6 Samples on SOUTH wall SB5 & EAST wall Sample SB1
20) West most Sample on SOUTH wall - SB7
21) EAST wall SB11 Sample of EASTmost Valve from North SB
22) EAST most SB8 Sample on NORTH wall showing Column N-4 AT TOP

No Plan 23) EAST wall 4 ft. down. SB11
w/Plan 24) " "

21/120

T

Removed 3 hydraulic lifts Inside the Plant —

And Encountered Some soil Contaminated w/ Hydraulic Fluid

Can You Come out & Look at the Area &

~~Decide if we can proceed~~

It looks like Agrey Streak with Clay

Above & below It.

If can't come out Can I take Pictures

of It to Document It & then Send a Proposal

for future Remediation, geo probe testings etc.?

11/15/96 @ 1Pm called for ELLIS & told He out of Station

since She's In A Meeting All Afternoon

Came out on 11/15/96

@ ≈ 1:15Pm

& looked at Excavation

told us to take Some

Samples, Send the

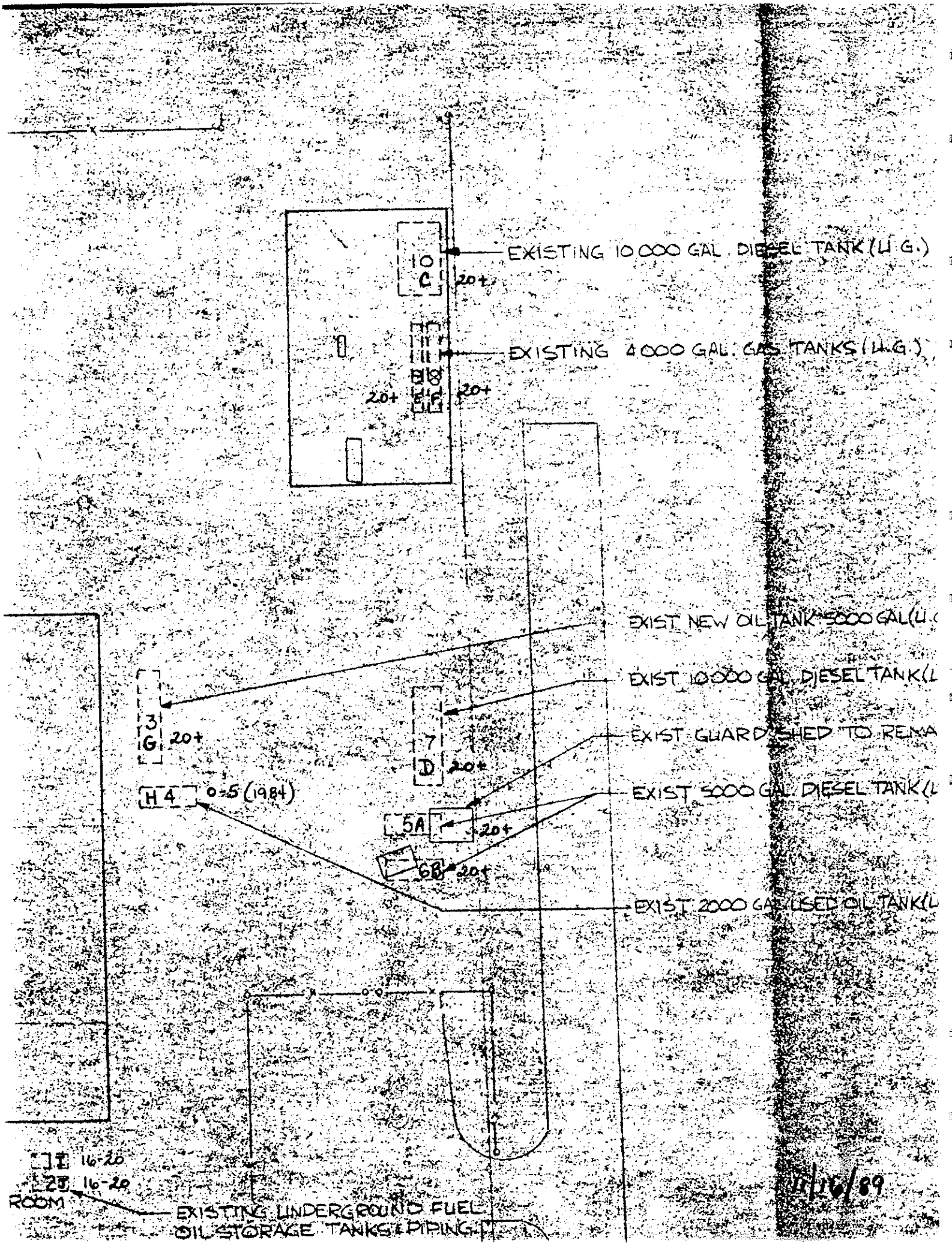
results in

& for Mail &

Backfilling

Gary Charles - DRO

(Diesel Range Organics)


EXISTING 10 000 GAL. DIESEL TANK (U.G.)
C
20+
EXISTING 4000 GAL. GAS. TANKS (U.G.)
20+
F
20+
EXIST. NEW OIL TANK 5000 GAL (U.
EXIST. 10000 GAL. DIESEL TANK (U
3
G
20+
7
D
20+
EXIST. GUARD SHED TO REMA
H 4
0-5 (1984)
EXIST. 5000 GAL. DIESEL TANK (U
5A
20+
6B
20+
EXIST. 2000 GAL. USED OIL TANK (U
16-20
23
16-20
ROOM
EXISTING UNDERGROUND FUEL OIL STORAGE TANKS & PIPING
11/16/89

Chevrolet·Pontiac·Canada Group
Wilmington Plant
General Motors Corporation
Boxwood Road
P.O. Box 1512
Wilmington, Delaware 19899

November 16, 1989

Mr. John Barndt
Department of Natural Resources
and Environmental Control
Division of Air and Waste Mgmt.
Underground Storage Tank Branch
715 Grantham Lane
New Castle, Del. 19720

SUBJECT: UNDERGROUND STORAGE TANK REMOVAL

Dear Sir:

Three Underground Storage Tank Registration Forms for the removal of twelve underground storage tanks are enclosed.

As indicated on the forms, the tanks will be removed from service by December 22, 1989. Weather permitting, removal operations are scheduled to begin April 2, 1990.

As discussed during our meeting on November 8, 1989, it is requested that the Wilmington Plant be provided with a letter from the U.S.T. Branch stating that removal of the tanks is permitted up to one year after this notification is received. Any changes in the removal schedule will be relayed by telephone to the U.S.T. Branch so that a DNREC representative may be present during removal.

To ensure understanding of the removal project, a drawing of the tanks to be removed from the Anchor Motor Freight facility is enclosed. The tanks are numbered to correspond with the numbers on the Registration Form.

Should you have any questions, please contact Deborah Kryak at 428-7421.

D.W. Kryak

D. W. KRYAK,
Sr. Environmental Engineer

cc: file10/12

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER 3-000541

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: ANCHOR MOTOR FREIGHT, INC.
Street: 95 DODSON ROAD
City: WILMINGTON State: DEL Zip: 19804
Phone: 992-9300 County: NEW CASTLE

2. **Owner Information**
Name: GENERAL MOTORS, B-O-C WILMINGTON
Street: P.O. BOX 1512; BOXWOOD & DODSON RDS.
City: WILMINGTON State: DEL Zip: 19899
County: NEW CASTLE

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____)
( ) State ( ) County
( ) Municipal ( ) Public School District
(X) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
(X) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm (X) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**
Name: I.D. GRIFFITH
Title: FRED ATKINSON, PROJECT MANAGER
Street: 735 S. MARKET ST. P. O. BOX 1552
City: WILMINGTON State: DEL. Zip: 19899-1552
Operating License #/State: 183066 DE
Phone: 656-8253

7. Does the facility have a water well? ( ) Yes (X) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A ft.

9. How close is the tank field to an occupied building?
TEN ft.

10. Does the building have a basement?
( ) yes (X) no

11. Is any routine tank inspection/testing conducted?
( ) yes (X) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(X) yes: (X) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s)** **Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____ 2 _____
3 _____ 4 _____ 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (X) Remove from ground
Date tank(s) removed: 04 / 02 / 90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 16-20 2 16-20 3 20+ 4 0-5 5 20+

16. If abandoned in place, date tank(s) abandoned:
12 / 22 / 89

17. If removed/abandoned, type of substance last stored:
Tank 1: FUEL OIL Tank 4: USED OIL
Tank 2: FUEL OIL Tank 5: DIESEL FUEL
Tank 3: ENGINE OIL

18. Do abandoned tanks contain inert materials? ( ) yes (X) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 0 gals.
2 0 gals. 3 0 gals. 4 0 gals. 5 0 gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☒		☒		☒	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☒		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☒		☐		☒	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☒		☒		☒
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☒		☒		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☒	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☒		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)					(40W ENGINE OIL)					
25. **Tank Capacity in Gallons**	(2000)		(2000)		(5000)		(2000)		(5000)	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

ON BEHALF OF GM: Deborah W. Kryak — 11/16/89

Signature — *Date*

DEBORAH W. KRYAK, SENIOR ENVIRONMENTAL ENGINEER

Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER 3-000541

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: ANCHOR MOTOR FREIGHT, INC.
Street: 95 DODSON ROAD
City: WILMINGTON State: DEL Zip: 19804
Phone: 992-9300 County: NEW CASTLE

2. **Owner Information**
Name: GENERAL MOTORS,B-O-C WILMINGTON
Street: P.O. BOX 1512; BOXWOOD & DODSON RDS.
City: WILMINGTON State:DEL Zip: 19899
County: NEW CASTLE

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
(X) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
(X) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm (X) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**
Name: I.D. GRIFFITH
Title: FRED ATKINSON, PROJECT MANAGER
Street: 735 S. MARKET ST. - P.O. BOX 1552
City: WILMINGTON State: DEL Zip: 19899-1552
Operating License #/State: 183066 DE
Phone: 656-8253

7. Does the facility have a water well? ( ) Yes (X) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A
_____ ft.

9. How close is the tank field to an occupied building?
TEN _____ ft.

10. Does the building have a basement?
( ) yes (X) no

11. Is any routine tank inspection/testing conducted?
( ) yes (X) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(X) yes: (X) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s)** **Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____, 2 _____,
3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (X) Remove from ground
Date tank(s) removed: 04 / 02 / 90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 20+ (6) 2 20+ (7) 3 20+ (8) 4 20+ (9) 5 20+ (10)

16. If abandoned in place, date tank(s) abandoned:
12 / 22 / 89

17. If removed/abandoned, type of substance last stored:
Tank 1: DIESEL Tank 4: GASOLINE
Tank 2: DIESEL Tank 5: DIESEL
Tank 3: GASOLINE

18. Do abandoned tanks contain inert materials? ( ) yes (X) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 0 gals.
2 0 gals. 3 0 gals. 4 0 gals. 5 0 gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1 (6)		TANK NO. 2 (7)		TANK NO. 3 (8)		TANK NO. 4 (9)		TANK NO. 5 (10	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☒		☒		☒	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☒		☒		☒
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☒		☒		☐		☐		☒	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☒		☒		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	(5000)		(10,000)		(4000)		(4000)		(10,000)	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

ON BEHALF OF GM: Deborah W. Kryak — 11/16/89

Signature — *Date*

DEBORAH W. KRYAK, SENIOR ENVIRONMENTAL ENGINEER

Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER 3-000169

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: GENERAL MOTORS, B-O-C WILMINGTON
Street: P.O.BOX 1512; BOXWOOD & DODSON RDS.
City: WILMINGTON State: DEL Zip: 19899
Phone: 428-7421 County: NEW CASTLE

2. **Owner Information**
Name: SAME AS ABOVE
Street: _____
City: _____ State: _____ Zip: _____
County: _____

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
(X) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
(X) Automotive ( ) Government
( ) Chemical (X) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm ( ) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**
Name: I.D. GRIFFITH
Title: FRED ATKINSON, PROJECT MANAGER
Street: 735 S. MARKET ST. - P.O. BOX 1552
City: WILMINGTON State: DEL Zip: 19899-1552
Operating License #/State: 183066 DE
Phone: 656-8253

7. Does the facility have a water well? ( ) Yes (X) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A ft.

9. How close is the tank field to an occupied building?
TWENTY ft.

10. Does the building have a basement?
( ) yes (X) no

11. Is any routine tank inspection/testing conducted?
( ) yes (X) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(X) yes: ( ) daily ( ) weekly (X) monthly ( ) other
( ) no:

13. **New tank(s) Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____, 2 _____,
3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (X) Remove from ground
Date tank(s) removed: 04 / 02 / 90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 11-15 2 16-20 3 _____ 4 _____ 5 _____

16. If abandoned in place, date tank(s) abandoned:
12 / 22 / 89

17. If removed/abandoned, type of substance last stored:
Tank 1: GASOLINE Tank 4: _____
Tank 2: WASTE OIL Tank 5: _____
Tank 3: _____

18. Do abandoned tanks contain inert materials? ( ) yes (X) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 0 gals.
2 0 gals. 3 _____ gals. 4 _____ gals. 5 _____ gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☐		☐		☐	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒	☐		☐		☐	
galvanized steel		☐		☐	☐		☐		☐	
fiberglass / plastic		☐		☐	☐		☐		☐	
cathodic protection		☐		☐	☐		☐		☐	
coated / wrapped		☐		☐	☐		☐		☐	
unknown		☐		☐	☐		☐		☐	
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☐	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☒		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☒		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	(10,000)		(1000)		( )		( )		( )	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

ON BEHALF OF GM: Deborah W. Kryak — 11/16/89
Signature — *Date*

DEBORAH W. KRYAK, SENIOR ENVIRONMENTAL ENGINEER
Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER _____

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**

Name: _____
Street: _____
City: _____ State: _____ Zip: _____
Phone: _____ County: _____

2. **Owner Information**

Name: _____
Street: _____
City: _____ State: _____ Zip: _____
County: _____

3. **Type of Ownership**

( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
( ) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**

(mark all that apply)

( ) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm ( ) Transportation
( ) Other (please specify) _____

5. **Contact Person**

Name: _____
Title: _____
Phone: _____

6. **Contractor Information**

Name: _____
Title: _____
Street: _____
City: _____ State: _____ Zip: _____
Operating License #/State: _____
Phone: _____

7. Does the facility have a water well? ( ) Yes ( ) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
_____ ft.

9. How close is the tank field to an occupied building?
_____ ft.

10. Does the building have a basement?
( ) yes ( ) no

11. Is any routine tank inspection/testing conducted?
( ) yes ( ) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
( ) yes: ( ) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s)** **Tank Status**
a. Date tank to be installed _____/_____/_____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: _____/_____/_____
Gallons remaining: Tank No. 1 _____, 2 _____,
3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. ( ) Remove from ground
Date tank(s) removed: _____/_____/_____
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
_____/_____/_____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

16. If abandoned in place, date tank(s) abandoned:
_____/_____/_____

17. If removed/abandoned, type of substance last stored:
Tank 1: _____ Tank 4: _____
Tank 2: _____ Tank 5: _____
Tank 3: _____

18. Do abandoned tanks contain inert materials? ( ) yes ( ) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 _____ gals.
2 _____ gals. 3 _____ gals. 4 _____ gals. 5 _____ gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☐		☐		☐		☐	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☐		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☐		☐		☐		☐
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☒		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☐	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)					(USW ENGINE OIL)					
25. **Tank Capacity in Gallons**	(2000)		(2000)		(5000)		(2000)		( )	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

Signature *Date*

Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER _____

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: _____
Street: _____
City: _____ State: ___ Zip: _____
Phone: _____ County: _____

2. **Owner Information**
Name: _____
Street: _____
City: _____ State: ___ Zip: _____
County: _____

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
( ) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
( ) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm ( ) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH L. KRYNAK
Title: JR. ENVIRONMENTAL ENGINEER
Phone: 302-420-7826

6. **Contractor Information**
Name: J.D. GRIFFITH
Title: FRED ATKINSON, PROJECT MANAGER
Street: 705 S. MARKET ST. - P.O. BOX 1552
City: WILMINGTON State: DEL Zip: 19899-1552
Operating License #/State: _____
Phone: 658-4203

7. Does the facility have a water well? ( ) Yes ( ) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
_____ ft.

9. How close is the tank field to an occupied building?
_____ ft.

10. Does the building have a basement?
( ) yes ( ) no

11. Is any routine tank inspection/testing conducted?
( ) yes ( ) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
( ) yes: ( ) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s)** **Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____, 2 _____, 3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. ( ) Remove from ground
Date tank(s) removed: ____/____/____
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

16. If abandoned in place, date tank(s) abandoned:
____/____/____

17. If removed/abandoned, type of substance last stored:
Tank 1: _____ Tank 4: _____
Tank 2: DIESEL Tank 5: _____
Tank 3: GASOLINE

18. Do abandoned tanks contain inert materials? ( ) yes ( ) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 _____ gals.
2 _____ gals. 3 _____ gals. 4 _____ gals. 5 _____ gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☐		☐		☐		☐	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☐		☒		☐		☐	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☐		☒		☐		☐	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☐		☐		☐
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☒		☐		☐		☒	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☐		☒		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	(5000)		([illegible])		(4000)		([illegible])		([illegible])	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

[illegible] [illegible]

Signature *Date*

[illegible]

Print or Type name and Title

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☐		☐		☐		☐		☐	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☐		☐		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☐		☐		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☐		☐		☐		☐		☐
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☐	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	([illegible])		([illegible])		( )		( )		( )	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

[illegible]

Signature *Date*

[illegible]

Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
(302) 323 - 4588

UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER _____

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: ANCHOR MOTOR FREIGHT INC.
Street: 95 DODSON ROAD
City: WILMINGTON State: DE Zip: 19804
Phone: 992-9300 County: NEW CASTLE

2. **Owner Information**
Name: GENERAL MOTORS, B.O.C WILMINGTON
Street: P.O.BOX 1512; BOXWOOD AND DODSON RDS.
City: WILMINGTON State: DE Zip: 19899
County: NEW CASTLE

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
(✓) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
(✓) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm (✓) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**
Name: I.D. GRIFFITH
Title: FRED ATKINSON, PROJECT MANAGER
Street: 735 SOUTH MARKET ST.; P.O. BOX 1552
City: WILMINGTON State: DE Zip: 19899-1552
Operating License #/State: 1830666 DE
Phone: 656-8253

7. Does the facility have a water well? ( ) Yes (✓) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A ft.

9. How close is the tank field to an occupied building?
TEN ft.

10. Does the building have a basement?
( ) yes (✓) no

11. Is any routine tank inspection/testing conducted?
( ) yes (✓) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(✓) yes: (✓) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s) Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____, 2 _____,
3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (✓) Remove from ground
Date tank(s) removed: 04 / 02 / 90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 16-20 2 16-20 3 20+ 4 0-5 5 20+

16. If abandoned in place, date tank(s) abandoned:
12 / 22 / 89

17. If removed/abandoned, type of substance last stored:
Tank 1: FUEL OIL Tank 4: USED OIL
Tank 2: FUEL OIL Tank 5: DIESEL FUEL
Tank 3: ENGINE OIL

18. Do abandoned tanks contain inert materials? ( ) yes (✓) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 Ø gals.
2 Ø gals. 3 Ø gals. 4 Ø gals. 5 Ø gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☒		☒		☒	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☒		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☒		☐		☒	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☒		☒		☒
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☒		☒		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☒	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☒		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)					(40W ENGINE OIL)					
25. **Tank Capacity in Gallons**	(2000)		(2000)		(5000)		(2000)		(5000)	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

Signature *Date*

Print or Type name and Title

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
UNDERGROUND STORAGE TANK BRANCH
715 Grantham Lane
New Castle, Delaware 19720
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UNDERGROUND STORAGE TANK REGISTRATION FORM
(FOR EXISTING TANKS, RETROFITTING OF EXISTING TANKS, REMOVAL/ABANDONMENT OF EXISTING TANKS, AND INSTALLATION OF NEW TANKS)

FACILITY NUMBER _____

A permit is required to install new or retrofit existing underground storage tanks. Existing, new retrofitted and abandoned tanks all must be in accordance with the provisions of the Delaware Regulations Governing Underground Storage Tanks. For all new tank installations, a **detailed** site plan and the canary copy of this form **must** be submitted to the Office of the State Fire Marshal for approval.

Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**
Name: ANCHOR MOTOR FREIGHT, INC
Street: 95 DODSON RD.
City: WILMINGTON State: DE Zip: 19804
Phone: 992-9300 County: NEW CASTLE

2. **Owner Information**
Name: GENERAL MOTORS, P-O-C WILMINGTON
Street: P.O. BOX 1512, BOXWOOD & DODSON RDS.
City: WILMINGTON State: DE Zip: 19899
County: NEW CASTLE

3. **Type of Ownership**
( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
(✓) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**
(mark all that apply)
(✓) Automotive ( ) Government
( ) Chemical ( ) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm (✓) Transportation
( ) Other (please specify) _____

5. **Contact Person**
Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**
Name: I.D. GRIFFITH
Title: _____
Street: _____
City: _____ State: _____ Zip: _____
Operating License #/State: _____
Phone: _____

7. Does the facility have a water well? ( ) Yes (✓) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A ft.

9. How close is the tank field to an occupied building?
TEN ft.

10. Does the building have a basement?
( ) yes (✓) no

11. Is any routine tank inspection/testing conducted?
( ) yes (✓) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(✓) yes: (✓) daily ( ) weekly ( ) monthly ( ) other
( ) no:

13. **New tank(s) Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____, 2 _____, 3 _____, 4 _____, 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (✓) Remove from ground
Date tank(s) removed: 04 / 02 / 90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 20+ (6) 2 20+ (7) 3 20+ (8) 4 20+ (9) 5 20+ (10)

16. If abandoned in place, date tank(s) abandoned:
12 / 22 / 89

17. If removed/abandoned, type of substance last stored:
Tank 1: DIESEL Tank 4: GASOLINE
Tank 2: DIESEL Tank 5: DIESEL
Tank 3: GASOLINE

18. Do abandoned tanks contain inert materials? ( ) yes (✓) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 Ø gals. 2 Ø gals. 3 Ø gals. 4 Ø gals. 5 Ø gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1 (6)		TANK NO. 2 (7)		TANK NO. 3 (8)		TANK NO. 4 (9)		TANK NO. 5 (10)	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☒		☒		☒	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☒		☒		☒	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☒		☒		☒
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☒		☒		☐		☐		☒	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☐		☐		☒		☒		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☐		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	(5000)		(10,000)		(4000)		(4000)		(10,000)	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

Signature *Date*

Print or Type name and Title

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FACILITY NUMBER _____

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Please fill out all application sections; no more than five tanks may be registered on one form. Assign each tank a number and maintain that number consistently throughout the form.

1. **Facility Information**

Name: GENERAL MOTORS, B-O-C WILMINGTON
Street: P.O.BOX 1512; BOXWOOD & DODSON RDS.
City: WILMINGTON State: DE Zip: 19899
Phone: 428-7421 County: NEW CASTLE

2. **Owner Information**

Name: SAME AS ABOVE
Street: _____
City: _____ State: _____ Zip: _____
County: _____

3. **Type of Ownership**

( ) Federal (GSA facility ID # _____
( ) State ( ) County
( ) Municipal ( ) Public School District
(✓) Private or Corporate ( ) Volunteer Fire or Ambulance Company
( ) Other _____

4. **Facility/Industry Classification**

(mark all that apply)

(✓) Automotive ( ) Government
( ) Chemical (✓) Manufacturing
( ) Construction ( ) Petroleum
( ) Education ( ) Service
( ) Farm ( ) Transportation
( ) Other (please specify) _____

5. **Contact Person**

Name: DEBORAH W. KRYAK
Title: SR. ENVIRONMENTAL ENGINEER
Phone: 302-428-7421

6. **Contractor Information**

Name: I.D. GRIFFITH
Title: _____
Street: _____
City: _____ State: _____ Zip: _____
Operating License #/State: _____
Phone: _____

7. Does the facility have a water well? ( ) Yes (✓) No
If so, how far is the well from the nearest tank?
_____ ft.

8. How close is the tank to a public or off site private drinking water well?
N/A ft.

9. How close is the tank field to an occupied building?
TWENTY ft.

10. Does the building have a basement?
( ) yes (✓) no

11. Is any routine tank inspection/testing conducted?
( ) yes (✓) no (If yes, attach copy of last test results.)

12. Are inventory records kept and reconciled on a regular basis?
(✓) yes: ( ) daily ( ) weekly (✓) monthly ( ) other
( ) no:

13. **New tank(s)** **Tank Status**
a. Date tank to be installed ____/____/____
b. Type of pump system:
( ) Positive Pressure
( ) Suction
(proceed to # 19, Tank and Piping Construction)

14. **Existing tanks**
a. ( ) Existing, in use
(proceed to # 15)
b. ( ) Existing, not in use
Date tank(s) last used: ____/____/____
Gallons remaining: Tank No. 1 _____ 2 _____
3 _____ 4 _____ 5 _____
(proceed to # 19, Tank and Piping Construction)
c. ( ) Abandoned, in place
(proceed to # 16, 17 and 18)
d. (✓) Remove from ground
Date tank(s) removed: 04/02/90
e. ( ) Retrofitting
Date tank(s) retrofitted or to be retrofitted:
____/____/____

15. Age in years of each tank being reported or year tank installed:
Tank No. 1 11-15 2 16-20 3 _____ 4 _____ 5 _____

16. If abandoned in place, date tank(s) abandoned:
12/22/89

17. If removed/abandoned, type of substance last stored:
Tank 1: GASOLINE Tank 4: _____
Tank 2: WASTE OIL Tank 5: _____
Tank 3: _____

18. Do abandoned tanks contain inert materials? ( ) yes (✓) no
Please specify tank number(s) _____
If yes, type of inert material:
( ) concrete ( ) grout ( ) sand ( ) soil
If no, amount of substance left in tank(s): Tank No 1 Ø gals.
2 Ø gals. 3 _____ gals. 4 _____ gals. 5 _____ gals.
(proceed to # 19, Tank and Piping Construction)

Tank and Piping Construction (place an x in all boxes that apply)

TANKS	TANK NO. 1		TANK NO. 2		TANK NO. 3		TANK NO. 4		TANK NO. 5	
19. **Material of Construction**	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping
steel	☒		☒		☐		☐		☐	
concrete	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
double-wall steel	☐		☐		☐		☐		☐	
double-wall fiberglass	☐		☐		☐		☐		☐	
20. **Internal Protection**										
internal lining	☐		☐		☐		☐		☐	
none	☒		☒		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
21. **External Corrosion Protection**										
cathodic protection	☐		☐		☐		☐		☐	
asphalt / tar coated	☐		☐		☐		☐		☐	
epoxy coated	☐		☐		☐		☐		☐	
fiberglass / plastic	☐		☐		☐		☐		☐	
none	☒		☒		☐		☐		☐	
unknown	☐		☐		☐		☐		☐	
other (specify)										
22. **Piping**										
bare steel		☒		☒		☐		☐		☐
galvanized steel		☐		☐		☐		☐		☐
fiberglass / plastic		☐		☐		☐		☐		☐
cathodic protection		☐		☐		☐		☐		☐
coated / wrapped		☐		☐		☐		☐		☐
unknown		☐		☐		☐		☐		☐
other (specify)										
23. **Monitoring and Detection System**										
line leak detector	☐		☐		☐		☐		☐	
continuous in-tank gauging system	☐		☐		☐		☐		☐	
groundwater monitoring wells	☐		☐		☐		☐		☐	
vapor detection tubes	☐		☐		☐		☐		☐	
on-site spill recovery system	☐		☐		☐		☐		☐	
emergency power shut-off	☐		☐		☐		☐		☐	
Continuous interstitial space monitoring system	☐		☐		☐		☐		☐	
other (specify)										
24. **Substances stored or to be stored (mark one x)**										
heating oil (No. 2)	☐		☐		☐		☐		☐	
heating oil (No. 4)	☐		☐		☐		☐		☐	
heavy heating oil (No. 6)	☐		☐		☐		☐		☐	
light diesel fuel (No. 1-D)	☐		☐		☐		☐		☐	
medium diesel fuel (No. 2-D)	☐		☐		☐		☐		☐	
kerosene	☐		☐		☐		☐		☐	
leaded gasoline	☐		☐		☐		☐		☐	
unleaded gasoline	☒		☐		☐		☐		☐	
alcohol enriched gasoline	☐		☐		☐		☐		☐	
waste oil	☐		☒		☐		☐		☐	
aviation fuel	☐		☐		☐		☐		☐	
mixture (specify)	☐		☐		☐		☐		☐	
hazardous substance	☐		☐		☐		☐		☐	
CAS number										
CERCLA number										
unknown	☐		☐		☐		☐		☐	
other (please specify)										
25. **Tank Capacity in Gallons**	(10,000)		(1000)		( )		( )		( )	

26. **Owner or Owners Agent Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information submitted is true, accurate, and complete.

Signature *Date*

Print or Type name and Title

A	5	5000	20+	DIESEL
B	6	5000	20+	DIESEL
C	10	10,000	20+	DIESEL
D	7	10,000	20+	DIESEL
E	9	4000	20+	GASOLINE
F	8	4000	20+	GASOLINE
G	3	5000	20+	ENGINE OIL
H	4	2000 1954	0-5	WASTE OIL
I	1	2000	~~11-15~~ 16-20	HEATING OIL
J	2	2000	~~11-15~~ 16-20	HEATING OIL

age as of 1/21/86

Rob Andby
Surfgrave

fuel oil # 2 for heating oil
diesel 2-D for diesel fuel
gas unleaded

straight flow engine oil

4 asphalt coated pvc

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
89 KINGS HIGHWAY
DOVER, DELAWARE

OFFICIAL USE ONLY

UNDERGROUND STORAGE TANK NOTIFICATION FORM

1. NAME AND ADDRESS OF FACILITY: ANCHOR MOTOR FREIGHT INC. 95 DOOSON RD. WILMINGTON, DE. 19804

2. COUNTY FACILITY IS LOCATED IN: [X] NEW CASTLE [ ] KENT [ ] SUSSEX

3. CONTACT PERSON FOR THE FACILITY (NAME AND PHONE NUMBER): A.A. SNODGRASS 302-992-9300

4. OWNER OF THE TANK(S) NAME, BUSINESS ADDRESS, AND PHONE NUMBER: SAME AS #1

5. TYPE OF OWNERSHIP: [ ] FEDERAL [ ] SCHOOL DISTRICT [ ] STATE [ ] COUNTY [ ] MUNICIPAL [X] PRIVATE (BUSINESS)

6. DOES THE FACILITY HAVE A WATER WELL? [ ] YES [X] NO
IF YES, HOW FAR IS THE WELL FROM THE TANK(S)? ____ FT.

7. APPROXIMATELY HOW FAR IS THE CLOSEST OCCUPIED BUILDING FROM THE TANK(S)? 10 FT.

8. IS ANY ROUTINE TANK INSPECTION/TESTING CARRIED OUT? [ ] YES [X] NO

9. ARE INVENTORY RECORDS KEPT AND RECONCILED ON A REGULAR BASIS? [X] YES [ ] NO
IF YES, ARE THEY [X] DAILY [ ] WEEKLY [ ] MONTHLY [ ] OTHER

COMPLETE THE FOLLOWING SECTION BY CHECKING THE APPROPRIATE BOXES AND FILLING IN THE BLANKS WHERE APPLICABLE. LIST EACH TANK SEPARATELY

10. LIST EACH TANK SEPARATELY	11. TANK STATUS: NEW	EXISTING TANK (IN USE)	EXISTING TANK (NOT IN USE)	ABANDONED	DATE OF LAST USE *	ESTIMATED AMOUNT OF STORED SUBSTANCE LEFT IN TANK (GALLONS) * *	12. TANK CAPACITY (GALLONS)	13. AGE (YEARS): 0-5	6-10	11-15	16-20	20+	14. MATERIALS OF CONSTRUCTION: STEEL	FIBERGLASS	OTHER (SPECIFY)	15. INTERNAL PROTECTION: LINED	OTHER (SPECIFY)	16. EXTERNAL PROTECTION: COATED	CATHODIC PROTECTION	OTHER (SPECIFY)	17. SUBSTANCE STORED: GASOLINE	DIESEL	KEROSENE	HAZARDOUS SUBSTANCE NAME AND/OR CHEMICAL ABSTRACT SERVICE NO.	OTHER (SPECIFY)
EXAMPLE				X	12/2/81	3,000	15,000		X				X			X			X		X				
EXAMPLE			X		6/10/80	500	9,000			X			X			X		X						TRICHLOROETHYLENE CAS # 79016	
EXAMPLE	X						10,000									X		X							
EXAMPLE		X					12,000	X						X		X			X		X				
A		X					5000				X	X	X									X			
B		X					5000				X	X	X									X			
C		X					10000				X	X	X									X			
D		X					10000				X	X	X									X			
E		X					4000				X	X									X				
F		X					4000				X	X									X				
G		X					5000				X	X													ENG. OIL
H		X					2000	X				X					X								WASTE OIL
I		X					2000		X			X													HEATING OIL
J		X					2000		X			X													HEATING OIL
K ABOVE GROUND		X					500		X			X													HYDRAULIC OIL

18. NAME AND OFFICIAL TITLE OF PERSON FILLING OUT FORM: A.A. SNODGRASS MAINTENANCE SUPERINTENDENT

19. SIGNATURE: A.A. Snodgrass

20. DATE: 1/21/86

* DATE OF LAST USE: THIS REFERS TO TANK(S) EXISTING BUT NOT IN USE, AND ABANDONED TANKS

* * THIS REFERS TO THE ESTIMATED AMOUNT OF STORED SUBSTANCES LEFT IN THE UNDERGROUND STORAGE TANK NOT IN USE OR ABANDONED

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
89 KINGS HIGHWAY
DOVER, DELAWARE

UNDERGROUND STORAGE TANK NOTIFICATION FORM

OFFICIAL USE ONLY

1. NAME AND ADDRESS OF FACILITY
C-P-C Wilmington PLant
General Motor Corp.
P. O. Box 1512
Wilmington, DE 19899

2. COUNTY FACILITY IS LOCATED IN
☒ NEW CASTLE
☐ KENT
☐ SUSSEX

3. CONTACT PERSON FOR THE FACILITY (NAME AND PHONE NUMBER)
ERNEST R. BOSETTI
302-428-7406

4. OWNER OF THE TANK(S) NAME, BUSINESS ADDRESS, AND PHONE NUMBER
General Motors Corp.
302-428-7400

5. TYPE OF OWNERSHIP
☐ FEDERAL ☐ SCHOOL DISTRICT
☐ STATE
☐ COUNTY ☒ PRIVATE (BUSINESS)
☐ MUNICIPAL

6. DOES THE FACILITY HAVE A WATER WELL? ☐ YES ☒ NO
IF YES, HOW FAR IS THE WELL FROM THE TANK(S)? _____ FT.

7. APPROXIMATELY HOW FAR IS THE CLOSEST OCCUPIED BUILDING FROM THE TANK(S)?
Approx 20 FT.

8. IS ANY ROUTINE TANK INSPECTION/TESTING CARRIED OUT?
☐ YES ☒ NO

9. ARE INVENTORY RECORDS KEPT AND RECONCILED ON A REGULAR BASIS? ☒ YES ☐ NO
IF YES, ARE THEY
☐ DAILY ☐ WEEKLY ☒ MONTHLY ☐ OTHER

COMPLETE THE FOLLOWING SECTION BY CHECKING THE APPROPRIATE BOXES AND FILLING IN THE BLANKS WHERE APPLICABLE. LIST EACH TANK SEPARATELY

10. LIST EACH TANK SEPARATELY	11. TANK STATUS: NEW	EXISTING TANK (IN USE)	EXISTING TANK (NOT IN USE)	ABANDONED	DATE OF LAST USE *	ESTIMATED AMOUNT OF STORED SUBSTANCE LEFT IN TANK (GALLONS) * *	12. TANK CAPACITY (GALLONS)	13. AGE (YEARS): 0-5	6-10	11-15	16-20	20+	14. MATERIALS OF CONSTRUCTION: STEEL	FIBERGLASS	OTHER (SPECIFY)	15. INTERNAL PROTECTION: LINED	OTHER (SPECIFY)	16. EXTERNAL PROTECTION: COATED	CATHODIC PROTECTION	OTHER (SPECIFY)	17. SUBSTANCE STORED: GASOLINE	DIESEL	KEROSENE	HAZARDOUS SUBSTANCE NAME AND/OR CHEMICAL ABSTRACT SERVICE NO.	OTHER (SPECIFY)
EXAMPLE				X	12/2/81	3,000	15,000	X					X			X			X		X				
EXAMPLE			X		6/10/80	500	9,000			X			X			X		X						TRICHLOROETHYLENE CAS # 79016	
EXAMPLE	X						10,000									X										
EXAMPLE		X					12,000	X						X		X		X			X					
																					X					
Gasoline, Co. Car		X			---	---	10,000	X				X									X					

NOTE: THIS CERTIFICATION IS MADE ON BEHALF OF GENERAL MOTORS CORPORATION

18. NAME AND OFFICIAL TITLE OF PERSON FILLING OUT FORM
ERNEST R. BOSETTI, SENIOR ENGINEER

19. SIGNATURE [signature] Plant Manager

20. DATE 4/7/86

* DATE OF LAST USE: THIS REFERS TO TANK(S) EXISTING BUT NOT IN USE, AND ABANDONED TANKS

* * THIS REFERS TO THE ESTIMATED AMOUNT OF STORED SUBSTANCES LEFT IN THE UNDERGROUND STORAGE TANK NOT IN USE OR ABANDONED

redundant water
co cargo tank
+10

1. GENERAL MOTORS, B-O-C WILMINGTON
P.O.BOX 1512; BOXWOOD AND DODSON RDS.
WILMINGTON, DE 19899
302-428-7406 NEW CASTLE

2. SAME AS ABOVE

3. CORPORATE (v)

4. AUTOMOTIVE (v)
~~[redacted]~~
TRANSPORTATION (v)

5. ERNEST R. BOSETTI
SR. ENVIRONMENTAL STAFF ASSISTANT
302-428-7406

? 6. I.D. GRIFFITH

7. NO

? 8. NA >1000' County

9. ~~300 FEET (LEARNING CENTER)~~ 10' ANCHOR MOTOR FREIGHT
75'

10. NO

in filling out form –
do we want abandonment
first the removal notice

11. No

12. ?

13.

14. ~~(V) K~~ ~~12/10/89~~ 12/22/89
gallons remaining ϕ ϕ ϕ ϕ ϕ

~~(V) c. abandoned in place~~

c. (V)

d. (V) remove from ground

~~12/1/90~~

4/5/90

B·O·C LANSING AUTOMOTIVE

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

D. Krupak

March 2, 1990

Mr. Tawn Franz
C/O Continental Vanguard
204 Harding Avenue
Bellmawr, New Jersey 08031

Dear Tawn,

With reference to the Underground Storage Tank removal at Anchor Motor Freight at this plant site, the DNREC informs me that the following tests must be performed by type of tank contents:

TANK CONTENTS	TYPE OF ANALYSIS
Diesel Fuel	TPH
Engine Oil	TPH
Hydraulic Oil	TPH
Gasoline	BTEX and TPH
Waste Oil	TPH, and RCRA Characteristics (ign, cor. react., and Tox.)

DNREC is also requiring two samples per tank as follows:

1. One composite sample for surface soil.
2. One discrete sample 2-feet below tank bottom.

DNREC does not require split samples; however, they do require copies of all analyses. DNREC is not placing limitations on specific parameters in the analyses. After reviewing the analyses and inspecting each tank location, DNREC will then determine remediation needs.

Gasoline and its wash water will have to be disposed of separately as a hazardous waste at a GM-approved contract facility. Disposal of diesel fuel, engine, hydraulic, and waste oil at PRI, a reclaiming facility, will be satisfactory.

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

Inter-Organization

B·O·C LANSING AUTOMOTIVE

Date: December 18, 1989

Subject: Tank Removal Project

To: Andy Snodgrass, Maintenance Superintendent Anchor Motor Freight

Underground Storage Tank Registration forms were submitted to the state for the removal project scheduled for April 2, 1990. DNREC has acknowledged receipt of the forms. Should removal be rescheduled, DNREC must be notified 10 days in advance of the tank removal.

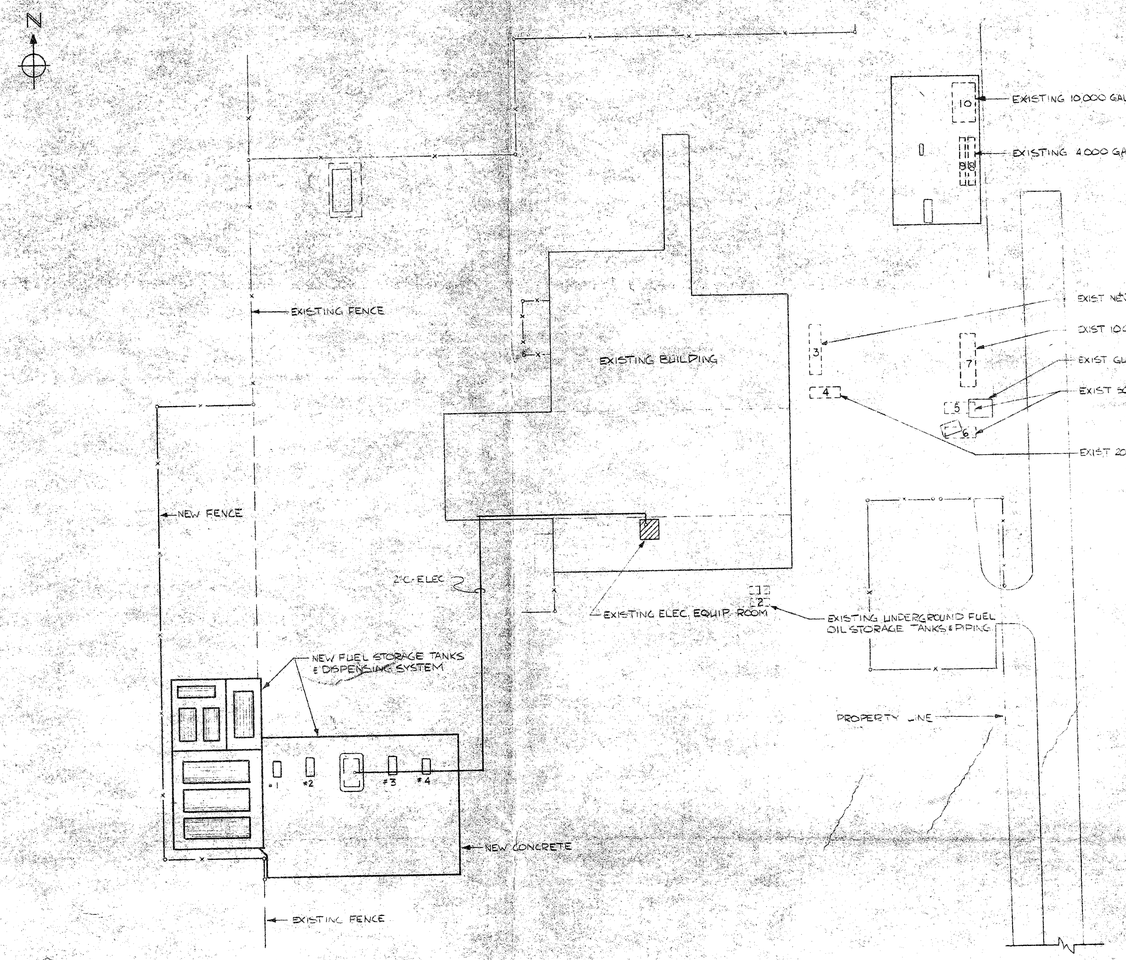
BOC facilities has made 2 recommendations to ensure compliance with the federal Underground Storage Tank regulation. After the underground tanks are emptied, the tank piping should be capped. In addition, daily inventory control (through either sticking the tank or, if possible, a visual inspection of the tank floor) should be performed. Inventory control, assuring the tanks remain empty, provides a form of leak detection.

Should you have any questions, please contact me at your earliest convenience at 428-7421.

D. W. Kryak

D. W. Kryak
Sr. Environmental Engineer

cc: T. Kukulich
F. Atkinson



PLOT PLAN

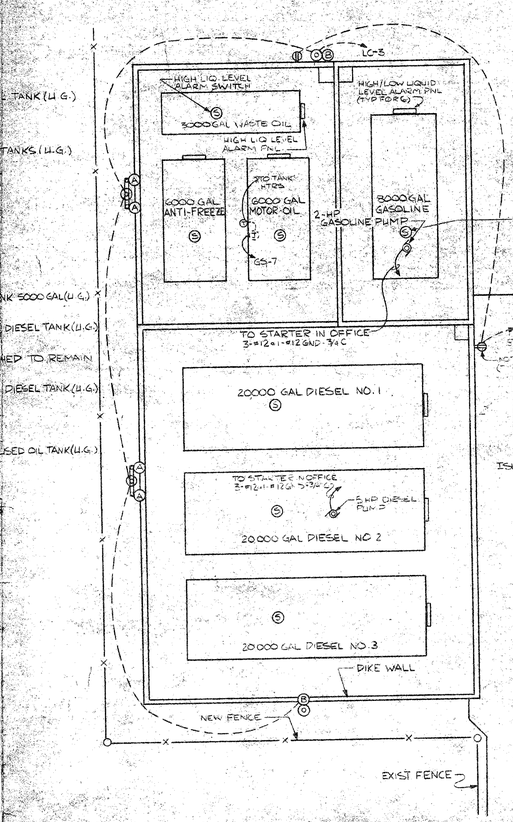
SCALE: 1"=30'-0"

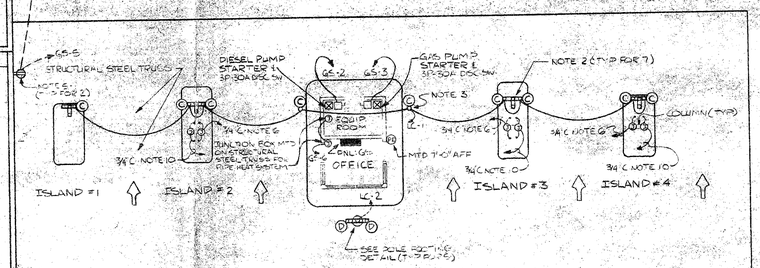
GENERAL CONSTRUCTION NOTES

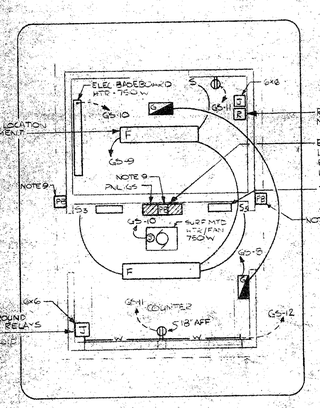
1. ENTIRE ELECTRICAL INSTALLATION SHALL CONFORM TO NEC, ARTICLES 501, 514 AND 515 FOR A HAZARDOUS LOCATION. PROVIDE CONDUIT SEALS AS REQUIRED. TYPE 'MI' CABLE MAY BE USED IN LIEU OF RIGID STEEL CONDUIT WHERE APPROVED BY THE NEC.
2. ALL CONDUITS FOR THIS INSTALLATION SHALL BE RIGID STEEL AND MEET ALL PROVISIONS OF THE SPECIFICATIONS.
3. STORAGE TANKS, STRUCTURAL STEEL TRUSS AND ENTIRE CATWALK/PLATFORM ASSEMBLY SHALL BE SECURELY BONDED AND GROUNDED TO EARTH VIA BONDING STRAPS AND GROUND RODS. NO EXOTHERMIC WELDS SHALL BE MADE TO TANK SHELLS.
4. ALL EXISTING ELECTRIC SERVICES, BRANCH CIRCUIT AND CONTROL WIRING FOR FUEL DISPENSING STATIONS WHICH ARE TO BE REMOVED SHALL BE DISCONNECTED AND REMOVED IN THEIR ENTIRETY. EXISTING UNDERGROUND CONDUIT MAY BE ABANDONED IN PLACE.
5. REFER TO DWG E-2 FOR WIRING DIAGRAMS OF SPECIAL SYSTEMS.

NEW WORK NOTES

1. REFER TO POLE MANUFACTURER'S DETAILS FOR POLE MOUNTING BOLT PATTERN AND DIMENSIONS.
2. PROVIDE 2" RIGID STEEL CONDUIT RISER WITH 1'-0" OFFSET FOR MOUNTING OF LIGHT FIXTURE CROSSARMS. RISER SHALL BE WELDED TO SIDE OF STRUCTURAL STEEL TRUSS AND EXTEND FROM BOTTOM OF TRUSS TO A FINAL FIXTURE ELEVATION OF 22'-0" ABOVE CONCRETE SLAB.
3. SAME AS NOTE 2, BUT WITHOUT 1'-0" OFFSET.
4. ALL ABOVE GROUND ELECTRICAL CONDUITS ARE TO BE SECURED TO UPPERSIDE OF STRUCTURAL STEEL TRUSS AND GROUPED TOGETHER TO MAINTAIN AT LEAST 12" CLEARANCE FROM FUEL/FLUID PIPING.
5. CONVENIENCE OUTLETS MOUNTED ON DIKE WALL SHALL BE LOCATED 6" CLEAR BELOW FINAL DIKE WALL ELEVATION.
6. PROVIDE JUNCTION BOX AND ¾" CONDUIT HOMERUN TO OFFICE FOR PULSE TRANSMITTER FEED TO PRINTER. PROVIDE ALL INTER-CONNECTING WIRING AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
7. PROVIDE 2" H x 6" W RED PHENOLIC PLATE WITH ¾" WHITE LETTERING ENGRAVED THEREIN. ENGRAVE THE FOLLOWING: 'EMERGENCY PUMP SHUTOFF'. LOCATE PLATE DIRECTLY ABOVE PUSHBUTTON STATION.
8. PROVIDE 4" H x 6" W RED PHENOLIC PLATE WITH 1" WHITE LETTERING ENGRAVED THEREIN. ENGRAVE THE FOLLOWING: 'EMERGENCY SYSTEM SHUTDOWN'. LOCATE PLATE DIRECTLY ABOVE PUSHBUTTON STATION.
9. PROVIDE OIL TIGHT/WATER TIGHT EMERGENCY PUSHBUTTON WITH MUSHROOM HEAD IN NEMA 13 ENCLOSURE AND MOUNT 44 ABOVE GRADE AT LOCATIONS INDICATED, U.N.O.
10. PROVIDE JUNCTION BOX AND ¾" HOMERUN TO EQUIPMENT ROOM FOR RELAY FEED TO SOLENOID VALVE. PROVIDE INTERCONNECTING WIRING AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
11. PROVIDE 2P FUSED DISCONNECT SWITCH, 2 POLE MECHANICALLY HELD LIGHTING CONTACTOR WITH RESET PUSHBUTTON MOUNTED ON CONTACTOR ENCLOSURE AND EDWARDS SO. MODEL # 5530-IN SIREN. DISCONNECT TO BE PAINTED RED AND LABELED 'SIREN DISCONNECT'. SIREN TO ACTUATE UPON MANUAL ACTUATION OF SYSTEM SHUTDOWN PUSHBUTTON.







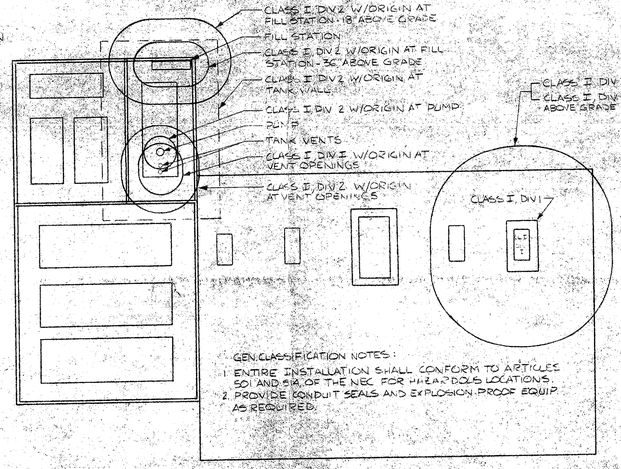
SHED PLAN

SCALE: 3/8"=1'-0"

LEGEND & ABBREVIATIONS

- NEW WIRING RUN EXPOSED. ARROW INDICATES HOMERUN, LETTERS DENOTE CKT.
- NEW WIRING BELOW GRADE
- EXISTING WIRING OR EQUIPMENT TO REMAIN
- LIGHTING FIXTURE (OUTLET-UPPER CASE DENOTES FIXTURE TYPE IN LTG FXT SCHEDULE
- INDICATES FIXTURE IS ON EMERGENCY CIRCUIT
- S, S3 — SWITCH: SINGLE POLE, 3-WAY
- (S) — ALARM SWITCH
- (PB) — HEAVY DUTY, WATERTIGHT/OILTIGHT PUSHBUTTON IN NEMA 13 ENCL.
- (PE) — PHOTOCELL
- DUPLEX CONVENIENCE RECEPTACLE - MTD 18" AFF U.N.O.
- W — WIREMOLD # 2000 OUTLET STRIP, TYPE 6B, MTD ABOVE CTR, HEIGHT W/OUTLETS ON 6" CENTERS
- SURFACE MTD. PANELBOARD & PANEL DESIGNATION
- DISCONNECT SWITCH: DOT IN CENTER DENOTES SWITCH IS FUSED - POLES AND SIZE AS INDICATED
- MAGNETIC MOTOR STARTER
- (2) — MOTOR AND MOTOR OUTLET, NUMBER DENOTES HORSE POWER
- (J) — JUNCTION BOX

AFF	ABOVE FINISHED FLOOR
CTR	COUNTERTOP
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
MTD	MOUNTED
STO	SHUNT TRIP OPERABLE
U.N.O.	UNLESS NOTED OTHERWISE



PARTIAL PLOT PLAN

SCALE: 1"=16'-0"

ANCHOR TANK REMOVAL PLAN

NO.	DATE	DESCRIPTION
		REVISIONS

GILLAN, HARTMANN & MAHAFFY, INC.
CONSULTING ENGINEERS
800 WOODLAWN AVE. WILMINGTON, DE

ANCHOR MOTOR FREIGHT, INC.
95 DODSON ROAD
WILMINGTON

NEW FUEL DISPENSING SYSTEM
ELECTRICAL PLAN

SCALE	AS NOTED
DRAWN	T.R.
CHECKED	E.F.
DATE	8/17/89

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEERS BEFORE PROCEEDING WITH WORK. THIS DRAWING IS THE PROPERTY OF THE ENGINEERS AND MAY NOT BE REPRODUCED OR OTHERWISE USED WITHOUT THEIR PERMISSION.

ENG. NO.

DRAWING NO. GB-13

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF AIR AND WASTE MANAGEMENT
715 GRANTHAM LANE
NEW CASTLE, DELAWARE 19720-4801

WASTE MANAGEMENT SECTION

TELEPHONE: (302) 323 - 4540

November 28, 1990

Mr. Ernest R. Bosetti
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington, DE 19899

RE: Anchor Motor Freight
Project ID# N8708035
Facility ID# 3-000541

Dear Mr. Bosetti:

The Delaware Department of Natural Resources and Environmental Control, Underground Storage Tank Branch has reviewed the Final Report for Closure on the above-referenced site. The report meets the Department's closure standards for LUST sites.

Based on the analytical data submitted, it appears that residual soil contamination has been reduced to non-detectable levels, and that no threat to human health or the environment is present. As a result, no further action is required at this time.

However, this letter does not absolve the responsible party from accountability for any future problems related to the underground storage tank(s) formerly at this location. If a related problem is identified, the Department must be notified and immediate action must be taken to eliminate any threat to public health and safety, and to the environment.

If you have any questions, please contact me at (302) 323-4588.

Sincerely,

F. Michael Gavas
Hydrologist
Underground Storage Tank Branch

EDM:FMG\rbd
FMG90058

cc: Deborah Buniski, Clean Technologies

CLEAN TECHNOLOGIES

P.O. Box 4694 • Newark, Delaware 19715

INV. NO. 1072

Mr E. Bosetti, P.E.
General Motors Corp.
P.O. Box 1512
Wilm. DE 19899

COMM. CN 1005
DATE 11/17/90

ALL ACCOUNTS ARE PAYABLE NET 30 DAYS. SERVICE CHARGE OF 1½% PER MONTH WILL BE ADDED TO THE UNPAID BALANCE ON ALL ACCOUNTS NOT PAID WITHIN 30 DAYS. THIS IS AN ANNUAL RATE OF 18%.

ALL INVOICES DUE WHEN RENDERED

FOR PROFESSIONAL SERVICES RENDERED

In reference to P.O. 14111 the following services have been completed as specified:

(1.) Treatment of soils contaminated by hydrocarbons. A total of 920 cubic yards were treated at $45.00/cy. The cost for treatment of the soil was a total of $41,400.00 of which half ($20,750.00) was billed on July 28, 1990. The total amount now due for treatment of soil is $20,750.00.

(2.) A Closure Report was submitted to DNREC in September, 1990 and verbal approval of this submitted Closure Plan was obtained in October,1990. Total amount due for Closure Report on bioremediation of soils is $ 5,000.00

TOTAL AMOUNT NOW DUE .....$ 25,750.00

Underground Storage Tank Project : W-513

OK To Pay

Ernest R. Bosetti

26 Nov 90

THIS INVOICE WILL BE CONSIDERED CORRECT AS RENDERED IF NOT QUESTIONED IN WRITING WITHIN TEN DAYS.

PLEASE DETACH AND RETURN THIS PORTION WITH YOUR REMITTANCE.

COMM. CN 1005

DATE 11/17/90

AMT. REMITTED $ _____

INV. NO. 1072

WE 318 REV. 5/80

WILMINGTON PLANT GENERAL MOTORS CORP. REQ. No 217717

QUOTE DATE

PURCHASE REQUISITION PRINT/TYPE P. O. NO.

Buyer 7206

DATE 10/21/97 ISSUED BY J. HOLMES SIGNED

SEND:
- ☐ SAMPLES
- ☐ ATTACHMENT
- ☐ OTHER

ORDER FROM AUCHTER INDUSTRIAL VAC SERVICE, INC. TERMS

ADDRESS 24 PLUTO DRIVE F.O.B.

SEWELL, NJ 08080 VIA OR SHIPPING SPEC.

(609) 256-9623 NOV 19 1997 DELIVERY REQUIRED

EST. COST	QUANTITY	DESCRIPTION	PRICE
☒ ONE TIME BUY ☐ RECURRING BUY	1	CLEANING OF 7 "ANCHOR LOT" TANKS	$8600.00
	1	LOADING AND TRANSPORTATION OF SCRAP STEEL TANKS (7)	$12,900.00
	1	REMOVAL OF INSULATION AND ALUMINUM JACKETING FROM PIPES, FLUSHING OF LINES INTO DRUMS, LOADING OF SCRAP PIPES INTO ROLLOFF CONTAINER FOR SCRAP	$12,690.00
	1	PREPARATION OF CUT STEEL TO REQUIRED LENGTH FOR LOADING AND TRANSPORTATION	$4,560.00
	1	GENERAL CLEANUP OF MISCELLANEOUS PLASTIC, OIL DRY ETC.	$1,100.00
	1	TRANSPORTATION AND DISPOSAL OF WATER WASHINGS TO CLEAN VENTURE (1500 GALLONS)	$1,245.00

SINGLE SOURCE REF. NO. (SEE REVERSE SIDE)

Post-It® Fax Note 7671 | Date | # of pages ▶
To Patti Hallendy | From
Dept. Bldg. Supplies & Service | Co.
Phone # Buyer 7206 | Phone #
Fax # 8-238-7649 | Fax #

APPROVALS FOR PURCHASE

11/11/97 (Financial)

REASON FOR PURCHASE (Must Comment) CLEAN AND REMOVE SCRAP TANKS
- To Create Additional Parking for New Cores and Employees

☐ MSDS ATTACHED

HAZARDOUS MATERIAL = ☐ YES ☒ NO ☐ REORDER HMC No.

APPROVALS

CHARGE TO OR REQUIRED BY DEPT ENG.

APPROP NO.

WORK ORDER NO.

ACCOUNT CLASSIFICATION

DELIVER TO DEPT OR ROOM PLANT

REQUESTED BY SUPT./DEPT. HEAD

36 8858 04800 09765 00000 0010

Committee

Committee

Committee

Plant Manager

#8689352214

NOTE: If Hazardous Material, approved TMC 001 by Safety Committee Member required on New First Time Buy.
Not required on reorder, but must indicate TMC 005-HMC number assigned to item being purchased.
If questionable material, review with Hazardous Committee Chairman before processing requisition.

PURCHASING DEPT. COPY #1

1

Date: 26 Oct 98
To: Ann Foster, Financial
Subject: Underground Storage Tanks

Please be informed that no disposal request has been submitted for the Underground Some tanks were installed when the plant was built in 1947; other tanks we installed by Anchor Motor Freight at their expense. The plant's company car gasoline tank ~~#~~ was installed 10-12 years ago by Gulf Oil Co. for $1.00. The ~~tanks~~ underground oil storage tank at ~~the~~ for the Redundant Water System was installed in 1972. I doubt that any of these ~~tanks~~ underground tanks had property tags on them.

Following is the UST Project Chronology ~~without digging~~ as best remembered without digging into a lot of files:

By End of Dec 1989 - Above ground tank farm completed and place in operation. Underground tanks emptied and deactivated to avoid ~~with~~

2/

Feb 1990 – Underground tanks uncovered, soil sampled and analyzed. Underground tanks were cleaned before removal and disposal.

March 1990 – Underground tanks removed, ~~photographed~~ cut up, and disposed

April 1990 – Soil cleanup contract bid and awarded

May 1990 – Soil excavated and sampled Samples sent out for analysis

June - July 1990 – Analysis results received Remediation commenced.

Aug - Sept 1990 – Remediation ~~testing~~ in process

Oct 1990 – Final report and analysis submitted to DNREC.

3

Nov 1990 - Upon receipt of DNREC approval, soil will be removed from Anchor site and disposed of in a local landfill completing UST Project

Ernest L. Boutte

c.c. File

Jane,
If I'm out, get Hudak to sign it.

Division of
Buick-Oldsmobile-Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1612, Boxwood Road
Wilmington, Delaware 19899

GM
B·O·C LANSING AUTOMOTIVE

December 5, 1990

Mr. Fred Atkinson
C/O I. D. Griffith, Inc.
735 South Market Street
P. O. Box 1552
Wilmington, Del. 19899-1552

Dear Fred,

Finally! Enclosed is the State's letter approving disposal of the soil excavated for the underground tanks in the Anchor Lot. A copy of this letter may be required at the landfill at the time of disposal.

And Legal Staff wanted all this work completed by 31 Dec. 89, remember?

One last item, did the pump supplier ever get back with you on the higher horsepower pump for receiving diesel fuel?

Respectfully,

Ernest R. Bosetti

Ernest R. Bosetti,
Sr. Staff Assistant

cc: Wm. Pedicone - Corrado
J. Hudak
file/b:erb19

Bridgeport Environmental Inc.

Licensed Analytical Laboratories
08555

P.O. Box 247
510 Heron Drive Suite 107
Bridgeport, NJ 08014-0247

609/467-0380

CONTINENTAL VANGUARD, INC.

PROJECT: ANCHOR MOTOR FREIGHT

DATE RECEIVED: MARCH 15, 1990

REPORT NO: E1449-E1456

BRIDGEPORT ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

SAMPLE LOCATION AND IDENTIFICATION

ANALYSIS NO.	CLIENT ID
E 1449	WW1 (Top Layer Soil)
E 1450	WW1 (2' Below Tank)
E 1451	D (Top Layer Soil)
E 1452	D (2' Below Tank)
E 1453	E (Top Layer Soil)
E 1454	E (2' Below Tank)
E 1455	F (Top Layer Soil)
E 1456	F (2' Below Tank)

METHODOLOGY SUMMARY

PURGEABLES

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240 from SW846.

ACID EXTRACTABLES
BASE NEUTRALS

U.S.E.P.A. Method 625 - This method covers the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. This is a gas chromatography/mass spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

A HP5985B was used with a DB-5 FCCC.

Method detection limits are as stated.

Soil samples were prepared for analysis as prescribed in Method 3550 from SW846.

PESTICIDES/PCB'S

U.S.E.P.A. Method 608 - This method covers the determination of pesticides and PCB's in samples by extraction/concentration with organic solvents and subsequent qualification/quantification by Gas Chromatography. The gas chromatograph utilizes an electron capture detector (ECD) which is applicable for the determination of the compounds listed for this method in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

Soil samples were prepared as prescribed in Method 3550 from SW846.

METHODOLOGY SUMMARY

METALS

Soil samples for metal analysis were run in accordance with the methods prescribed in SW846. This includes a nitric acid digestion followed by either Furnace Flame Atomic Absorption, Flameless Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes,EPA-600/4-79-020 March 1979.

PHENOLS

Analysis performed according to U.S.E.P.A. 420 (colorimetric,Automated 4AAP with Distillation). Samples that are high in solids are predistilled according to 420.1 (8.1). Sample is reacted with four (4) Aminoantipyrine and Alkaline ferricyanide to form a red color, which is read at 505nm. Equipment used: Technicon Autoanalyzer IIC.

CYANIDE

Analysis performed according to U.S.E.P.A. 355.3 (colorimetric, automated). Samples high in solids are predistilled according to figure 1,335-2. All samples pass through automated distillation. Sample is reacted with Chloroamine T to produce cyanogen chloride, which developes a red color when combined with pyridine/barbituric acid reagent; which is read at 570nm. Equipment used: Technicon Autoanalyzer IIC.

PETROLEUM HYDROCARBONS

Aqueous samples were analyzed following Method 418.1 as prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 March 1979.

Soil samples were extracted in accordance with the methods prescribed in SW-846 and subsequently analyzed as stated above.

E14[illegible] - E1456

BRIDGEPORT ENVIRONMENTAL, INC.
510 HERON DRIVE
BRIDGEPORT, NEW JERSEY 08014
(609) 467-0380

CHAIN OF CUSTODY RECORD

Client:

Site Location:

Samplers:

Sta No	Date	Time	Comp	Grab	Station Location	No. Containers									
	3/14/90	[illegible]	1		[illegible]	1	1	1	1	1	1				
	3/14/90	[illegible]		1	[illegible]	1	1	1	1	1	1				
	3/14/90	[illegible]	1		[illegible]	1	1								
	3/14/90	[illegible]		1	[illegible]	1	1								
	3/14/90	[illegible]	1		[illegible]	1	1						1		
	3/14/90	[illegible]		1	[illegible]	1	1						1		
	3/14/90	[illegible]	1		[illegible]	1	1						1		
	3/14/90	[illegible]		1	[illegible]	1	1						1		

Totals

Relinquished By:	Date	Time	Received By:	Relinquised By:	Date	Time	Received By:
[illegible]	3/15/90	4:00pm					
Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time	Received By:
Relinquished By:	Date	Time	Received For Laboratory By:	Date	Time	Remarks:	
			Kendal J Jones	3/15/90	4:00pm		

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 3/15/90

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons 3/16/ 90

ANALYSIS

1. Volatiles 3/27/90
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons 3/17/90
6. Total Organic Carbon NA

Section Supervisor
Review & Approval

INORGANICS

1. Metals 3/19/90 - 3/22/90
2. Cyanides 3/19/90
3. Phenols NA

OTHER ANALYTES

Section Supervisor
Review & Approval

Quality Control Supervisor
Review & Approval RWL

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

CERTIFICATE OF ANALYSIS

RCRA

ANALYSIS NO: E 1449

CLIENT ID: WWL (Top Layer Soil)

SAMPLE DATE:

PARAMETER	MDL	RESULT
Flash Point (°F)		>140
pH (S.U.)		7.0
Reactive Cyanide (mg/kg)	0.10	N.D.
Reactive Sulfide (mg/kg)	0.10	0.27
Petroleum Hydrocarbon (mg/kg)	30	950

CERTIFICATE OF ANALYSIS

CHARACTERISTICS OF EP TOXICITY

ANALYSIS NO: E 1449

CLIENT ID: WW1 (Top Layer Soil)

SAMPLE DATE: 3/15/90

PARAMETER	MDL (mg/L)	RESULT (mg/L)
Arsenic	0.005	N.D.
Barium	0.5	N.D.
Cadmium	0.01	N.D.
Chromium	0.01	N.D.
Lead	0.05	N.D.
Mercury	0.0005	N.D.
Selenium	0.005	0.005
Silver	0.01	N.D.

CERTIFICATE OF ANALYSIS

RCRA

ANALYSIS NO: E 1450

CLIENT ID: WW1 (2' Below Tank)

SAMPLE DATE:

PARAMETER	MDL	RESULT
Flash Point (°F)		>140
pH (S.U.)		7.5
Reactive Cyanide (mg/kg)	0.10	N.D.
Reactive Sulfide (mg/kg)	0.10	N.D.
Petroleum Hydrocarbon (mg/kg)	30	N.D.

CERTIFICATE OF ANALYSIS

CHARACTERISTICS OF EP TOXICITY

ANALYSIS NO: E 1450

CLIENT ID: WW1 (2' Below Tank)

SAMPLE DATE: 3/15/90

PARAMETER	MDL (mg/L)	RESULT (mg/L)
Arsenic	0.005	N.D.
Barium	0.5	N.D.
Cadmium	0.01	N.D.
Chromium	0.01	N.D.
Lead	0.05	N.D.
Mercury	0.0005	N.D.
Selenium	0.005	N.D.
Silver	0.01	N.D.

CERTIFICATE OF ANALYSIS

TOTAL PETROLEUM HYDROCARBONS

ANALYSIS NO.	CLIENT ID	MDL (mg/kg)	RESULTS (mg/kg)
E 1451	D (Top Layer Soil)	30	10000
E 1452	D (2' Below Tank)	30	9400
E 1453	E (Top Layer Soil)	30	9900
E 1454	E (2' Below Tank)	30	9000
E 1455	F (Top Layer Soil)	30	1400
E 1456	F (2' Below Tank)	30	7800

Sample Number
E1453

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Bridgeport Environmental, Inc.
Lab Sample ID: >B7748::D2
Sample Matrix: SOIL
Data release Authorized by: Richard W Lynch

Case No.: N/A
QC Report No.:
Contract No.: N/A
Date Sample Received: 1F MAR 90

Volatile Compounds
Concentration: (Low) Medium (Circle One)
Date Extracted:
Date Analyzed: 03/27/90 12:47
Conc/Dil factor: 1
Percent Moisture:

C.A.S. Number		ug/l or (ug/kg) (Circle One)	
71-43-2	Benzene	25.	U
108-88-3	Toluene	18.	J
100-41-4	Ethylbenzene	37.	
	Total Xylenes	81.	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dil- detection limit). The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 ug/L is calculated, report as 3J.

C - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10 ng/uL in the final extract should be confirmed by GC/MS.

B - This flag is used when the analyte is found in possible/probable blank contamination and warns data the user to take appropriate action.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Sample Number
E1454

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Bridgeport Environmental, Inc.
Lab Sample ID: >B7749::D2
Sample Matrix: SOIL
Data release Authorized by: Richard W Symes

Case No.: N/A
QC Report No.:
Contract No.: N/A
Date Sample Received: 15 MAR 90

Volatile Compounds
Concentration: (Low) Medium (Circle One)
Date Extracted:
Date Analyzed: 03/27/90 13:29
Conc/Dil factor: 1
Percent Moisture:

C.A.S. Number		ug/l or (ug/Kg) (Circle One)	
71-43-2	Benzene	25.	U
108-88-3	Toluene	13.	J
100-41-4	Ethylbenzene	45.	
	Total Xylenes	170.	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dil-

detection limit). The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 ug/L is calculated, report as 3J.

C - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10 ng/uL in the final extract should be confirmed by GC/MS.

B - This flag is used when the analyte is found in

possible/probable blank contamination and warns data the user to take appropriate action.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Sample Number
E1455

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Bridgeport Environmental, Inc.
Lab Sample ID: >E7750::D2
Sample Matrix: SOIL
Data release Authorized by: Richard W Symonds

Case No.: N/A
QC Report No.:
Contract No.: N/A
Date Sample Received: 15 MAR 90

Volatile Compounds
Concentration: (Low) Medium (Circle One)
Date Extracted:
Date Analyzed: 03/27/90 14:15
Conc/Dil factor: 1
Percent Moisture:

C.A.S. Number		ug/l or (ug/Kg) (Circle One)	
71-43-2	Benzene	25.	U
108-88-3	Toluene	46.	
100-41-4	Ethylbenzene	190.	
	Total Xylenes	440.	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dil- detection limit). The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 ug/L is calculated, report as 3J.

C - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10 ng/uL in the final extract should be confirmed by GC/MS.

B - This flag is used when the analyte is found in possible/probable blank contamination and warns data the user to take appropriate action.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described anc such description attached to the data summary report

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Sample Number
E1456

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Bridgeport Environmental, Inc.
Lab Sample ID: >B7751::D2
Sample Matrix: SOIL
Date release Authorized by: Richard W Lynch

Case No.: N/A
QC Report No.:
Contract No.: N/A
Date Sample Received: 15 MAR 90

Volatile Compounds
Concentration: (Low) Medium (Circle One)
Date Extracted:
Date Analyzed: 03/27/90 15:05
Conc/Dil factor: 1
Percent Moisture:

C.A.S. Number		ug/l or (ug/Kg) (Circle One)	
71-43-2	Benzene	25.	U
108-88-3	Toluene	11.	J
100-41-4	Ethylbenzene	25.	U
	Total Xylenes	160.	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dil-

detection limit). The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicatec the presence of a compound that meets the identification criteria but the result is < than the specified detectior limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 ug/L is calculated, report as 3J.

C - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10 ng/uL in the final extract should be confirmed by GC/MS.

B - This flag is used when the analyte is found in

possible/probable blank contamination and warns data the user to take appropriate action.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Bridgeport Environmental Inc.

Licensed Analytical Laboratories
08555

P.O. Box 247
510 Heron Drive Suite 107
Bridgeport, NJ 08014-0247

609/467-0380

CONTINENTAL VANGUARD INC.

PROJECT: ANCHOR MOTOR FREIGHT

DATE RECEIVED: March 19, 1990

REPORT NO: E1572 - E1575

BRIDGEPORT ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

CERTIFICATE OF ANALYSIS

TOTAL PETROLEUM HYDROCARBONS

ANALYSIS NO.	CLIENT ID	MDL	RESULTS (mg/kg)
E1572	Tank B (Top Layer)	30	1500
E1573	Tank B (2' Below)	30	2500
E1574	Tank A (Top Layer)	30	1300
E1575	Tank A (2' Below)	30	1100

E1572-E1575

BRIDGEPORT ENVIRONMENTAL, INC.
510 HERON DRIVE
BRIDGEPORT, NEW JERSEY 08014
(609) 467-0380

CHAIN OF CUSTODY RECORD

Client:

Site Location:

Samplers:

Sta No	Date	Time	Comp	Grab	Station Location	No Containers								
			1			1	1							
				1		1	1							
			1			1	1							
				1		1	1							
					Totals									

Relinquished By:	Date	Time	Received By:	Relinquised By:	Date	Time	Received By:
			R. Lynch				
Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time	Received By:
Relinquished By:	Date	Time	Received For Laboratory By:	Date	Time	Remarks:	

METHODOLOGY SUMMARY

METALS

Soil samples for metal analysis were run in accordance with the methods prescribed in SW846. This includes a nitric acid digestion followed by either Furnace Flame Atomic Absorption, Flameless Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes,EPA-600/4-79-020 March 1979.

PHENOLS

Analysis performed according to U.S.E.P.A. 420 (colorimetric,Automated 4AAP with Distillation). Samples that are high in solids are predistilled according to 420.1 (8.1). Sample is reacted with four (4) Aminoantipyrine and Alkaline ferricyanide to form a red color, which is read at 505nm. Equipment used: Technicon Autoanalyzer IIC.

CYANIDE

Analysis performed according to U.S.E.P.A. 355.3 (colorimetric, automated). Samples high in solids are predistilled according to figure 1,335-2. All samples pass through automated distillation. Sample is reacted with Chloroamine T to produce cyanogen chloride, which developes a red color when combined with pyridine/barbituric acid reagent; which is read at 570nm. Equipment used: Technicon Autoanalyzer IIC.

PETROLEUM HYDROCARBONS

Aqueous samples were analyzed following Method 418.1 as prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 March 1979.

Soil samples were extracted in accordance with the methods prescribed in SW-846 and subsequently analyzed as stated above.

LABORATORY CHRONICLE

DATE

RECEIPT/REFRIGERATION 3/19/90

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's NA
4. Dioxin NA

ANALYSIS

1. Volatiles NA
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's NA
5. Dioxin NA

Section Supervisor
Review & Approval

INORGANICS

1. Metals NA
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

TPHC 3/20/90

Section Supervisor
Review & Approval

Quality Control Supervisor
Review & Approval RWL

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

Bridgeport Environmental Inc.

Licensed Analytical Laboratories
08555

P.O. Box 247
510 Heron Drive Suite 107
Bridgeport, NJ 08014-0247

609/467-0380

CONTINENTAL VANGUARD, INC.

ANCHOR MOTOR FREIGHT

DATE RECEIVED: MARCH 20, 1990

REPORT NO: E1590-E1593

BRIDGEPORT ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

SAMPLE LOCATION AND IDENTIFICATION

ANALYSIS NO.	CLIENT ID
E 1590	GMGT1 (Top Layer Soil)
E 1591	GMGT1 (2' Below Tank)
E 1592	C (Top Layer Soil
E 1593	C (2' Below Tank)

E1590-E1593

BRIDGEPORT ENVIRONMENTAL, INC.
510 HERON DRIVE
BRIDGEPORT, NEW JERSEY 08014
(609) 467-0380

CHAIN OF CUSTODY RECORD

Client:

Site Location:

Samplers:

Sta No	Date	Time	Comp	Grab	Station Location	No Containers									
					Totals										

Relinquished By:	Date	Time	Received By:	Relinquised By:	Date	Time	Received By:
Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time	Received By:
Relinquished By:	Date	Time	Received For Laboratory By:	Date	Time	Remarks:	

METHODOLOGY SUMMARY

PURGEABLES

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as

prescribed in Method 8240 from SW846.

ACID EXTRACTABLES
BASE NEUTRALS

U.S.E.P.A. Method 625 - This method covers the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. This is a gas chromatography/mass spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

A HP5985B was used with a DB-5 FCCC.

Method detection limits are as stated.

Soil samples were prepared for analysis as

prescribed in Method 3550 from SW846.

PESTICIDES/PCB'S

U.S.E.P.A. Method 608 - This method covers the determination of pesticides and PCB's in samples by extraction/concentration with organic solvents and subsequent qualification/quantification by Gas Chromatography. The gas chromatograph utilizes an electron capture detector (ECD) which is applicable for the determination of the compounds listed for this method in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

Soil samples were prepared as prescribed in Method

3550 from SW846.

METHODOLOGY SUMMARY

METALS

Soil samples for metal analysis were run in accordance with the methods prescribed in SW846. This includes a nitric acid digestion followed by either Furnace Flame Atomic Absorption, Flameless Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes,EPA-600/4-79-020 March 1979.

PHENOLS

Analysis performed according to U.S.E.P.A. 420 (colorimetric,Automated 4AAP with Distillation). Samples that are high in solids are predistilled according to 420.1 (8.1). Sample is reacted with four (4) Aminoantipyrine and Alkaline ferricyanide to form a red color, which is read at 505nm. Equipment used: Technicon Autoanalyzer IIC.

CYANIDE

Analysis performed according to U.S.E.P.A. 355.3 (colorimetric, automated). Samples high in solids are predistilled according to figure 1,335-2. All samples pass through automated distillation. Sample is reacted with Chloroamine T to produce cyanogen chloride, which developes a red color when combined with pyridine/barbituric acid reagent; which is read at 570nm. Equipment used: Technicon Autoanalyzer IIC.

PETROLEUM HYDROCARBONS

Aqueous samples were analyzed following Method 418.1 as prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 March 1979.

Soil samples were extracted in accordance with the methods prescribed in SW-846 and subsequently analyzed as stated above.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 3/20/90

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons 3/21/90

ANALYSIS

1. Volatiles 3/26/90
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons 3/22/90
6. Total Organic Carbon NA

Section Supervisor
Review & Approval _____

INORGANICS

1. Metals NA
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

_____

_____

Section Supervisor
Review & Approval _____

Quality Control Supervisor
Review & Approval RW

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

CERTIFICATE OF ANALYSIS

TOTAL PETROLEUM HYDROCARBONS

ANALYSIS NO.	CLIENT ID	MDL (mg/kg)	RESULTS (mg/kg)
E 1590	GMGT1 (Top Layer Soil)	30	1300
E 1591	GMGT1 (2' Below Tank)	30	530
E 1592	C (Top Layer Soil)	30	3300
E 1593	C 2' Below Tank)	30	3000

CERTIFICATE OF ANALYSIS

ANALYSIS NO. E 1590

CLIENT ID: GMGT1 (Top Layer Soil)

PARAMETER	MDL (ug/kg)	RESULT (ug/kg)
BENZENE	1.0	N.D.
TOLUENE	1.0	N.D.
PO-XYLENE	1.0	N.D.
M-XYLENE	1.0	N.D.
ETHYLBENZENE	1.0	N.D.

CERTIFICATE OF ANALYSIS

ANALYSIS NO. E 1591

CLIENT ID: GMGT1 (2' Below Tank)

PARAMETER	MDL (ug/kg)	RESULT (ug/kg)
BENZENE	1.0	N.D.
TOLUENE	1.0	N.D.
PO-XYLENE	1.0	N.D.
M-XYLENE	1.0	N.D.
ETHYLBENZENE	1.0	N.D.

GM

Memo

Post-it® Fax Note 7671	Date 10/27/98	# of pages ▶ 1
To J. Walle	From J. Holmes	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

TO: Wayne Bigham, Plant Engineer

From: Jeff Holmes, Sr. Environmental Engineer

Date: October 28, 1998

Re: Discovery of Previously Undisclosed Material in East Lot

This morning at about 11:30 am, while fence post holes were being drilled in the East lot next to the new test tracks, material appearing to be some type of dead paint material was discovered about 12 to 24 inches below the surface of the parking lot. Since our lab personnel (Clean Tech) were on site at the time, I had them take a representative sample for analytical work.

Mr. Jim Walle at our corporate legal staff was notified at about 11:45 am. Dispatcher Cohen of the State of Delaware DNREC was notified at the 1-800-662-8802 number at 11:58 am and told of our findings.

This afternoon at around 2:15pm, Mr. Christopher Berlin and Mr. Greg DeCowski of DNREC came in to look at the material. They agreed that there was no further immediate action needed. They were also going to contact the hazardous waste branch to let them know what is going on and what was found. As soon as I receive the testing results (next week) I am to fax them to Mr. Berlin. At that time, the department will determine if any further action is required.

I directed the contractors working on the test tracks to place the removed material into two drums and take them to the hazardous waste pad until the results are received. I also had them drill three additional holes to see if the material continues toward the Tire Building. It appeared to be tapering off at these holes. At about 11:40 am, I told the contractors not to do any further work on the three fence post holes where material in question was found. After discussions with the state, I told the contractor at about 1:30pm to continue any needed work on those holes.

Please see me with any questions. Thanks.

cc: E. Bosetti, S. Mullen, J. Peronti

FAX

Date 11/18/98

Number of pages including cover sheet

TO:	*Fred Rindhage* *GM*	***FROM:***	*JEFFREY A. HOLMES* *General Motors* *P.O. Box 1512* *Wilmington, DE 19899*
cc:	*Chris Barricklow* *Enecotech*		
Phone		***Phone***	*(302) 428-7421*
Fax Phone		***Fax Phone***	*(302) 428-7246*

CC:

REMARKS: ☐ *Urgent* ☒ *For your review* ☐ *Reply ASAP* ☐ *Please Comment*

Fred, Chris

Please see the attached information on the "Anchor" East lot sample. Also included is a copy of the map in your report that I have marked up as to where the East lot sample was taken.

Let me know about what time you want to try to set up a conference call.

Please call me with any questions at (302) 428-7421 or 8-438-7421.

Thanks.

Jeff Holmes

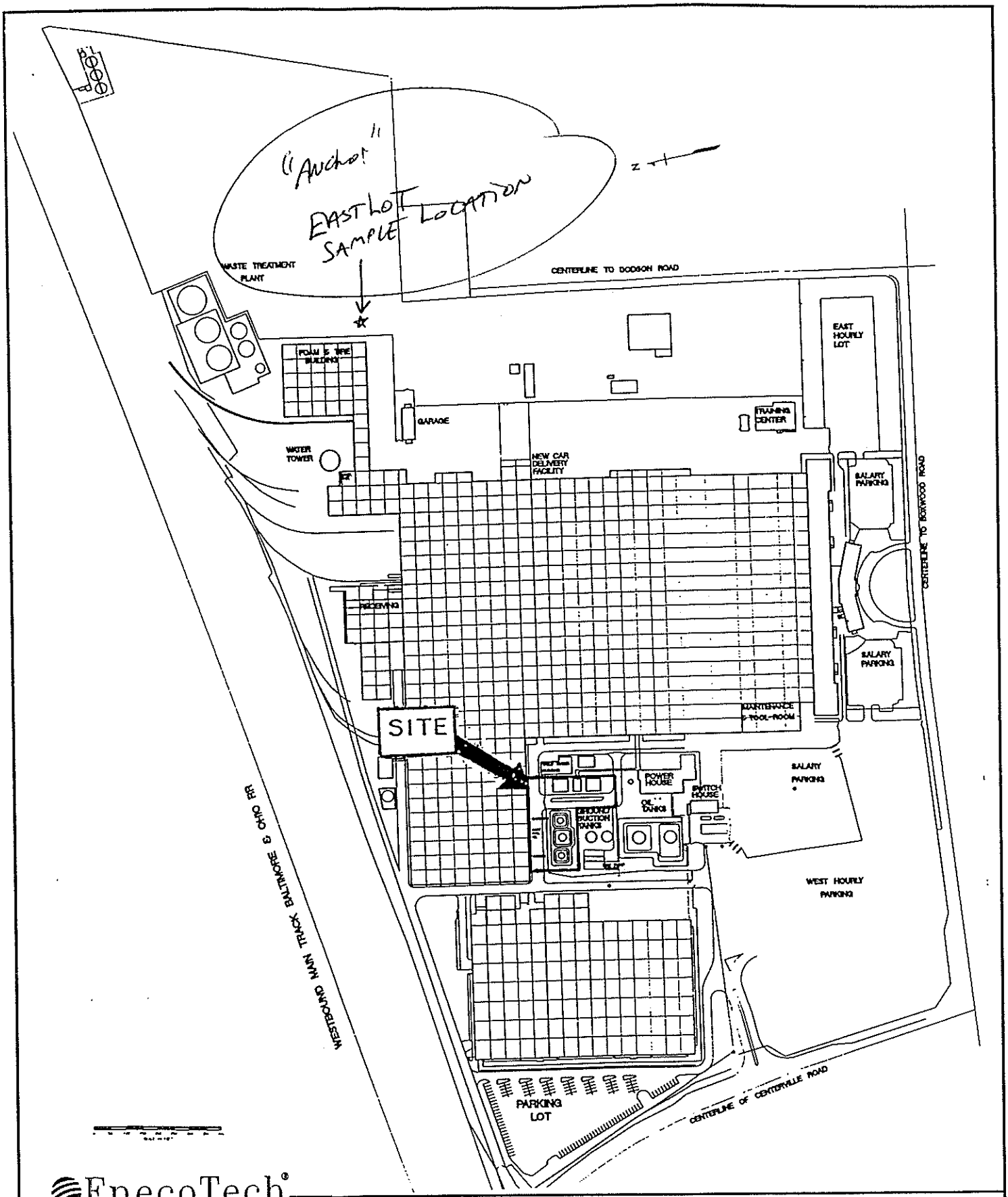
FAX results to Chris & Fred Rhindhage - split plan

248-489-4184 ✓

Fred @-346-0803 ✓

	Cu	Zn
#1A -	0.026	1.32
2A -	0.017	0.147
3A -	3.05	1.31 wk

water table



EnecoTech®
ENVIRONMENTAL CONSULTANTS

Project:	GENERAL MOTORS PLANT
	BOXWOOD & DODSON ROADS WILMINGTON, DELAWARE

SITE MAP

File No.: 1057P-003	ACAD File No.:		Date: 10/26/98	REV.:
Drawn By: MRP	Design By:	Checked By:	Approved By:	Figure No.: 2

Atlantic Coast Laboratories, Inc.
dba Artesian Laboratories
630 Churchmans Road
Newark, Delaware 19702
(302) 266-9121 • 454-8730 (FAX)

REPORT OF ANALYSIS

Clean Technologies
2700 Capitol Trail
Newark, DE 19711

Attn: Ms. Deborah Buniski

Purchase Order:
Invoice Number:

Acct:1070267

Order #: 98-10-998
Date: 11/04/98 15:57
Work ID: GM-Anchor Lot-test area
Date Received: 10/28/98
Date Completed: 11/04/98

Client Code: CLEAN_TECH

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	anchor 1		

This cover page is an integral part of the analytical report that follows.

Certified By
Warren Van Arsdall

TO: JEFF HOLMES - GM

FROM: CHRIS CANDELA - CT

16 PAGES.

This is the rush full TCLP from original day

Order # 98-10-998
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 018
Test Description: GC/MS Volatiles,SW846 8260 Method: SW 846 8260 Test Code: V8260S
Collected: 10/28/98 11:30 Category: SOLID

Isopropylbenzene	2.1	0.18
4-Isopropyltoluene	2.7	0.16
4-Methyl-2-Pentanone (MIBK)	ND	10
Naphthalene	11	0.32
n-Propylbenzene	5.8	0.14
Styrene	0.5	0.16
1,1,1,2-Tetrachloroethane	ND	0.16
1,1,2,2-Tetrachloroethane	ND	0.18
Tetrachloroethene	ND	0.16
Toluene	8.7	0.12
1,2,3-Trichlorobenzene	ND	0.22
1,2,4-Trichlorobenzene	ND	0.16
1,1,2-Trichloroethane	ND	0.18
1,1,1-Trichloroethane	ND	0.12
Trichloroethene	0.3	0.16
Trichlorofluoromethane	ND	0.16
1,2,3-Trichloropropane	ND	0.28
1,3,5-Trimethylbenzene	12	0.14
1,2,4-Trimethylbenzene	39	0.16
Vinyl Acetate	ND	10
Vinyl Chloride	ND	0.12
o-Xylene	18	0.20
m,p-Xylene	46	0.32
Xylenes, Total	64	0.52

SURROGATE	%RECOVERY	LIMITS
Dibromofluoromethane	101	80 - 120
Toluene-d8	110	81 - 117
4-Bromofluorobenzene	107	74 - 121

Notes and Definitions for this Report:

EXTRACTED 11/01/98
DATE RUN 11/01/98 14:57:00
ANALYST DED
CONC FACTOR 0.2
UNITS UG/KG

Order # 98-10-998 Page 8
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 01C
Test Description: TCLP, Metals Method: Test Code: TCLPMP
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	Regulatory Limit (mg/L)	RESULT	LIMIT	UNITS
Element				
Arsenic	5.0	0.05	0.040	
Barium	100.0	2.31	0.010	
Chromium	5.0	ND	0.010	
Cadmium	1.0	0.06	0.010	
Lead	5.0	47.3	0.020	
Mercury	0.2	ND	0.0004	
Selenium	1.0	ND	0.040	
Silver	5.0	0.01	0.010	
Unregulated Metals				
Boron		--	0.050	
Aluminum		0.11	0.050	
Antimony		0.65	0.050	
Beryllium		ND	0.010	
Calcium		140	0.080	
Cobalt		0.02	0.010	
Copper		0.01	0.010	
Nickel		0.07	0.010	
Iron		36.6	0.010	
Manganese		1.51	0.010	
Molybdenum		0.01	0.010	
Sodium		1270	0.20	
Strontium		--	0.010	
Thallium		ND	0.10	
Vanadium		ND	0.010	
Zinc		86.4	0.010	
Tin		--	0.020	
Titanium		--	0.010	

Notes and Definitions for this Report:

DATE RUN
ANALYST
INSTRUMENT
FILE ID
CONC FACTOR
UNITS mg/L

Order # 98-10-998 Page 9
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 010
Test Description: TCLP Volatiles by GC-MS Method: Method 8260 Test Code: TCLPVM
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	Regulatory Limit (mg/L)	RESULT	LIMIT	UNITS
Vinyl chloride	0.2	ND	0.0050	
1,1-Dichloroethene	0.7	ND	0.0050	
Chloroform	6.0	ND	0.0050	
1,2-Dichloroethane	0.5	ND	0.0050	
Carbon tetrachloride	0.5	ND	0.0050	
Trichloroethene	0.5	0.06	0.0050	
Benzene	0.5	0.06	0.0050	
Tetrachloroethene	0.7	ND	0.0050	
Chlorobenzene	100.0	ND	0.0050	
Methyl Ethyl Ketone	200.0	ND	0.010	

SURROGATE	%RECOVERY	LIMITS	
Dibromofluoromethane	119 Q	86	118
Toluene-d8	124 Q	88	110
4-Bromofluorobenzene	122 Q	86	115

Notes and Definitions for this Report:

DATE RUN 11/01/98 15:33:00
ANALYST DED
CONC FACTOR 5
UNITS MG/L

Order # 98-10-998
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 01E
Test Description: TCLP Semi-volatile by 8270 Method: SW_846_8270 Test Code: TCLPSV
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	Regulatory Limit (mg/L)	RESULT	LIMIT	WEIGHT
1,4-Dichlorobenzene	7.5	ND	0.0048	
Hexachloroethane	3.0	ND	0.0050	
Nitrobenzene	2.0	ND	0.0025	
Hexachlorobutadiene	0.5	ND	0.0048	
2,4-Dinitrotoluene	0.13	ND	0.0020	
Hexachlorobenzene	0.13	ND	0.0022	
Pyridine	5.0	ND	0.0062	
o-Cresol	200.0	ND	0.0035	
m+p-Cresol	200.0	0.06	0.0028	
2,4,6-Trichlorophenol	2.0	ND	0.0030	
2,4,5-Trichlorophenol	400.0	ND	0.0030	
Pentachlorophenol	100.0	ND	0.0072	

SURROGATE	%RECOVERY	LIMITS	
2-Fluorophenol	32	21 -	110
Phenol d5	22	10 -	110
Nitrobenzene d5	57	10 -	123
2-Fluorobiphenyl	50	35 -	114
2,4,6-Tribromophenol	72	43 -	116
Terphenyl d14	69	33 -	141

Notes and Definitions for this Report:

EXTRACTED 11/02/98
DATE RUN 11/03/98 04:01:00
ANALYST DED
CONC FACTOR 2.5
UNITS MG/L

Order # 98-10-998
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1
Test Description: TCLP Pesticides
Collected: 10/28/98 11:30

Lab No: 01F
Method: SW 846 8080 Test Code: TCLPPE
Category: SOLID

PARAMETER	Regulatory Limit (mg/L)	RESULT	LIMIT	UNITS
gamma-BHC (lindane)	0.4	ND	0.000010	
Heptachlor	0.008	ND	0.000010	
Heptachlor epoxide	0.008	ND	0.000010	
Endrin	0.02	ND	0.000015	
Methoxychlor	10.0	ND	0.000095	
Chlordane	0.03	ND	0.0017	
Toxaphene	0.5	ND	0.00060	

Notes and Definitions for this Report:

EXTRACTED 10/30/98
DATE RUN 11/04/98 05:06:00
ANALYST MH
INSTRUMENT
FILE ID
CONC FACTOR 5
UNITS MG/L

Order # 98-10-998 Page 12
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 016
Test Description: TCLP, Herbicides Method: SW 846 8150 Test Code: TCLPHE
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	Regulatory Limit (mg/L)	RESULT	LIMIT	UNITS
2,4-D	1.4	ND	0.0060	
2,4,5-TP (Silvex)	0.14	ND	0.0070	

Notes and Definitions for this Report:

EXTRACTED 10/30/98
DATE RUN 11/03/98 14:35:00
ANALYST MH
INSTRUMENT
FILE ID
CONC FACTOR 10
UNITS MG/L

Order # 98-10-998
11/04/98 15:37

TEST METHODOLOGIES

Silver (Ag) - Flame AA	Wastewater & drinking water	EPA (1983) Method 272.1
	RCRA TCLP & groundwater	SW 846 Method 7760
	Solids	SW 846 Method 7760

Aluminum (Al) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Arsenic (As) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Barium (Ba) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Beryllium (Be) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Calcium (Ca) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Cadmium (Cd) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Cobalt (Co) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Chromium (Cr) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Copper (Cu) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Acid Digestion, Furnace AA Analysis of As & Se

Wastewater & drinking water	EPA (1983) Methods 206.2/270.2

Order # 98-10-998
11/04/98 15:37

TEST METHODOLOGIES

	RCRA TCLP & groundwater	SW 846 Methods 7060/7740
	Solids	SW 846 Method 3050
Microwave Digestion		Aqueous landfill samples and TCLP extract SW-846, Method 3015
Microwave Digestion	Wastewater	Federal Register 9/11/92
	Soils/Solids	SW-846 Method 3051

Iron (Fe) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Mercury, Soil	Sediment	EPA (1983) Method 245.5 (cold vapor AA)
	Solids	SW 846 Method 7471

Potassium (K) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Magnesium (Mg) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Manganese (Mn) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Sodium (Na) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Nickel (Ni) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Lead (Pb) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Antimony (Sb) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Order # 98-10-998
11/04/98 15:37

TEST METHODOLOGIES

Selenium (Se) - ICP (Inductivaly Coupled Argon Plasma Emission Spectroscopy)	
Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010
Silver (Ag) - TCLP Leachate	SW-846 Method 7760 (flame AA)
Aluminum (Al) - TCLP Leachate	SW-846 Method 6010 (ICP)
Arsenic (As) - TCLP Leachate	SW-846 Method 6010 (ICP)
Barium (Ba) - TCLP Leachate	SW-846 Method 6010 (ICP)
Beryllium (Be) - TCLP Leachate	SW-846 Method 6010 (ICP)
Calcium (Ca) - TCLP Leachate	SW-846 Method 6010 (ICP)
Cadmium (Cd) - TCLP Leachate	SW-846 Method 6010 (ICP)
Chromium (Cr) - TCLP Leachate	SW-846 Method 6010 (ICP)
Copper (Cu) - TCLP Leachate	SW-846 Method 6010 (ICP)
Iron (Fe)- TCLP Leachate	SW-846 Method 6010 (ICP)
Mercury (Hg) - TCLP Leachate	SW-846 Method 7470
Potassium (K)- TCLP Leachate	SW-846 Method 6010 (ICP)
Magnesium (Mg)- TCLP Leachate	SW-846 Method 6010 (ICP)
Manganese (Mn)- TCLP Leachate	SW-846 Method 6010 (ICP)
Nickel (Ni) - TCLP Leachate	SW-846 Method 6010 (ICP)
Lead (Pb) - TCLP Leachate	SW-846 Method 6010 (ICP)
Antimony (Sb) - TCLP Leachate	SW-846 Method 6010 (ICP)
Selenium (Se) - TCLP Leachate	SW-846 Method 6010 (ICP)
Thallium (Tl) - TCLP Leachate	SW-846 Method 6010 (ICP)
Zinc (Zn) - TCLP Leachate	SW-846 Method 6010 (ICP)
Thallium (Tl) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)	
Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010
Vanadium (V) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)	

Order # 98-10-998
11/04/98 15:37

TEST METHODOLOGIES

	Wastewater & drinking water	EPA (1983) Method 200.7
	RCRA TCLP & groundwater	SW 846 Method 6010
	Solids	SW 846 Method 6010
Zinc (Zn) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)		
	Wastewater & drinking water	EPA (1983) Method 200.7
	RCRA TCLP & groundwater	SW 846 Method 6010
	Solids	SW 846 Method 6010
Extraction, Herbicides		
	Wastewater, drinking water	SM Method 6640-B
	Solids	SW 846 Method 3550/8150
	RCRA TCLP leachates & groundwater	SW 846 Method 3510/8150
Extraction, Pesticides		
	Wastewater, drinking water	EPA Method 608 (liq-liq)
	Solids	SW 846 Method 3550 (sonication)
	RCRA TCLP leachates & groundwater	SW 846 Method 3510 (liq-liq)
Chlorinated Herbicides, TCLP Leachate		SW-846 Method 8150
Pesticides, TCLP Leachate		SW-846 Method 8080
TCLP Extraction		SW-846 Method 1311
Zero Headspace Extraction		SW-846 Method 1311
Extraction, Base/Neutral and Acid Extractable Organics		
	Wastewater	EPA Method 625 (liq-liq, sep funnel)
	Solids	SW 846 Method 3550 (sonication)
	RCRA TCLP leachates & groundwater	SW 846 Method 3510 (liq-liq, sep funnel)
Base/Neutral and Acid Extractable Organics, Soils/Solids		SW 846 Method 8270
Semi-Volatile Organics, TCLP Leachate		SW-846 Method 8270
Volatile Organics, TCLP Leachate		SW-846 Method 8260
Volatile Organics (Expanded List) by GC/MS		
	SW846 Method 8260 (purge & trap, capillary column GC/MS)	

Atlantic Coast Laboratories, Inc.
dba Artesian Laboratories
630 Churchmans Road
Newark, Delaware 19702
(302) 266-9121 - 454-8720 (FAX)

REPORT OF ANALYSIS

Clean Technologies
2700 Capitol Trail
Newark, DE 19711

Attn: Ms. Deborah Buniski

Purchase Order:
Invoice Number:

Acct:1070267

Order #: 98-10-998
Date: 11/06/98 15:37
Work ID: GM-Anchor Lot-test area
Date Received: 10/28/98
Date Completed: 11/04/98

Client Code: CLEAN_TECH

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	anchor 1		

This cover page is an integral part of the analytical report that follows.

Certified By
Warren Van Arsdall

TO: JEFF HOLMES - GM

FROM: CHRIS CANDELA - CT

16 PAGES.

This is the rush fulltcp from original day

Order # 98-10-998
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample: 01A anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Ag Digestion, Flame	10/29/98		date digested	SPL	10/29/98 15:30
Aluminum, ICP	2030	5.0	mg/Kg	SPL	10/30/98 14:38
Antimony, ICP	27	1.8	mg/Kg	SPL	10/30/98 14:38
Arsenic, ICP	25	3.6	mg/Kg	SPL	10/30/98 14:38
Barium, ICP	8990	0.5	mg/Kg	SPL	10/30/98 14:38
Beryllium, ICP	ND	0.2	mg/Kg	SPL	10/30/98 14:38
Cadmium, ICP	61	0.4	mg/Kg	SPL	10/30/98 14:38
Calcium, ICP	30000	8.0	mg/Kg	SPL	11/02/98 12:53
Chromium, ICP	88	0.8	mg/Kg	SPL	10/30/98 14:38
Cobalt, ICP	11	0.6	mg/Kg	SPL	10/30/98 14:38
Copper, ICP	76	0.3	mg/Kg	SPL	10/30/98 14:38
Digestion, As/Se	10/29/98		date digested	SPL	10/29/98 15:30
Digestion, Microwave	10/29/98		date digested	SPL	10/29/98 15:30
Iron, ICP	17600	0.86	mg/Kg	SPL	11/02/98 12:53
Lead, ICP	4480	2.3	mg/Kg	SPL	10/30/98 14:38
Magnesium, ICP	2930	0.4	mg/Kg	SPL	11/02/98 12:53
Manganese, ICP	274	0.5	mg/Kg	SPL	10/30/98 14:38
Mercury, Cold Vapor AA	0.093	0.03	mg/Kg	RJM	10/30/98 09:00
Nickel, ICP	30	1.1	mg/Kg	SPL	10/30/98 14:38
Potassium, ICP	173	37	mg/Kg	SPL	10/30/98 14:38
Selenium, ICP	11	3.8	mg/Kg	SPL	10/30/98 14:38
Silver, Flame AA	1.7	0.96	mg/KG	SL	11/03/98 13:30
Sodium, ICP	297	19	mg/Kg	SPL	10/30/98 14:38
Thallium, ICP	ND	6.2	mg/Kg	SPL	10/30/98 14:38
Vanadium, ICP	10	0.5	mg/Kg	SPL	10/30/98 14:38
Zinc, ICP	15300	0.3	mg/Kg	SPL	11/02/98 12:53

Sample: 01B anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TCLP Extraction	10/30/98		date extracted	NG	10/30/98 10:00
TCLP, Zero Headspace Ext	10/30/98		date extracted	NG	10/30/98 10:00

Sample: 01C anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Digestion, Microwave	10/30/98		date digested	SPL	10/30/98 10:00
TCLP, Aluminum	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Antimony	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Arsenic	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Barium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Beryllium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Cadmium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Calcium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Chromium	10/30/98		date analyzed	SPL	10/30/98 14:27

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11/04/98 15:37

TEST RESULTS BY SAMPLE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
TCLP, Cobalt	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Copper	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Iron	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Lead	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Magnesium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Manganese	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Mercury	10/30/98		date analyzed	RJM	10/30/98 09:00
TCLP, Nickel	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Potassium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Selenium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Silver	10/30/98		date analyzed	SPL	10/30/98 16:00
TCLP, Sodium	11/02/98		date analyzed	SPL	11/02/98 12:50
TCLP, Thallium	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, VANADIUM	10/30/98		date analyzed	SPL	10/30/98 14:27
TCLP, Zinc	10/30/98		date analyzed	SPL	10/30/98 14:27

Sample: 01E anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30
Job: TCLPSV TCLP, Semivolatiles

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Extraction, BNA	11/02/98		date extracted	TA	

Sample: 01F anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30
Job: TCLPPE TCLP, Pesticides

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Extraction, Pesticides	10/30/98		date extracted	TA	

Sample: 01G anchor 1 **Category: SOLID**
Collected: 10/28/98 11:30
Job: TCLPHE TCLP, Herbicides

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Extraction, Herbicides	10/30/98		date extracted	TA	

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11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 018
Test Description: Acid/Base Neutrals Method: Method 8270 Test Code: S82705
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	RESULT	LIMIT	WEIGHT
pyridine	ND	120	
n-nitrosodimethylamine	ND	29	
bis(2-chloroethyl) ether	ND	53	
1,3-dichlorobenzene	ND	96	
1,4-dichlorobenzene	ND	91	
1,2-dichlorobenzene	ND	91	
bis(2-chloroisopropyl) ether	ND	67	
n-nitroso-di-n-propylamine	ND	38	
hexachloroethane	ND	96	
nitrobenzene	ND	48	
isophorone	ND	38	
bis(2-chloroethoxy)methane	ND	43	
1,2,4-trichlorobenzene	ND	77	
naphthalene	81	67	
hexachlorobutadiene	ND	91	
hexachlorocyclopentadiene	ND	48	
2-chloronaphthalene	ND	48	
dimethyl phthalate	ND	180	
acenaphthylene	ND	38	
2,6-dinitrotoluene	ND	38	
acenaphthene	ND	38	
2,4-dinitrotoluene	ND	38	
diethylphthalate	ND	120	
4-chlorophenyl-phenylether	ND	43	
fluorene	ND	38	
n-nitrosodiphenylamine	ND	24	
azobenzene	ND	29	
4-bromophenyl-phenylether	ND	34	
hexachlorobenzene	ND	43	
phenanthrene	ND	34	
anthracene	ND	34	
di-n-butylphthalate	1430	77	
fluoranthene	ND	29	
benzidine	ND	170	
pyrene	ND	38	
butylbenzylphthalate	ND	170	
chyrsene	ND	29	
3,3'-dichlorobenzidine	ND	38	
benzo(a)anthracene	ND	34	
bis(2-ethylhexyl) phthalate	ND	34	
di-n-octyl phthalate	ND	82	
benzo(b)fluoranthene	ND	38	
benzo(k)fluoranthene	ND	62	
benzo(e)pyrene	ND	29	
dibenzo(a,h)anthracene	ND	29	

Order # 98-10-998
11/06/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1
Test Description: Acid/Base Neutrals
Collected: 10/28/98 11:30

Lab No: 018
Method: Method 8270 Test Code: 8270S
Category: SOLID

indeno(1,2,3-cd)pyrene	ND	29	
benzo(g,h,i)perylene	ND	34	
phenol	ND	38	
2-chlorophenol	ND	82	
o-cresol	ND	100	
m & p-cresol	ND	120	
2-nitrophenol	ND	77	
2,4-dimethylphenol	ND	48	
2,4-dichlorophenol	ND	72	
4-chloro-3-methylphenol	ND	43	
2,4,6-trichlorophenol	ND	58	
2,6,5-trichlorophenol	ND	58	
2,4-dinitrophenol	ND	150	
4-nitrophenol	ND	19	
4,6-dinitro-2-methylphenol	ND	160	
pentachlorophenol	ND	160	

SURROGATE	%RECOVERY	LIMITS	
2-Fluorophenol	48	25 -	121
Phenol d5	50	24 -	113
Nitrobenzene d5	59	23 -	120
2-Fluorobiphenyl	61	30 -	115
2,4,6-Tribromophenol	43	19 -	122
Terphenyl d14	70	18 -	137

Notes and Definitions for this Report:

EXTRACTED 11/02/98
DATE RUN 11/03/98 06:01:00
ANALYST DED
CONC FACTOR 48
UNITS NG/KG

Order # 98-10-998
11/04/98 15:37

TEST RESULTS BY SAMPLE

Sample Description: anchor 1 Lab No: 018
Test Description: GC/MS Volatiles,SW846 8260 Method: SW 846 8260 Test Code: V82605
Collected: 10/28/98 11:30 Category: SOLID

PARAMETER	RESULT	LIMIT
Acetone	ND	20
Acrolein	ND	10
Acrylonitrile	ND	10
Benzene	0.4	0.20
Bromobenzene	ND	0.20
Bromochloromethane	ND	0.16
Bromodichloromethane	ND	0.14
Bromoform	0.2	0.20
Bromomethane	ND	0.20
2-Butanone (MEK)	ND	20
n-Butylbenzene	6.4	0.14
sec-Butylbenzene	2.1	0.16
tert-Butylbenzene	ND	0.18
Carbon Disulfide	ND	1.0
Carbon Tetrachloride	ND	0.18
Chlorobenzene	ND	0.14
Chloroethane	ND	0.16
2-Chloroethylvinyl Ether	ND	0.20
Chloroform	ND	0.12
Chloromethane	ND	0.14
2-Chlorotoluene	ND	0.14
4-Chlorotoluene	ND	0.22
Dibromochloromethane	ND	0.16
1,2-Dibromoethane	ND	0.16
Dibromomethane	ND	0.18
1,2-Dibromo-3-Chloropropane	ND	0.32
1,2-Dichlorobenzene	ND	0.16
1,3-Dichlorobenzene	ND	0.14
1,4-Dichlorobenzene	0.2	0.12
Dichlorodifluoromethane	ND	0.12
1,2-Dichloroethane	ND	0.14
1,1-Dichloroethane	ND	0.16
1,1-Dichloroethene	ND	0.12
cis-1,2-Dichloroethene	0.4	0.16
trans-1,2-Dichloroethene	ND	0.18
Dichloromethane (MeCl2)	ND	0.32
1,1-Dichloropropene	ND	0.14
1,2-Dichloropropane	ND	0.14
2,2-Dichloropropane	ND	0.22
1,3-Dichloropropane	ND	0.18
cis-1,3-Dichloropropene	ND	0.080
trans-1,3-Dichloropropene	ND	0.080
Ethylbenzene	12	0.14
Hexachlorobutadiene	ND	0.38
2-Hexanone	ND	10

WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

16 September 1982

Mr. Ernest R. Bosetti
General Motors Assembly Division
P.O. Box 1512
Wilmington, DE 19899

W.O. 1138-23-01

Dear Ernie:

I am enclosing a draft copy of the Part B Application to the Environmental Protection Agency for the Wilmington Plant. I have gone through the Part B requirements in details and have attempted to place everything in perspective and isolate the appendices to reflect specific requirements. There are several pieces of information which you must provide and I have noted in the copy where these items are needed.

In particular, we require some documentation of your insurance policy or self-insurance methodology in Appendix I. You have marked an aerial photograph requirement which was originally submitted in Appendix B, the original Part A Submittal. After reviewing your entire process and the requirements of RCRA, I am offering the following comments for your consideration.

1. The chrome treatment facility is not a treatment facility under the totally enclosed treatment concept of Part 260. In the strictest sense, the painting and bonderizing lines are not electroplating operations. As such, any sludge which you generate is not considered a sludge from an electroplating operation. In fact, if you review the source document, you will find that only cyanide-bearing electroplating operations fall in this category. Plating lines using non-cyanide baths have been delisted by the EPA.

Your treatment facility has been defined as handling F017 and several lesser quantity wastes. F017 is no longer a listed hazardous waste, having been removed in the January 26, 1981 amendment to the RCRA regulations. It appears to me that the only listed wastes which you generate are those solvents that may be used in your operations and which are hauled to the drum storage area for staging.

Samples of the other sludges produced indicate they are not hazardous under the EP procedure.

As GM is well aware, there are requirements of the facility associated with insurance, financial obligations under closure, trust funds, etc., which are to be established. There are few advantages to being classified as a facility except perhaps your peace of mind. It is my interpretation that the Wilmington Plant is not a facility, and if you should desire, now is the time to notify the EPA that you are not a facility and will not be submitting Part B. At the same time, request withdrawal of your Part A application.

GM is still a generator and will continue to comply with generator requirements. However, those requirements are much less extensive than for a treatment or storage facility. An intermediate option might be for you to withdraw the application for Part B for the treatment part, and simply have a facility permit for storage. This might provide the peace of mind which you require.

I would be happy to discuss any contents of this letter or any contents of the application with you.

Very truly yours,

ROY F. WESTON, INC.

R.J. Schoenberger, Ph.D., P.E.
Project Manager

RJS/ctr
Enc.

cc: P.B. Lederman

GM Assembly Division

General Motors Corporation

Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

September 22, 1982

Mr. Stephen R. Wassersug
Director, Air and Waste Management Division
United States Environmental Protection Agency
Region III
6th & Walnut Streets
Philadelphia, Pennsylvania 19106

RE: EPA I.D. NO. DED002369205

GMC Assembly Division - Wilmington
Boxwood Road
Wilmington, Delaware 19899

Dear Mr. Wassersug:

Submitted herewith are three (3) copies of the Hazardous Waste Application, Part B, for the Wilmington plant as requested by the EPA in your letter dated March 24, 1982.

Should you request additional information or have any questions, please feel free to contact Mr. Ernest Bosetti at the Wilmington plant, area code 302-998-8831 extension 212, 213 or 464.

Respectfully yours,

P. J. COLETTA
Vice President & General Manager
GM Assembly Division

PJC/lhw

cc: file

General Motors Corporation

Central Office
30009 Van Dyke Avenue
Warren, Michigan 48090

September 23, 1982

Mr. Stephen R. Wassersug
Director, Air and Waste Management Division
United States Environmental Protection Agency
Region III
6th & Walnut Streets
Philadelphia, Pennsylvania 19106

RE: EPA I.D. NO. DED002369205

GM Assembly Division - Wilmington
Boxwood Road
Wilmington, Delaware 19899

Dear Mr. Wasserusug:

Submitted herewith are three (3) copies of the Hazardous Waste Application, Part B, for the Wilmington plant as requested by the EPA in your letter dated March 24, 1982.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Should you request additional information or have any questions, please feel free to contact Mr. Ernest Bosetti at the Wilmington plant, (302) 998-8831, extension 212, 213 or 464.

Respectfully yours,

P. J. Coletta
Vice President & General Manager
GM Assembly Division

/nb

Application for Part B Permit
Under The Resource Conservation and Recovery Act
for
A Treatment and Storage Facility

Prepared By

General Motors Assembly Division
Wilmington, Delaware

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Appendix A - Hazardous Waste Characterization for Bonderite, Phosphate and Chrome Treatment Sludges - July 1982.

Hazardous Waste Characterization for Bonderite, Paint Residue, and Solvent Wastes.

Appendix B - Part A Submittal.

Appendix C - Waste Analysis Plan.

Appendix D - Inspection Schedule

Appendix E - Contingency Plan.

Appendix F - Traffic Surveys.

Appendix G - Operating Record.

Appendix H - Closure Plan.

Appendix I - Insurance Documentation.

Appendix J - Bonderite and Chrome Waste Effluent Tank.

Appendix K - Wastewater Treatment Tank.

Attachment III - Tank Drawing

Part B Application
General Motors Assembly Division
Wilmington, Delaware

INTRODUCTION

General Motors operates an Assembly Division for Chevette motor vehicles at the Wilmington Plant. The facility is located south of Delaware Route #2, Kirkwood Highway near the intersection of Kirkwood Highway and Delaware Route 141. The facility is bounded by Route 141 on the west and Boxwood Road on the south. There is no access from the north where the boundary is marked by the Wilsmere Yards of the Baltimore & Ohio (Chessie System). The property to the east is largely residential and Dodson Avenue marks the eastern boundary. The total size of the land parcel is approximately 141 acres, most of which is developed and used at the facility.

As part of the operation, the Wilmington Plant assembles and finishes vehicles from the component parts. As part of the assembly and finishing operation, several waste streams are produced which require monitoring and control by the facility. The primary streams in question are those associated with the painting and metal protection operations. Base coats in the treatment consist of a chromium-based anticorrosion material which is applied initially. Excess paint, clean-up and all wastes associated with the operation are carefully collected and treated on-site as part of the continuous totally enclosed treatment facility. A sludge is produced in the treatment operation which is hauled off-site for disposal. Storage of the material is in drums which are subsequently moved to a staging area for disposal. The sludge resulting from this operation is known as bonderite and the active chromium component is in the trivalent form.

Other wastes produced on that assembly line are paint residue and solvent which is used for clean-up operations. Recent improvements in the painting line utilize electrostatic attraction of the paint. This greatly reduces the amount of solvent which is required in the operation.

In July 1982, a sample of the bonderite phosphate and chrome treatment sludges were analyzed. The results of those analyses (presented in Appendix A of this application) indicate that the

sludges produced from the enclosed treatment process are not hazardous and, therefore, do not fall in the storage requirements for RCRA. However, in anticipation of future changes in the raw material, GM will consider licensing of the storage of these wastes under the Resource Conservation and Recovery Act, Part 264.

PERMIT CONTENTS

The contents of this submittal is organized to conform with the requirements of 40CFR-Part 122 and 40CFR-Part 264. A brief description of the contents of the respective portions of this submittal is given in the succeeding sections.

A. General Facility Description

The Part A application for the existing facility is given in Appendix A. All information which was previously submitted in that Part A is included. No new additional information is included, nor are there any revisions to Part A which have not been previously submitted to the Region III Office of EPA.

B. Chemical and Physical Analysis of Waste

Samples of waste streams were taken and analyzed in accordance with Part 264. The results of analyses are given in Appendix A for all wastes. Two reports are included in Appendix A which comprise analyses of all hazardous wastes generated by the Wilmington Plant of General Motors.

EP toxicity analyses as reported in the two reports reflect total chromium. However, the concentration of hexavalent chromium in all cases is well below the five milligrams per liter as required for consideration in the EP extraction leachate test. The only wastes which are hazardous under the definition of RCRA are the solvent and paint waste which fail because of the ignitibility criteria.

C. Waste Analysis Plan

Appendix C contains the waste analysis plan for the Wilmington facility. The waste analysis plan contains the parameters for analysis, the rationale for selecting the parameters, and the test procedures to be followed.

D. Security Procedures

The GM Plant at Wilmington operates under strict security procedures. Access to the facility is limited through gates, fences, and guard service. The grounds of the facility are monitored by close circuit television, and all visitors must be accompanied by plant personnel. The facility conforms with requirements under Part 264.14.

E. Inspection Schedule

An inspection schedule has been prepared for all pertinent activities and parts of the manufacturing process associated with RCRA and waste handling under RCRA. Appendix D is the inspection schedule for the facility including copies of the forms which are used to record the data.

F. Preparedness and Prevention

The Wilmington Plant complies with all regulations under Subpart C - Preparedness and Prevention.

G. Contingency Plan

A contingency plan has been developed by the facility and is presented in Appendix E. The contingency plan has been approved by the management at the facility and procedures contained in the plan have been discussed and explained to the appropriate personnel.

H. Emergency Procedures

Emergency procedures associated with handling of the waste in the generation area and movement to the storage area are discussed in the contingency plan.

I. Ignitable Wastes

The paint and solvent residues are ignitable wastes under RCRA. Sludges are collected from the clean-up area and from the coating and painting operations. Wastes are transferred to drums which are stored in the area as designated in Part A. The handling of ignitable wastes conforms to Part 264.17 and the storage area conforms to the requirements of 264.176 and 177.

J. Traffic Patterns

The General Motors Assembly Division, Wilmington Plant, is a major employer in the State of Delaware. Because of the high employment and because the facility is prepared to work three shifts when necessary, there occurs periods of congestion during the change of shifts. However, except during these peak periods, access to the facility is extremely adequate and movement of hazardous waste is not constrained, nor does it impart undue risk to the population surrounding the facility.

Two studies have been performed by the State of Delaware on traffic patterns and adequacy of existing roadways at the facility. Both studies are presented in Appendix F. The result of the March 1982 study showed that some traffic patterns could be implemented for improving the flow during the change in shifts. During the change in shifts, it is expected that high traffic patterns do result with long delays in cars exiting and entering the facility. General Motors will work with regulatory agencies to correct deficiencies within the facility.

K. Facility Information

The GM facility and New Castle County, Delaware are not listed in Appendix 6 of Part 264. The facility is not located in a 100 year flood plain. Storm drainage from the facility is designed to handle extreme flows and flooding problems are not a major consideration over the entire area of the facility.

L. Personnel Training

Personnel responsible for all hazardous waste activities have been identified and training of those individuals into the contents of emergency activities, contingency plans, prevention and preparedness have been completed. Contents of the training are included in the operating record as given in Appendix G, plus in the contingency plan and inspection schedule given in Appendices D&E.

M. Closure Plan

A closure plan has been developed for the facility. Details of the closure plan are presented in Appendix H. Also included in the closure plan is a cost estimate associated with closure. Since this is a storage facility, there are no post-closure requirements associated with this facility. Since this is not a disposal facility, no deed restriction or other appropriate legal instrument is necessary.

N. Insurance Coverage

Documentation is provided by General Motors for compliance with the Hazardous Waste Facility Liability Endorsement. Since this is a facility which does not have disposal options, no liability requirements are fulfilled under Part 264.147. Documentation is provided in Appendix I.

O. Structural Description

Storage of waste occurs in several types of containers. All washings containing solvent and paint waste are deposited into drums for transport off-site. All drums used for storage comply with the regulations regarding container size, material construction and reuse.

Details of the bonderite and chrome waste treatment tank and the wastewater treatment tank are provided in Appendix J and K, respectively. The specifications and size of the facilities are contained in those Appendices. In addition, Attachment III is provided which shows the construction of the bonderite waste tank, including curbing and and contingency plan compliance.

CLOSURE

The foregoing information is provided by the General Motors Assembly Division, Wilmington Plant, under its application for a Part B treatment and storage permit. The normal operation at the Wilmington Plant requires waste to be temporarily staged and removed off-site as quickly as possible. The normal activity at the facility does not require storage for ninety days or longer, and removal is on a more frequent basis. No listed hazardous wastes are handled by the facility except for the solvent clean-up materials. These wastewaters are all segregated and contractual arrangements exist with third parties for the disposal of waste produced.

APPENDIX A

1. Waste Analysis Report - July 1982

2. Waste Analysis Report - March 1982

GENERAL MOTORS CORPORATION
ASSEMBLY DIVISION
WILMINGTON, DELAWARE

HAZARDOUS WASTE CHARACTERIZATION FOR BONDERITE, PAINT RESIDUE, AND SOLVENT WASTES

16 March 1982

W.O. #0033-33-06

Joseph F. Martino
Associate Project Scientist
Laboratory Services

Walter P. Lambert, Ph.D.
Manager
Research and Development
Laboratory Services

Prepared by:

ROY F. WESTON, INC.
DESIGNERS-CONSULTANTS
Weston Way
West Chester, Pennsylvania 19380
(215) 692-3030

INTRODUCTION

Roy F. Weston, Inc. conducted a sampling and characterization program of solid waste materials for the General Motors Corporation. Sampling of bonderite, paint residue, and solvent wastes was performed at General Motors' Wilmington, Delaware plant on 22 January 1982. Each of the materials was tested to determine if they exhibited the characteristics of a hazardous waste as defined in 40 CFR 261, an implementing regulation for the Resource Conservation and Recovery Act (RCRA).

SAMPLING PROGRAM

Sampling of bonderite, paint residue, and solvent wastes from the Wilmington Plant was conducted by Weston personnel on 22 January 1982. Sampling supervision was provided on site by General Motors' personnel. The wastes were contained in metal drums which were located on the hazardous waste pad in the rear of the plant. Samples were obtained from randomly selected drums of each waste type.

The bonderite waste was a solid. Seven drums of the material were manually sampled after the tops of the containers had been removed. The seven samples were composited in Weston's West Chester, Pennsylvania laboratory on an equal weight basis to form a single sample which was then tested.

Two drums of the paint residue were sampled and an equal volume composite of the waste was made in the field. The paint residue waste was a sludge, and samples were collected with a stainless steel Coliwasa[1]-type device.

The solvent waste was a liquid and a sample was obtained from a single drum with an ISCO automatic sampler using teflon tubing.

[1]Coliwasa - Composite liquid waste sampler.

WASTE CHARACTERIZATION

Ignitability, corrosivity, and EP toxicity characterization was performed for the bonderite, paint residue, and solvent wastes. Waste characterization was conducted according to the appropriate definitions and procedures contained in Subpart C of 40 CFR 261 and in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA, SW-846, 1980.

The characteristic of ignitability was evaluated by a flash point determination (40 CFR 261.21[a][1]) with a Pensky-Martens Closed Cup Tester using the test method specified in ASTM Standard D-93-79. The ignitability of the wastes to a match flame (40 CFR 261.21[a][2]) was also observed.

The corrosivity of the wastes was tested by the pH method (40 CFR 261.22 [a][1]) Since the wastes were not aqueous in nature, sample pH was measured in water following the procedure for soil pH found in Methods of Soil Analysis, Chemical and Microbiological Properties, AGRONOMY, No. 9, Part 2, 1965.

Extraction of the wastes (40 CFR 261.24[a]) for the characteristic of EP toxicity followed the procedure in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. The EP toxicity extract of each of the wastes was analyzed for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Metal analyses were conducted in accordance with EPA procedures in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979, and Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980.

RESULTS

The results of the hazardous waste characterization for the bonderite, paint residue, and solvent wastes are summarized in Table 1. Tables 2-4 present

the detailed results of the ignitability, corrosivity, and EP toxicity evaluations for each waste. Applicable guidelines and limits established for each characteristic in 40 CFR 261 also appear in these tables.

Limits of detection for each of the eight metals analyzed in the EP toxicity extract are shown in Table 5 which should be referred to when analytical results are reported as "not found." The limit of detection is the lowest concentration of an analyte that the analytical process can reliably detect.

DISCUSSION

Laboratory testing showed that each of the wastes displayed one of the three hazardous waste characteristics evaluated. Both the paint residue and solvent wastes exhibited the characteristic of ignitability while the bonderite waste was found to exhibit the characteristic of EP toxicity with respect to chromium.

The highly ingitable and flammable nature of the paint residue and solvent wastes was observed during the characterization testing. Both materials had flash points at room temperature: 67°F for the paint residue and 64°F for the solvent. These values are well below the limit of 140°F set forth in 40 CFR 261.

The EP toxicity extract of the bonderite waste had a chromium concentration of 8.1 mg/L. This value is just over the maximum limit of 5.0 mg/L. The relatively small difference between the observed chromium concentration and the regulatory limit may warrant re-examination of the bonderite waste.

All other metal analyses performed on the EP toxicity extracts of the bonderite, paint residue, and solvent wastes were below the maximum levels established in 40 CFR 261.

None of the samples were found to exhibit the characteristic of corrosivity. The pH values of all three wastes fell within the acceptable range of 2.0-12.5.

GENERAL MOTORS CORPORATION

ASSEMBLY DIVISION

WILMINGTON, DELAWARE

TABLE 1

SUMMARY OF HAZARDOUS WASTE CHARACTERIZATION

	Characteristic of Hazardous Waste		
Waste	Ignitability	Corrosivity	EP Toxicity
Bonderite	No	No	Yes, chromium
Paint Residue	Yes	No	No
Solvent	Yes	No	No

GENERAL MOTORS CORPORATION

ASSEMBLY DIVISION - WILMINGTON, DELAWARE

TABLE 2

HAZARDOUS WASTE CHARACTERIZATION FOR BONDERITE WASTE

RFW NUMBER

13773 (sample)
13761 (leachate)

Sample Collected 22 January 1982

Characteristic	Result	EPA Hazardous Waste Number		EPA Guideline/Limit Evaluated
Ignitability	Flash point: Not observed below 140°F	D001	40 CFR 261.21(a)(1):	Liquid and has flashpoint less than 60°C (140°F).
	Not ignitable to open flame		40 CFR 261.21(a)(2):	Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited burns so vigorously and persistently that it creates a hazard.
Corrosivity	Sample pH measured in water (standard units): 7.8	D002	40 CFR 261.22(a)(1):	Aqueous and has pH less than or equal to 2.0 or greater than or equal to 12.5.
EP Toxicity	Contaminant Concentration in Extract (mg/L)		40 CFR 261.24(a) :	Maximum Contaminant Concentration in Extract (mg/L)
	Arsenic: Not found, see Table 5	D004		Arsenic: 5.0
	Barium: 0.18	D005		Barium: 100.0
	Cadmium: Not found, see Table 5	D006		Cadmium: 1.0
	Chromium: 8.1	D007		Chromium: 5.0
	Lead: Not found, see Table 5	D008		Lead: 5.0
	Mercury: Not found, see Table 5	D009		Mercury: 0.2
	Selenium: 0.02	D010		Selenium: 1.0
	Silver: Not found, see Table 5	D011		Silver: 5.0

GENERAL MOTORS CORPORATION

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TABLE 3

HAZARDOUS WASTE CHARACTERIZATION FOR PAINT RESIDUE WASTE

RFW NUMBER

13758 (sample)
13762 (leachate)

Sample Collected 22 January 1982

Characteristic	Result	EPA Hazardous Waste Number		EPA Guideline/Limit Evaluated
Ignitability	Flash point observed at 67°F	D001	40 CFR 261.21(a)(1):	Liquid and has flashpoint less than 60°C (140°F).
	Ignitable to open flame		40 CFR 261.21(a)(2):	Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so virogously and persistent that it creates a hazard.
Corrosivity	Sample pH measured in water (standard units): 12.0	D002	40 CFR 261.22(a)(1):	Aqueous and has pH less than or equal to 2. or greater than or equal to 12.5.
EP Toxicity	Contaminant Concentration in Extract (mg/L)		40 CFR 261.24(a) :	Maximum Contaminant Concentration in Extrac (mg/L)
	Arsenic: Not found, see Table 5	D004		Arsenic: 5.0
	Barium: 2.65	D005		Barium: 100.0
	Cadmium: Not found, see Table 5	D006		Cadmium: 1.0
	Chromium: 0.06	D007		Chromium: 5.0
	Lead: 4.0	D008		Lead: 5.0
	Mercury: Not found, see Table 5	D009		Mercury: 0.2
	Selenium: 0.03	D010		Selenium: 1.0
	Silver: Not found, see Table 5	D011		Silver: 5.0

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TABLE 4

HAZARDOUS WASTE CHARACTERIZATION FOR SOLVENT WASTE

RFW NUMBER

13759 (sample)
13763 (leachate)

Sample Collected 22 January 1982

Characteristic	Result	EPA Hazardous Waste Number		EPA Guideline/Limit Evaluated
Ignitability	Flash point: Observed at 64°F	D001	40 CFR 261.21(a)(1):	Liquid and has flashpoint less than 60°C (140°F).
	Ignitable to open flame		40 CFR 261.21(a)(2):	Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
Corrosivity	Sample pH measured in water (standard units): 4.3	D002	40 CFR 251.22(a)(1):	Aqueous and has pH less than or equal to 2.0 or greater than or equal to 12.5.
EP Toxicity	Contaminant Concentration in Extract (mg/L)		40 CFR 261.24(a):	Maximum Contaminant Concentration in Extract (mg/L)
	Arsenic: Not found, see Table 5	D004		Arsenic: 5.0
	Barium: 0.35	D005		Barium: 100.0
	Cadmium: Not found, see Table 5	D006		Cadmium: 1.0
	Chromium: Not found, see Table 5	D007		Chromium: 5.0
	Lead: Not found, see Table 5	D008		Lead: 5.0
	Mercury: Not found, see Table 5	D009		Mercury: 0.2
	Selenium: Not found, see Table 5	D010		Selenium: 1.0
	Silver: Not found, see Table 5	D011		Silver: 5.0

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TABLE 5

LIMITS OF DETECTION FOR
METAL ANALYSES OF EP TOXICITY EXTRACT

Contaminant	Limit of Detection (mg/)
Arsenic	0.002
Barium	0.004
Cadmium	0.01
Chromium	0.01
Lead	0.1
Mercury	0.0002
Selenium	0.002
Silver	0.01

Appendix A

GM ASSEMBLY DIVISION
GENERAL MOTORS CORPORATION
WILMINGTON PLANT
WILMINGTON, DELAWARE

HAZARDOUS WASTE CHARACTERIZATION FOR BONDERITE PHOSPHATE AND CHROME TREATMENT SLUDGES

July 1982

W.O. #0033-33-06

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INTRODUCTION

ROY F. WESTON, INC. conducted a sampling and characterization program of solid waste materials for the General Motors Corporation. Samples of the phosphate and chrome treatment sludges were collected from Stages 5 and 7, respectively, of the Body and Small Parts Bonderite Unit. The sampling was performed at General Motors' Wilmington, Delaware plant on 22 June 1982. Each of the materials was tested at WESTON's West Chester, Pennsylvania Laboratory to determine if they exhibited the characteristics of a hazardous waste as defined in 40 CFR 261, an implementing regulation for the Resource Conservation and Recovery Act (RCRA).

SAMPLING PROGRAM

Sampling of both the phosphate and chrome treatment sludges was conducted at the Wilmington Plant by WESTON personnel on 22 June 1982. Sampling supervision was provided on site by General Motors' personnel.

A sample of the phosphate sludge was obtained by scraping the material from Stage 5 of the Bonderite Process. The phosphate sludge was collected from only one unit. A sample of the chrome treatment sludge was collected in a similar manner from Stage 7 of The Bonderite Process. Approximately equal portions from two units were composited in a single sampling container.

WASTE CHARACTERIZATION

Ignitability, corrosivity, and EP toxicity characterization was performed for both the phosphate and chrome treatment sludges. Waste characterization was conducted according to the appropriate definitions and procedures contained in Subpart C of 40 CFR 261 and in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA, SW-846, 1980.

The characteristic of ignitability was evaluated by observing the sludges' behavior to an open flame (40 CFR 261.21 [a][2]).

The corrosivity of the sludges was tested by the pH method (40 CFR 261.22 [a][1]). Since the wastes were not aqueous in nature, sample pH was measured in water following the procedure for soil pH found in Methods of Soil Analysis, Chemical and Microbiological Properties, AGRONOMY, No. 9, Part 2, 1965.

Extraction of the sludges (40 CFR 261.24[a]) for the characteristic of EP toxicity followed the procedure in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. The EP toxicity extract of each of the sludges was analyzed for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Metal analyses were conducted in accordance with EPA procedures in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979, and Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980.

RESULTS

The results of the hazardous waste characterization for the phosphate and chrome treatment sludges are summarized in Table 1. Tables 2 and 3 present the detailed results of the ignitability, corrosivity, and EP toxicity evaluations for each sludge. Applicable guidelines and limits established for each characteristic in 40 CFR 261 also appear in these tables.

Limits of detection for each of the eight metals analyzed in the EP toxicity extract are shown in Table 4 which should be referred to when analytical results are reported as "not found." The limit of detection is the lowest concentration of an analyte that the analytical process can reliably detect.

DISCUSSION

Laboratory testing showed that neither the phosphate sludge nor the chrome treatment sludge displayed any of the three hazardous waste characteristics evaluated.

Both of the sludges were not ignitable to an open flame.

Neither of the samples was found to exhibit the characteristic of corrosivity. The pH values of both sludges fell within the acceptable range of 2.0-12.5.

All of the eight metal analyses performed on the EP toxicity extracts of the two sludges were below the maximum levels established in 40 CFR 261.

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WILMINGTON, DELAWARE

TABLE 1

SUMMARY OF HAZARDOUS WASTE CHARACTERIZATION

Waste	CHARACTERISTIC OF HAZARDOUS WASTE		
	Ignitability	Corrosivity	EP Toxicity
Phosphate Sludge from Stage 5 of the Body and Small Parts Bonderite Unit	No	No	No
Chrome Treatment Sludge from Stage 7 of The Body and Small Parts Bonderite Unit	No	No	No

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TABLE 2

HAZARDOUS WASTE CHARACTERIZATION FOR BONDERITE PHOSPHATE SLUDGE

RFW NUMBERS

16917 - Sample
17355 - Leachate
Sampled Collected 22 June 1982

Characteristic	Result	EPA Hazardous Waste Number	EPA Guideline/Limit Evaluated	
Ignitability	Not ignitable to open flame	D001	40 CFR 261.21 (a)(2):	Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
Corrosivity	Sample pH measured in water (standard units): 4.1	D002	40 CFR 261.22 (a)(1):	Aqueous and has pH less than or equal to 2.0 or greater than or equal to 12.5.
EP Toxicity	Contaminant Concentration in Extract (mg/L)		40 CFR 261.24 (a):	Maximum Contaminant Concentration in Extract (mg/L)
	Arsenic: Not found, see Table 4	D004		Arsenic: 5.0
	Barium: 0.05	D005		Barium: 100.0
	Cadmium: Not found, see Table 4	D006		Cadmium: 1.0
	Chromium: Not found, see Table 4	D007		Chromium: 5.0
	Lead: Not found, see Table 4	D008		Lead: 5.0
	Mercury: Not found, see Table 4	D009		Mercury: 0.2
	Selenium: Not found, see Table 4	D010		Selenium: 1.0
	Silver: Not found, see Table 4	D011		Silver: 5.0

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GENERAL MOTORS CORPORATION
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TABLE 3

HAZARDOUS WASTE CHARACTERIZATION FOR BONDERITE CHROME TREATMENT SLUDGE

RFW NUMBER

16918 - sample
17356 - leachate

Sample Collected 22 June 1982

Characteristic	Result	EPA Hazardous Waste Number	EPA Guideline/Limit Evaluated	
Ignitability	Not ignitable to open flame	D001	40 CFR 261.21(a)(2):	Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
Corrosivity	Sample pH measured in water (standard units): 10.2	D002	40 CFR 261.22(a)(1):	Aqueous and has pH less than or equal to 2.0 or greater than or equal to 12.5.
EP Toxicity	Contaminant Concentration in Extract (mg/L)		40 CFR 261.24(a):	Maximum Contaminant Concentration in Extract (mg/L)
	Arsenic: Not found, see Table 4	D004		Arsenic: 5.0
	Barium: 0.13	D005		Barium: 100.0
	Cadmium: Not found, see Table 4	D006		Cadmium: 1.0
	Chromium: 2.87	D007		Chromium: 5.0
	Lead: Not found, see Table 4	D008		Lead: 5.0
	Mercury: Not found, see Table 4	D009		Mercury: 0.2
	Selenium: Not found, see Table 4	D010		Selenium: 1.0
	Silver: Not found, see Table 4	D011		Silver: 5.0

GM ASSEMBLY DIVISION

GENERAL MOTORS CORPORATION

WILMINGTON PLANT

WILMINGTON, DELAWARE

TABLE 4

LIMITS OF DETECTION FOR
METAL ANALYSES OF EP TOXICITY EXTRACT

Contaminant	Limit of Detection (mg/L)
Arsenic	0.002
Barium	0.004
Cadmium	0.01
Chromium	0.01
Lead	0.1
Mercury	0.0002
Selenium	0.002
Silver	0.01

APPENDIX B

Part A Submittal

1. Form 1
2. Form 3
3. Attachment 1 - Plot Plan
4. Aerial Photograph
5. Attachment II - General Location
6. U.S.G.S. Quadrangle, Newark East, DE
7. U.S.G.S. Quadrangle, Wilmington South, DE-NJ

APPENDIX C

Waste Analysis Plan

Appendix C

GENERAL WASTE ANALYSIS PLAN

FOR

GMAD - WILMINGTON

BY: ERNEST R. BOSETTI
DATE: OCTOBER 1, 1981

GENERAL WASTE ANALYSIS PLAN

INTRODUCTION

SECTION 265.13 OF THE EPA INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE FACILITIES REQUIRES THAT "BEFORE AN OWNER OR OPERATOR TREATS, STORES, OR DISPOSES OF ANY HAZARDOUS WASTE, HE MUST OBTAIN A DETAIL CHEMICAL AND PHYSICAL ANALYSIS OF A REPRESENTATIVE SAMPLE OF THE WASTE". ANALYSIS MUST BE DEVELOPED AND FOLLOWED FOR ALL OWNERS AND OPERATORS.

A WASTE IS HAZARDOUS IF IT EXHIBITS THE CHARACTERISTICS WHICH MAY:

1. CAUSE, OR SIGNIFICANTLY CONTRIBUTE TO, AN INCREASE IN MORTALITY OR AN INCREASE IN SERIOUS IRREVERSIBLE, OR INCAPACITATING REVERSIBLE, ILLNESS; OR
2. POSE A SUBSTANTIAL PRESENT OR POTENTIAL HAZARD TO HUMAN HEALTH OR THE ENVIRONMENT WHEN IT IS IMPROPERLY TREATED, STORED, TRANSPORTED, DISPOSED OF, OR OTHERWISE MANAGED.

SUBPART "C" OF 40CFR261 LISTS THE CRITERIA FOR CHARACTERIZING A SOLID WASTE AS A HAZARDOUS WASTE. THE CHARACTERISTICS ARE THOSE OF IGNITABILITY, CORROSIVITY, REACTIVITY AND E.P. TOXICITY.

SUBPART "D" OF 40CFR261 CONTAINS LISTS OF HAZARDOUS WASTES. A SOLID WASTE IS A HAZARDOUS WASTE IF IT IS LISTED UNLESS IT HAS BEEN EXCLUDED UNDER 260.20 OR 260.22.

AN ANALYSIS PLAN SHOULD TAKE INTO CONSIDERATION THE ABOVE CRITERIA AND PROVIDE THE NECESSARY DATA TO ALLOW CLASSIFICATION BY THE GENERATOR AND DISPOSAL BY THE DISPOSAL CONTRACTOR. THE FOLLOWING PLAN IS DESIGNED TO MEET THE REQUIREMENTS OF THE REGULATIONS WITH REFERENCE TO ATTACHED APPENDICES FOR SPECIFIC METHODOLOGY.

I. SAMPLING CONSIDERATIONS

ALL SUSPECTED HAZARDOUS WASTE GENERATED BY GMAD-WILMINGTON THAT IS DESIGNATED FOR TREATMENT, STORAGE, OR DISPOSAL WILL BE SAMPLED AND A DETAILED CHEMICAL AND PHYSICAL ANALYSIS WILL BE OBTAINED FROM A REPRESENTATIVE SAMPLE OF THE WASTE.

IT WILL BE THE RESPONSIBILITY OF THE PURCHASING DEPARTMENT TO NOTIFY PLANT ENGINEERING DEPARTMENT WHEN THEY HAVE REASON TO BELIEVE THAT THE COMPOSITION OF THE GENERATED WASTE HAS CHANGED OR THAT THEY HAVE AN "UNKNOWN" WASTE MATERIAL.

IT WILL BE THE JOINT RESPONSIBILITY OF THE PURCHASING DEPARTMENT AND PLANT ENGINEERING DEPARTMENTS TO OBTAIN REPRESENTATIVE SAMPLES OF THE CHANGED OR UNKNOWN WASTE MATERIAL. IT WILL BE THE SOLE RESPONSIBILITY OF THE ENVIRONMENTAL ENGINEER, ERNEST R. BOSETTI, TO OBTAIN THE ANALYSIS OF ALL SAMPLED WASTE MATERIAL.

A. SAMPLING METHODS

THE METHOD AND EQUIPMENT USED FOR SAMPLING WASTE MATERIALS WILL VARY. THE FOLLOWING METHODS ARE CONSIDERED BY THE EPA TO BE ACCEPTABLE AND ARE ATTACHED AS APPENDIX I:

EXTREMELY VISCOUS LIQUID	ASTM STANDARD D140-70
CRUSHED OR POWDERED MATERIAL	ASTM STANDARD D346-75
SOIL OR ROCK-LIKE MATERIAL	ASTM STANDARD D420-69
SOIL-LIKE MATERIAL	ASTM STANDARD D1452-65
FLY ASH-LIKE MATERIAL	ASTM STANDARD D2234-76
CONTAINERIZED LIQUID WASTES	"COLIWASA" - "TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL/CHEMICAL METHODS" U.S.E.P.A.

B. SAMPLE FREQUENCY

THE ANALYSIS MUST BE REPEATED AS NECESSARY TO ENSURE THAT IT IS ACCURATE AND UP-TO-DATE. FREQUENCY OF ANALYSIS WILL BE AS FOLLOWS:

1. ALL "UNKNOWN" WASTE MATERIALS WILL BE SAMPLED AND CHARACTERIZED WHEN THEY ARE DELIVERED TO THE WASTE TREATMENT PLANT FOR STORAGE AND/OR DISPOSAL. (PLEASE NOTE THAT AN "UNKNOWN" WASTE MATERIAL IS ONE THAT HAS NOT BEEN PREVIOUSLY CHARACTERIZED).

2. ANALYSIS FOR SPECIFIC WASTE MATERIALS WILL BE REPEATED IF THE PROCESS GENERATING THE WASTE HAS CHANGED.

3. ANALYSIS FOR SPECIFIC WASTE MATERIALS WILL BE REPEATED IF AN ANALYSIS BY THE DISPOSAL CONTRACTOR DOES NOT MATCH THIS PLANT'S ORIGINAL WASTE ANALYSIS.

4. ANALYSIS DATA WILL BE REVIEWED ON AN ANNUAL BASIS AND DETERMINATION MADE AS TO WHICH NEED TO BE REPEATED.

II. TEST METHODS AND PARAMETERS

A. SELECTION OF PARAMETERS

1. LIQUID, SEMI-SOLID, SOLID WASTES

   A. PH (S.U.)
   B. PHYSICAL STATE
   C. FLASH POINT - CLOSED CUP
   D. VISCOSITY (CENTISTOKES)
   E. VAPOR PRESSURE
   F. SPECIFIC GRAVITY _
   G. HEATING VALUE BTU/LB.
   H. LAYERS
   I. TOTAL SOLIDS
   J. ASH CONTENT
   K. FREE CYANIDE
   L. TOTAL CYANIDE
   M. SULFATE
   N. CHLORIDE
   O. HEAVY METALS (SILVER, ARSENIC, BARIUM, CADMIUM, CHROMIUM, COPPER, MERCURY, NICKEL, LEAD, SELENIUM, ZINC)

B. RATIONAL FOR SELECTING OF PARAMETERS

ANALYSIS OF LIQUID, SOLID AND SEMI-SOLID WASTES FOR THE ABOVE LISTED PARAMETERS ALONG WITH THE GENERATORS KNOWLEDGE OF THE MATERIALS USED AND THE PROCESSES GENERATING THE WASTE WILL BE SUFFICIENT TO DETERMINE IF THE WASTE MATERIAL IS A R.C.R.A. HAZARDOUS WASTE AND PROVIDE BACKGROUND DATA FOR PROPER MANAGEMENT OF THE WASTE MATERIAL.

C. OTHER PARAMETERS

A. MATERIALS WHICH ARE SUSPECTED OF CONTAINING PCB'S WILL BE ANALYZED FOR PCB CONTENT.

B. MATERIALS WHICH ARE SUSPECTED OF BEING EP TOXIC WILL BE ANALYZED ACCORDING TO THE EPA EP TOXICITY TEST.

D. TEST METHODS

THE FOLLOWING TEST METHODS ARE TO BE USED IN TESTING FOR THE ABOVE PARAMETERS: (METHODS INCLUDED AS APPENDIX II)

	METHODS		
	E.P.A.[3]	STD. METHODS[2]	OTHER[4]
PH (S.U.)	5.2[1]	P460	
FLASH POINT			ASTM D-93
VISCOSITY			ASTM D-88
VAPOR PRESSURE			ASTM D-323
SPECIFIC GRAVITY		P121	
HEAVING VALUE			ASTM D-2015
LAYERS		P95, 129	OBSERVATION
TOTAL SOLIDS	160.3	P89	ASTM D-96
ASH CONTENT		P95	ASTM D-482
TOTAL CYANIDE	8.55[1]	P361	
FREE CYANIDE	8.55[1]	P376	
SULFATE	376.1, 377.1	P493	ASTM D-129
CHLORIDE		P303	ASTM D-808
SILVER	272.1, .2	P148	
ARSENIC	206.3	P285	
BARIUM	208.1, .2	P152	
CADMIUM	213.1, .2	P148	
CHROMIUM	218.1, .2	P148	
COPPER	220.1, .2	P148	

D. TEST METHODS - (CONTINUED)

	E.P.A.[3]	STD. METHODS[2]	OTHER[4]
MERCURY	245.1	P156	
NICKEL	149.1, .2	P148	
LEAD	239.1, .2	P148	
SELENIUM	270.3	P159	
ZINC	289.1, .2	P148	
E.P. TOXICITY	SW-846, SECTION 7.0[1]		
PCB'S	SW-846, SECTION 8.0[1]		

NOTE 1: "TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL/CHEMICAL METHODS" U.S.E.P.A.

NOTE 2: STANDARD METHOD FOR THE EXAMINATION OF WATER AND WASTEWATER, 14TH EDITION, 1975.

NOTE 3: "METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES" U.S.E.P.A.

NOTE 4: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), PHILADELPHIA, PENNSYLVANIA.

III. EVALUATION OF TEST RESULTS

A. REVIEW OF MATERIALS & PROCESSES

THE ENVIRONMENTAL ENGINEER WILL REVIEW THE MATERIALS AND PROCESSES USED IN GENERATING THE WASTE MATERIAL. THIS INFORMATION WILL BE USED AND CHECKED AGAINST SUBPART D OF 40CFR-261 TO SEE IF THE WASTE MATERIAL IS A LISTED HAZARDOUS WASTE. IF THE WASTE MATERIAL IS A LISTED HAZARDOUS WASTE, THE ANALYTICAL DATA

A. REVIEW OF MATERIALS & PROCESSES - (CONTINUED)

WILL BE REVIEWED AND WILL EITHER BECOME PART OF THE BACKGROUND DATA OR BE USED TO JUSTIFY POSSIBLE DE-LISTING STUDIES.

B. REVIEW OF SOLID WASTE CHARACTERISTICS

IF THE WASTE MATERIAL IS NOT A LISTED HAZARDOUS WASTE, CRITERIA UNDER SUBPART C OF 40CFR-261 MUST BE REVIEWED IN ORDER TO CHARACTERIZE THE WASTE MATERIAL. THE CHARACTERISTICS ARE IGNITABILITY, CORROSIVITY, REACTIVITY AND E.P. TOXICITY. CAREFUL ATTENTION TO THESE REQUIREMENTS AND A REVIEW OF THE ANALYTICAL DATA WILL PROVIDE A BASIS FOR CLASSIFYING THE WASTE MATERIAL AS HAZARDOUS OR NON-HAZARDOUS WASTE.

C. USE OF DATA FOR DISPOSAL CONTRACTOR FORMS

THE ANALYSIS PLAN PROVIDES FOR SUFFICIENT TESTING TO FULFILL REQUIREMENTS OF THE DISPOSAL CONTRACTORS USED BY GMAD-WILMINGTON. IN THE EVENT THAT NEW REQUIREMENTS ARE IMPOSED, THE PLAN WILL BE REVIEWED AND NECESSARY CHANGES WILL BE MADE.

APPENDIX I - SAMPLING METHODS

EXERPTS FROM:

ASTM PROCEDURES

"TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL/CHEMICAL METHODS", U.S.E.P.A.

AMERICAN NATIONAL STANDARD ANSI/ASTM D 140 - 70 (Reapproved 1976)

Standard Methods of SAMPLING BITUMINOUS MATERIALS[1]

This Standard is issued under the fixed designation D 140; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

1. Scope

1.1 These methods apply to the sampling of bituminous materials at points of manufacture, storage, or delivery.

NOTE 1—The values stated in U.S. customary units are to be regarded as the standard. The metric equivalents of U.S. customary units may be approximate.

2. Purpose

2.1 Sampling is as important as testing, and every precaution shall be taken to obtain samples that will show the true nature and condition of the materials.

2.2 Samples may be taken for either of the following two purposes:

2.2.1 To represent as nearly as possible an average of the bulk of the materials sampled, or

2.2.2 To ascertain the maximum variation in characteristics which the material possesses.

3. Selection of Samples

3.1 Whenever practicable, bituminous materials shall be sampled at the point of manufacture or storage, and at such time as to allow the tests controlling acceptance or rejection to be made in advance of shipment.

3.2 When the samples cannot be taken at the point of manufacture or storage, they shall be taken from the shipment immediately upon delivery.

4. Size of Samples

4.1 The sample size of liquid materials shall be as follows:

4.1.1 For routine laboratory examination, 1 qt (1 dm^3) (emulsions, 1 gal (4 dm^3)),

4.1.2 From bulk storage, 1 gal, or

4.1.3 From barrels or drums, 1 qt.

4.2 The sample size of semisolid or solid materials shall be as follows:

4.2.1 From barrels, drums, or cakes, 2 to 3 lb (1 to 1.5 kg), or

4.2.2 From crushed or powdered material in bulk or bags, 2 to 3 lb (1 to 1.5 kg).

5. Containers

5.1 *Type of Containers:*

5.1.1 Containers for liquid bituminous materials, except emulsions, shall be wide-mouth cans with lined screw caps or triple-seal friction-top cans.

5.1.2 Containers for emulsified bituminous materials shall be wide-mouth jars or bottles made of plastic, or wide-mouth plastic-lined cans with lined screw caps, or plastic-lined triple-seal friction-top cans.

5.1.3 Containers for crushed or powdered bituminous materials shall be triple-seal friction-top cans or plastic sacks placed in other containers suitable for handling.

5.2 *Size of Containers:*

5.2.1 The size of the container shall correspond to the required amount of sample.

6. Protection and Preservation of Samples

6.1 Sample containers shall be new. They shall not be washed or rinsed, or wiped with an oily cloth. If they contain evidence of solder flux, or if they are not clean and dry, they shall not be used. Top and container

[1] These methods are under the jurisdiction of ASTM Committee D-4 on Road and Paving Materials and are the direct responsibility of Subcommittee D04.30 on Methods of Sampling.

Current edition effective Feb. 27, 1970. Originally issued 1922. Replaces D 140 - 66 T.

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

shall fit together tightly.

6.2 Care shall be taken to prevent the sample from becoming contaminated. Immediately after filling, the container shall be tightly and positively sealed.

6.3 The filled sample container shall not be submerged in solvent, nor shall it be wiped with a solvent saturated cloth. If cleaning is necessary use a clean dry cloth.

6.4 Samples of emulsions shall be protected from freezing by correct packaging.

6.5 Samples shall not be transferred from one container to another except where required by the sampling procedure.

6.6 Immediately after filling, sealing, and cleaning, the sampling containers shall be properly marked for identification with a suitable marking pencil on the container itself, not on the lid. Linen tags also may be used for identification if they can be securely fastened to the container in such a manner as to ensure that they will not be lost in transit. Linen tags shall not be attached to containers by using the lids to secure them.

7. Sampling at Place of Manufacture

7.1 *Vertical Tanks Not Capable of Being Agitated (Liquid Materials or Materials Made Liquid by Heating)* (5000 bbl (800 m³) or more capacity) Three sampling methods are recommended (Note 2):

7.1.1 *Sampling-Valve Method*—Valves shall be located, with easy and safe access provided, on the side of the tank with the first in the top third of the tank, but no higher than 3 ft (1 m) from the top; the second in the middle third of the tank; and the third in the bottom third of the tank, but no lower than 3½ ft (1.1 m) from the bottom. A recommended design of the sampling valve is shown in Fig. 1.

NOTE 2—During sampling by any of the methods described all filling inlets and discharge outlets to the tank shall be closed.

7.1.1.1 A minimum of 1 gal (4 dm³) of the product shall be drawn from each sample valve and discarded before taking the sample for test, and

7.1.1.2 1 qt (1 dm³) to 1 gal shall be drawn from each sample valve for test.

7.1.2 *Thief Sampler Method* (not suitable for asphalt cements)—Samples shall be taken in the top, middle, and lower sections at levels indicated in 7.1.1, of the tank by lowering a thief sampler into the material. A satisfactory type with instructions for use is shown in Fig. 2.

NOTE 3—Most bituminous materials in the liquid state are of such viscous and adhesive character that, after normal emptying of a container by pouring, the container retains enough material to cause significant contamination of any second samples secured before the container was thoroughly cleaned. The aforementioned properties of bituminous materials also make container cleaning a difficult, tedious, and time-consuming task.

NOTE 4 The thief sampler described in Fig. 2 may be used for repetitive sampling because significant sample contamination by previous contents is avoided by the self-cleaning action provided by the passage of material through the tube-shaped thief sampler which is open at both ends. The practice of raising and lowering the sampler 3 or 4 times through a distance of several feet at the sampling depth is recommended.

7.1.3 *Throw-Away Container Method*—Samples shall be taken at top, middle, and lower levels by lowering into the material a container in a suitable weighted holding device. The essential feature of the method is to use a clean container to take the sample, pour this sample into another clean container, and throw away the container used to take the sample from the tank. A satisfactory type with instructions on how to use the device is shown in Fig. 3.

7.1.4 The three samples from bulk storage tanks may be tested separately for consistency to detect stratification. They may be combined, thoroughly mixed, and a 1-qt to 1-gal sample may be taken for other tests that may be required for determining average characteristics of the material.

7.2 *Bulk Storage Tanks (Liquid Materials or Materials Made Liquid by Heating) Equipped with Mechanical Agitators*—When the tank is equipped with operating mechanical agitators which, by observation through the sampling or inspection hatch, are performing adequate mixing of the tank contents, a single sample taken by any of the methods described in 7.1.1, 7.1.2, or 7.1.3 will be satisfactory to use for test purposes.

8. Sampling from Tank Cars, Vehicle Tanks, Distributor Trucks or Recirculating Storage Tanks

8.1 The sample may be taken from the sample valve or tap if the tanks are provided

with them. When such sampling devices are required, they are to be built into the tank itself. A sampling device of this type is shown in Fig. 1. Before the sample is taken, 1 gal (4 dm^3) shall be drawn from the sample valve and discarded.

8.2 Samples of liquid materials and materials made liquid by heating may be taken by the dip method using a clean wide-mouth or friction-top can in a suitable holder as shown in Fig. 4. A clean container must be used to take each sample, and the material sampled shall then be transferred to another new and clean container for retention or testing sample.

8.3 A detachable fitting, similar in design to the one shown in Fig. 5 may be inserted in the discharge line. Before the sample is taken 1 gal shall be drawn from this sampling valve and discarded.

9. Sampling from Tankers and Barges

9.1 For liquid materials (including all cutbacks made liquid by heating) top, middle, and lower samples shall be taken using the methods as described in 7.1.2 and 7.1.3.

9.2 For all other materials made liquid by heating, a top sample only shall be taken by the dip, thief, or throw-away container method.

10. Sampling from Pipe Lines During Loading or Unloading

10.1 When tankers and barges are being loaded or unloaded samples may conveniently be taken from the pipe line through which the material is flowing by insertion of a sampling pipe into a rising section of the pipe line on the discharge side of the pump or in a completely filled line in which gravity creates the materials flow. A suitable in-line sampling pipe is shown in Fig. 5. The sampling pipe shall be not more than one eighth the diameter of the pipe line and its opening should be turned to face the flow of the liquid. This pipe shall be provided with a valve or plug cock and shall discharge into a sample receiver. At least three 1-gal (4-dm^3) samples shall be taken at uniform intervals throughout the entire loading or unloading. At the completion of the loading or unloading, the individual 1-gal samples shall be combined, thoroughly mixed without altering its characteristics, and a 1-gal sample taken therefrom.

10.2 When sampling tankers and barges 25,000 bbl (4000 m^3), or less, capacity, at least five 1-gal samples shall be taken at uniform intervals throughout the entire loading or unloading (25,000 bbl, or larger, capacity requires at least ten 1-gal samples). At completion of the loading or unloading the individual 1-gal samples shall be combined, thoroughly mixed in a manner designed to not alter its characteristics, and a 1-gal sample taken therefrom.

11. Sampling from Drums or Barrels

11.1 After thorough mixing, samples of liquid bituminous material from barrels or drums shall be secured by tube or thief sampling by taking 1 qt (1 dm^3) of material from packages selected at random according to Section 12.

12. Sampling Semisolid or Uncrushed Solid Materials

12.1 *Drums, Barrels, Cartons, and Bags*—Where the lot of material to be sampled is obviously from a single run or batch of the producer, one package shall be selected at random and sampled as described below. Where the lot of material to be sampled is not obviously from a single run or batch of the producer, or where the single samples selected as described above fails on test to conform to the requirements of the specifications, a number of packages shall be selected at random equivalent to the cube root of the total number of packages in the lot. The following table is given, showing the number of samples to be selected for shipments of various sizes.

Packages in Shipment	Packages Selected
2 to 8	2
9 to 27	3
28 to 64	4
65 to 125	5
126 to 216	6
217 to 343	7
344 to 512	8
513 to 729	9
730 to 1000	10
1001 to 1331	11

Samples shall be taken from at least 3 in. (76 mm) below the surface and at least 3 in.

from the side of the container. A clean hatchet may be used if the material is hard enough to shatter and a broad, stiff putty knife if the material is soft. When more than one package in a lot is sampled, each individual sample shall be not less than ¼ lb (0.1 kg) in weight. When the lot of material is obviously from a single run or batch of the producer, all samples from the lot shall be melted and thoroughly mixed, and an average 1-gal (4-dm³) sample taken from the combined material for examination. In case more than a single run or batch of the producer is present and the batches can be clearly differentiated, a composite 1-gal sample shall be prepared for examination from each batch. Where it is not possible to differentiate between the various batches, each sample shall be examined separately.

13. Sampling Crushed or Powdered Materials

13.1 *Bulk Storage*—Solid bituminous materials in crushed ASTM fragments or powder shall be sampled in accordance with ASTM Method D 346, Collection and Preparation of Coke Samples for Laboratory Analysis.[2] The gross sample shall be not less than 50 lb (25 kg) from which shall be selected the 2 to 3-lb (1 to 1.5-kg) sample for test.

13.2 *Drums, Barrels, Bags and Cartons*—Where the crushed or powdered material is in barrels, drums, or bags, a number of packages shall be selected at random as described in Section 12. A sample at least 1½ lb (0.7 kg) in weight shall be selected from near the center of each container to yield a gross sample weighing not less than 50 lb (22.7 kg) from which the 2 to 3-lb (1 to 1.5-kg) sample for test shall be selected as prescribed in Method D 346.

14. Sampling at Point of Shipment Delivery

14.1 Sampling of bituminous materials shall be done as soon as practicable after the bituminous material has arrived at plant site, storage site, or job destination or at the time of unloading.

14.2 The required number of samples shall be taken from each delivery of bituminous material. In the case of small delivery units such as distributors, the samples shall be taken to represent a maximum of 10,000 gal (40 m³).

14.3 Sampling shall be done by one of the three following methods:

14.3.1 In accordance with Section 7.

14.3.2 By bleeding through a sample valve or tap in the transfer line during the unloading of the approximate middle third of the load, or

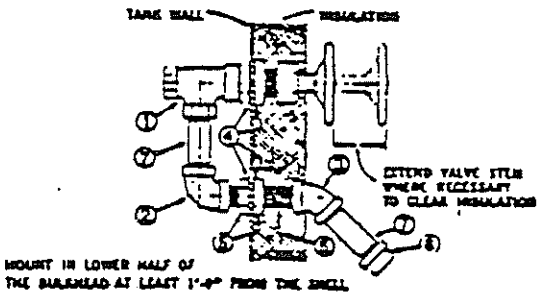
14.3.3 By means of a sampling device inserted to a level of approximately the middle third of the load or tank.

14.4 Tests for material acceptability shall be made on one of the samples taken. The other samples are to be retained for confirmation in the event the first sample tested should fail to comply with requirements.

15. Precautions

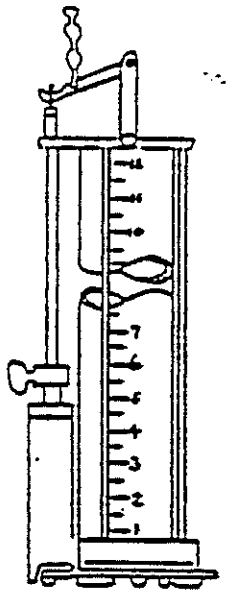
15.1 Because of the numerous types and grades of bituminous materials that are alternately shipped and stored in the same or similar containers, the opportunity for contaminating these containers with residues, precipitates, or cleaning solvents is ever present. Numerous opportunities also exist for obtaining samples which are not strictly representative of the material or are contaminated after removal. Therefore it is incumbent upon the producer, transporter, user, and sampler to exercise continuous precaution in the sampling and handling of these materials.

[2] *Annual Book of ASTM Standards*, Part 26.



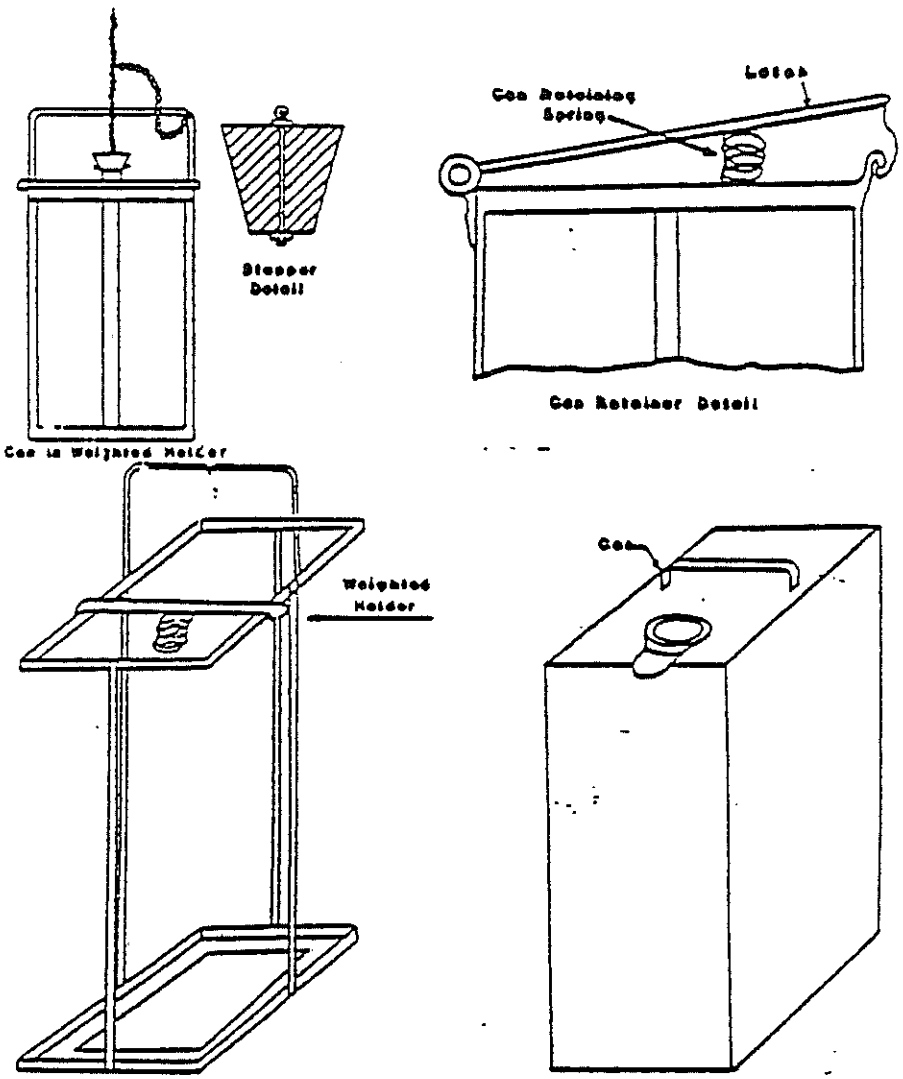
REF. No.	DESCRIPTION	No. REQ.
1	¼" "VOGT" F-9944 STEEL ANGLE VALVE OR SIMILAR, PANEL MOUNTED	1
2	¼" STEEL OR MALL. IRON 90° ELBOW	1
3	¼" STEEL OR MALL. IRON 45° ELBOW	1
4	ASBESTOS GASKETS SIZED OR THREAD OR WOUND WITH YARN	4
5	¼" LOCK SCREWED M. I. LOCKNUT	2
6	¼" x 2½" — PARALLEL THREADED STEEL PIPE NIPPLE (CUT FROM ¼" STD. TANK NIPPLE IF OTHERWISE UNOBTAINABLE)	1
7	¼" x 3" THREADED STEEL PIPE NIPPLE	2
8	¼" MALL. IRON PIPE CAP	1

FIG. 1 Typical Submerged Sampling Device.



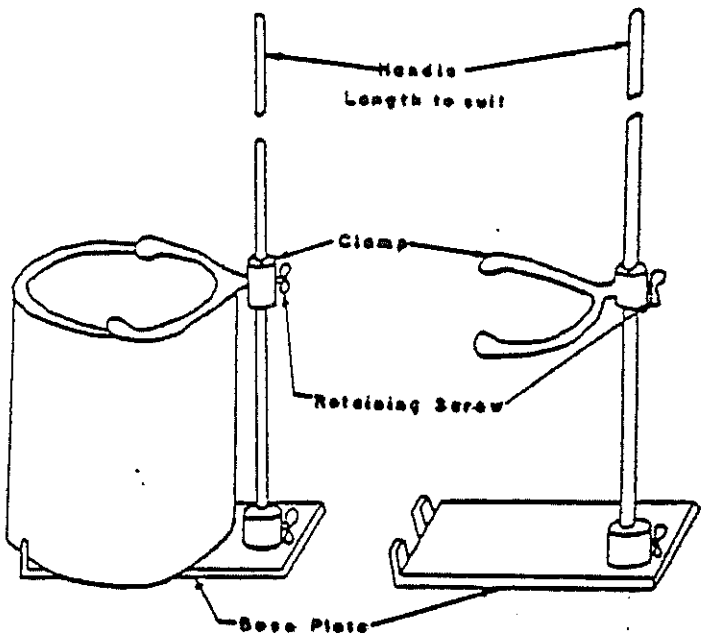
NOTE—This type sampler is lowered into the tank with bottom valve open (there is no top closure). When the desired depth is reached, the lowering chain is given a snap lug which closes the bottom valve. The sampler is then withdrawn from the tank and the contents transferred to the sample container. This sampler may be used for repetitive sampling in the same tank.

FIG. 2 Thief Sampler.



NOTE—This type sampler is lowered into the tank with the stopper in place. When the desired depth is reached, the stopper is removed by means of the attached wire, cord, or chain and the container allowed to fill. Complete filling is indicated by the cessation of bubbles of air from the can at the surface of the liquid. The sampler is then withdrawn from the tank and the contents poured into the clean sampler container. A clean can (bottle) must be used for each sample taken.

FIG. 3 Throw-Away Container Sampler.



NOTE—Sampler with can secured in place is rapidly lowered into tank to desired depth and allowed to fill with sample. The sampler is then withdrawn from the tank and the contents transferred to the sample container. A clean container *must* be used to take each sample.

FIG. 4 Dip Sampler.

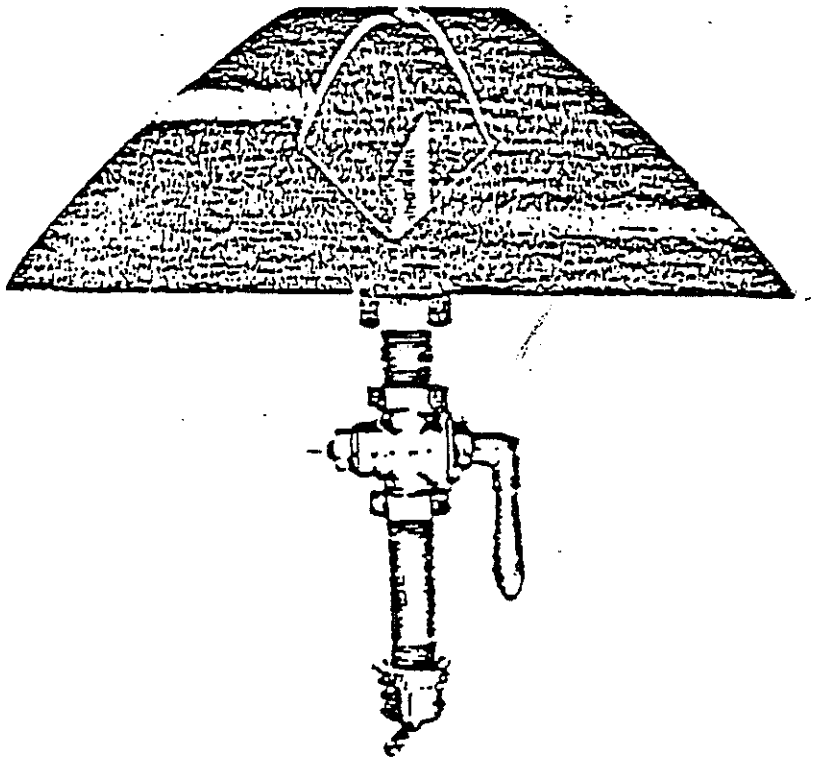


FIG. 5 In-Line Asphalt Sampling Device.

Designation: D 346 – 75

Standard Method of
COLLECTION AND PREPARATION OF COKE SAMPLES FOR LABORATORY ANALYSIS[1]

This Standard is issued under the fixed designation D 346; the number immediately following the designation indicates the year of original adoption, or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

INTRODUCTION

It is imperative that every sample be collected and prepared carefully and conscientiously and in strict accordance with the standard procedure described herein, for if the sampling is improperly done, the sample will be in error, and it may be impossible or impracticable to take another sample; whereas, if an analysis is in error, another analysis can readily be made of the original sample. The sample cannot be improved after the original sampling has been completed.

Gross samples of not less than the quantities designated in this method must be taken whether the coke to be sampled consists of a few tons or several hundred tons in order to minimize the effect of the chance inclusion or exclusion of too many or too few pieces of unrepresentative material.

1. Scope

1.1 This method covers the collection and preparation of samples of coke for laboratory analysis, and the determination of total moisture of the coke.

2. Applicable Documents

2.1 *ASTM Standards:*

D 271 Laboratory Sampling and Analysis of Coal and Coke[2]

D 2013 Preparing Coal Samples for Analysis[3]

D 2234 Collection of a Gross Sample of Coal[3]

3. Place of Sampling

3.1 Sample the coke while it is being loaded into or unloaded from railroad cars, ships, barges, or trucks, or when discharged from supply bins, railroad cars, grab buckets, or other coke-conveying equipment.

3.2 Samples collected from the surface of coke in piles, bins, cars, ships, or barges are, in general, unreliable because of size segregation and should not be used for determining conformance to specifications unless the purchaser and the seller so agree. In case it is necessary to collect a sample of coke from the surface of loaded shipments, take nine equal increments, about 1 ft (305 mm) below the surface. Locate the nine sampling points as shown in Fig. 1.

4. Size of Coke

4.1 Unsized coke that has coke size larger than 2 in. (51 mm) and presized coke of a bottom size larger than ¾ in. (19 mm):

4.1.1 The size of coke to be sampled frequently is larger than ¾ in. (19 mm), and the quantities to be sampled have frequently been closely sized previously, so that only manual methods can be applied. For these reasons coke larger than 2 in. (51 mm) top size and sized

[1] This method is under the jurisdiction of ASTM Committee D-5 on Coal and Coke.

Current edition approved Feb. 28, 1975. Published April 1975. Originally published as D 346 – 32 T. Last previous edition D 346 – 35 (1969).

[2] Discontinued, see 1974 *Annual Book of ASTM Standards*, Part 26.

[3] *Annual Book of ASTM Standards*, Part 26.

coke larger than ¾ in. (19 mm) bottoms size will be sampled, reduced, and divided in accordance with the methods in Sections 5, 6, 7, and 8 until the coke will pass a ¾-in. (19-mm) screen. At this point sample reduction and division follow Methods D 2013, beginning with Section 7.

4.1.2 Samples for the determination of total moisture of coke larger than ¾ in. (19 mm) are to be obtained separately and the moisture determined in accordance with the methods in Section 11.

4.2 Crushed coke that has been only reduced to a top size of 2 in. (51 mm) and any coke which is ¾ in. (19 mm) or smaller:

4.2.1 Sample these sizes of coke by Methods D 2234, and make the sample reduction and division by the methods in Methods D 2013.

4.2.2 Obtain the samples for the determination of total moisture in coke ¾ in. (19 mm) or smaller separately and determine the moisture in accordance with the methods in Section 11.

5. Size of Increments

5.1 To collect samples, use a shovel or specially designed tool or mechanical means for taking equal portions or increments. When samples are collected from the surface of loaded shipments, the gross sample shall consist of nine increments of approximately equal quantity. When sampling from piles, conveyor belts, etc., the gross sample shall consist of not less than 25 nor more than 50 increments of approximately equal quantity.

6. Collection of Gross Sample

6.1 Collect the increments regularly and systematically, so that the entire quantity of coke sampled will be represented proportionately in the gross sample, and with such frequency that a gross sample of the required amount will be collected. The standard gross sample shall be not less than the quantities given in 6.1.1.

6.1.1 *Size of Sample to be Taken*—The minimum weight of gross sample of coal coke (coke from coal) to be taken depends on the size of the coal from which the coke was made. Some examples are listed for various cokes made from various feeds of coals:

6.1.1.1 For run-of-oven, blast-furnace, foundry, water gas, and any coke containing a range of size of pieces made from uncrushed or coarsely crushed coal, provided more than 10 % of the coal was retained on a ¼-in. (6-mm) square hole sieve, but excluding coke breeze, or in case the pulverization of the coal is not known, the minimum weight required is 500 lb (227 kg).

6.1.1.2 For run-of-oven, blast-furnace, foundry, water gas, and any coke containing a range of size of pieces made from crushed coal provided not less than 90 % of the coal passed through a ¼-in. (6-mm) square hole sieve, but excluding coke breeze, minimum weight required is 250 lb (113 kg).

6.1.1.3 For closely sized coke made from uncrushed or coarsely crushed coal provided more than 10 % of the coal was retained on a ¼-in. (6-mm) square hole sieve and that the coke is free of coke breeze, the minimum weight required is 250 lb (113 kg). In case the pulverization of the coal is not known, take quantities designated for coke made from uncrushed or coarsely crushed coal (500 lb (227 kg)).

6.1.1.4 For closely sized coke made from crushed coal provided not less than 90 % of the coal passed through a ¼-in. (6-mm) square hole sieve, but excluding coke breeze, the minimum weight required is 125 lb (57 kg).

6.1.1.5 For coke breeze (coke that all passes a ¾-in. (19-mm) square hole sieve), the minimum required weight is 125 lb (57 kg).

6.1.2 For coke produced from materials other than coal, the sample size shall be mutually agreed upon between the purchaser and the seller.

7. Quantity Represented

7.1 Take a gross sample for each 250 tons (227 Mg) or fraction thereof, or in case of larger tonnages, for such quantities as may be agreed upon. Sample each lot of coke arising from a different source or known to be of different quality or size separately.

8. Preparation of Coke Sample

8.1 The entire gross sample shall be crushed, mixed, and divided in quantity to convenient size for transmission to the laboratory. Crush the sample preferably by means of jaw or roll crushers, or in case mechanical crushing means

are not available, crush the coke sample on a chilled-iron or hard-steel plate by impact of a tamper, hard bar, or sledge, avoiding all rubbing actions as otherwise the ash content may be materially increased by the addition of iron from the sampling apparatus even though hardened iron or steel is used. Do the crushing under such conditions as to prevent loss of coke or accidental admixture of foreign matter. Samples of the quantities indicated in Table I shall be crushed so that no pieces of coke and impurities will be greater in dimension, as judged by eye, then specified for the sample before division into two approximately equal parts.

8.1.1 The method of dividing by hand the quantity of coke in a gross sample shall be carried out as described even though the initial size of coke and impurities be less than indicated in Table I.

8.1.2 Do the progressive division in the weight of the sample to the quantities indicated in Table I by the following methods, which are described and illustrated in the accompanying Plate I until the maximum size of the coke is ¾ in. (19 mm).

8.1.2.1 Repeat the alternate-shovel method of dividing the gross sample until the sample is divided to approximately 125 lb (57 kg) and take care to observe before each division in quantity that the sample has been crushed to the fineness specified in Table I. Shovel the crushed coke into a conical pile (Fig. 2, Plate I) by depositing each shovelful of coke on top of the preceding one, and then formed into a long pile in the following manner: Take a shovelful of coke from the conical pile and spread it out in a straight pile (Fig. 3A) having a width equal to the width of the shovel and a length of 5 to 10 ft (1.5 to 3 m). Spread the next shovelful directly over the top of the first shovelful, but in the opposite direction, and so on back and forth, pile occasionally flattening the pile, until all the coke has been formed into one long pile (Fig. 3B). Then separate half of this pile, proceeding as follows: Beginning on one side of the pile, at either end, and shoveling from the bottom of the pile, take one shovelful (shovelful No. 1, Fig. 4) and set it aside; advancing along the side of the pile a distance equal to the width of the shovel, take a second shovelful (shovelful No. 2) and discard it; again advancing in the same direction one shovel width, take a third shovelful (shovelful No. 3) and add it to the first. Take the fourth (shovelful No. 4) in the manner and discard, retain the fifth (shovelful No. 5), and so on, advancing always in the same direction around the pile so that its size is gradually divided in a uniform manner. When the pile is removed, about half of the original quantity of coke should be contained in the new pile formed by the alternate shovelfuls that have been retained. (Fig. 5A shows the retained half and Fig. 5B the rejected half.)

8.1.3 Riffles or other mechanical means of sample division may be substituted for the alternate-shovel method, provided equally representative samples are obtained.

8.1.4 After the gross sample has been divided by the alternate-shovel method to approximately 125 lb (57 kg) sample of ¾-in. (19 mm) coke, proceed by the methods in Section 9.

8.1.5 Since in the report of the analysis a brief description should be given of the method of taking the sample, by such characteristic expressions as "belt sample," "top-of-car," etc., include information as to how the sample is taken in the description that accompanies the sample sent to the laboratory.

9. Preparation of Laboratory Samples for Analysis

9.1 *Apparatus for Preparing Coke Sam*

9.1.1 *Crusher*—See Section 5.2 of Met D 2013.

9.1.2 *Roller-Crusher*—A hard-steel crusher suitable for reducing the material passing a No. 4 (4.75-mm) sieve to pass a No. (850-μm) sieve.

9.1.3 *Pulverizer*—A porcelain jar ball m hard-steel roll crusher, or hard-steel diamo mortar for reducing the product passing a N 20 (850-μm) sieve to pass a No. 60 (250-μ sieve. The porcelain jars for the ball mill sho be approximately 9 in. (229 mm) in diame and 10 in. (254 mm) in height. The flint pebbl should be smooth, hard, and well-rounded. T rolls of the hard-steel roll crusher should r volve at the same speed.

9.1.4 *Large Riffle Sampler*—See Metho D 2013, Section 4.5.2.

9.1.5 *Small Riffle Sampler*—See Metho

D 2013, Section 4.5.2.

9.1.6 *Sieves*—See Method D 2013, Section 5.7.

9.1.7 *Containers*—See Method D 2013, Section 10.15.8.

9.2 *Reduction of Sample:*

9.2.1 Crush the sample mechanically with a jaw or roll crusher, or by hand on a chilled iron or hard-steel plate by impact of a hard bar or sledge, avoiding all rubbing action, since otherwise the ash content will be materially increased by the addition of iron from the sampling apparatus, even though hardened iron or steel is used. Continue the crushing until all the sample passes through a No. 4 (4.75-mm) sieve, mix, and divide on the large riffle sampler to not less than 5 lb (2.3 kg); again crush the 5-lb (2.3-kg) sample sufficiently fine to pass a No. 20 (850-μm) sieve, mix and divide on the small riffle sampler to 200 g. Transfer this 200-g portion to the porcelain jar of the ball mill and pulverize to pass a No. 60 (250-μm) sieve. When pulverization is complete, pour the contents of the jar on a ½ in. (12.5-mm) sieve and separate the sample from the pebbles by sieving. Pass all the material through a No. 60 (250-μm) sieve, pulverizing any coarse particles by impact in a hard-steel diamond mortar and mix with the remainder of the sample. Divide the sample through the small riffle sampler to about 50 g and transfer to a rubber-stoppered glass bottle.

9.2.2 In case a ball mill is not available for fine grinding, quarter the 5-lb (2.3-kg) sample passing a No. 20 (850-μm) sieve to 200 g, and pulverize to pass a No. 60 (250-μm) sieve by means of a hard-steel roll crusher in which the rolls revolve at the same speed, or by impact in a hard-steel diamond mortar. The use of rubbing surfaces such as a disk pulverizer or a bucking board is never permissable for grinding coke.

9.2.3 This 50-g sample is the sample used for laboratory analysis (see Method D 271).

DETERMINATION OF TOTAL MOISTURE

10. Sampling

10.1 For determining total moisture, take a special moisture sample weighing approximately 50 lb (23 kg). Take the moisture sample when the coke is being loaded or unloaded as the case may be, and accumulate by placing in waterproof receptacle with a tight-fitting l small equal parts of the freshly taken incr ments of the standard gross sample described Sections 5 and 6.

11. Apparatus

11.1 *Pans for Total Moisture Determinatic* —Galvanized iron or other suitable pans 24 b 24 by 4 in. (610 by 610 by 102 mm) in depth.

11.2 *Balance or Solution Scale*—A balanc or scale having a minimum capacity of 10 k and sensitive to 1 g for weighing the galvanize iron pans with samples.

11.3 *Crusher*—See Section 5.2 of Method D 2013.

11.4 *Oven, Stove, or Hot Plate*—An oven stove, or hot plate for drying coke samples i the determination of total moisture. If an over is used, it should have openings provided fo natural ventilation and should be capable of being regulated between 104 and 200°C.[4] If the coke is dried on a stove or hot plate, a thermometer should be placed in it, and care exercised that the temperature does not exceed 200°C at any point in the pan of coke.

12. Procedure

12.1 Dry the special moisture sample, without any preliminary crushing, preferably to constant weight at a temperature of not less than 104 nor more than 200°C. In case it is impracticable to dry the entire sample, proceed as follows:

12.1.1 *For Coke Appearing Dry*—Crush the special moisture sample rapidly to ½ in. (13 mm) size and reduce mechanically or by hand to about a 5-lb (2.3-kg) quantity; immediately place in a container, seal airtight, and forward to the laboratory without delay.

12.1.1.1 *Laboratory Moisture Determination*—Dry the entire sample received at the laboratory to constant weight at not less than 104°C nor more than 200°C.[4] Calculate the loss in weight to percentage of moisture, which shall constitute the total moisture in the coke as received at the laboratory.

[4] Experiments made at the U.S. Bureau of Mines have shown that results checking within 0.5 % are obtained between these temperature limits. See Fieldner, A. C., and Selvig, W. A., "The Determination of Moisture in Coke," U.S. Bureau of Mines, *Technical Paper No. 145* (1917).

12.1.2 *For Coke Appearing Wet*—Spread the special moisture sample on tared pans, weigh, and air-dry or dry in a warm place or on a warm or heated surface until the coke appears dry, and weigh again. Complete the sampling as described for coke appearing dry. This loss in weight divided by weight of sample, multiplied by 100, is the percentage of air-drying loss. Correct for the moisture found in the sample sent to the laboratory.

12.1.2.1 *Moisture Determination*—Dry the entire sample received at the laboratory to constant weight at not less than 104°C nor more than 200°C.[4] Calculate the loss in weight to percentage of moisture, which shall constitute the moisture in the coke as received at the laboratory.

13. Calculation

13.1 If the sample was dry before preparation for transmittance to the laboratory for analysis, calculate the total moisture, M, as follows:

$$M = (A/W) \times 100$$

where:

M = total moisture, %,
A = oven loss, and
W = total sample weight.

13.2 If the laboratory sample was wet before preparation but dried before arrival at the laboratory for analysis, calculate the total moisture, M, as follows:

$$M' = A'(100)/W'$$
$$M = M' + [(A)(100-M')/W]$$

where:

M = total moisture, %,
M' = moisture loss from wet coke, %,
A = oven loss, laboratory sample,
A' = air dried loss, gross sample (see 12.1.2),
W = moisture sample weight, laboratory sample and
W' = sample weight, gross sample (see 12.1.2).

TABLE 1 Weights of Coke Samples with Corresponding Crushing Sizes

Weight of Sample to be Divided		Largest Size of Coke and Impurities Allowable in Sample Before Division	
lb	kg	in.	mm
250 or over	113 or over	1	25
125	57	¾	19
60	27	½	13
30	14	¼	6

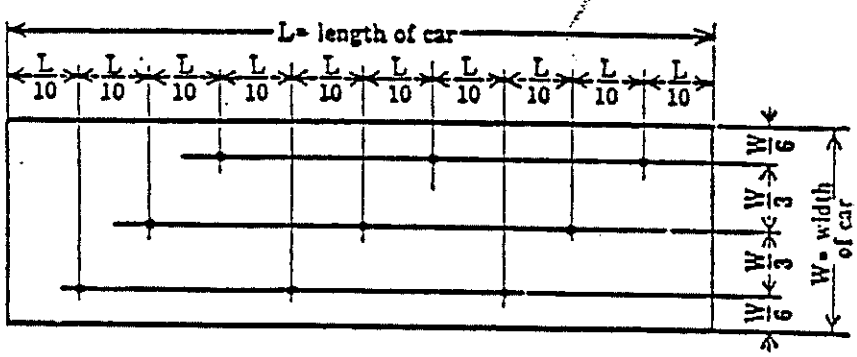


FIG. 1 Location of Sampling Points from Exposed Surface of Car.

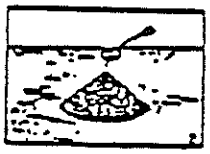
NOTE

SELECT A HARD, CLEAN SURFACE, FREE OF CRACKS AND PROTECTED FROM RAIN, SNOW, WIND, AND BEATING SUN. TO KEEP OUT CINDERS, SAND, CHIPPINGS FROM FLOOR, OR ANY OTHER FOREIGN MATTER GET INTO THE SAMPLE. PROTECT SAMPLE FROM LOSS OR GAIN IN MOISTURE

FIRST STAGE in the Preparation of a 500-Pound (227 kg) Sample



Crush 500 lb (227 kg) on hard, clean surface to 1 inch (25 mm)



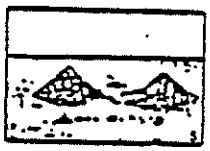
500 lb (227 kg) sample crushed to 1" (25 mm) and coned



Mix by forming long pile
A-Spreading out first shovelful
B-Long pile completed



Halving by alternate shovel method. Shovelfuls 1,3,5, etc. reserved as 5A; 2,4,6, etc. rejected as 5B



Long pile divided into two parts;
A-Reserve; B-Reject



Crush 250 lb (113 kg) Sample (Fig 5A) to 3/4" (19 mm) size

SECOND STAGE



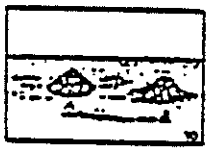
250 lbs. (113 kg) crushed to 3/4" (19 mm) and coned



Mix by forming long pile
A-Spreading out first shovelful
B-Long pile completed



Halving by alternate shovel method. Shovelfuls 1,3,5, etc. reserved as 10 A; 2,3,5, etc. rejected as 10 B



Long pile divided into two parts;
A-Reserve; B-Reject

Necessary tools: shovel, tamper, and steel plate, broom, and rake. Use rake for raking over coke when crushing it, so that all lumps will be crushed. Sweep floor clean of all discarded coke after each time sample is halved.

PLATE 1 Standard Method of Sampling Coke for Analysis

APPENDIX II - TEST METHODS

EXERPTS FROM:

"TEST METHODS FOR THE EVALUATION OF SOLID WASTE, PHYSICAL/CHEMICAL METHODS", U.S.E.P.A.

STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th EDITION, 1975

"METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES", U.S.E.P.A.

AMERICAN NATIONAL STANDARD ANSI/ASTM D 93 – 73[ε]

IP Designation: 34/71

Method 1102—Federal Test Method Standard No. 791b
Replaces Method 4293 of Federal Test Method Standard No. 141A
British Standard 2839

Standard Test Method for FLASH POINT BY PENSKY-MARTENS CLOSED TESTER[1]

ADOPTED (as method GO-7), 1924; LAST REVISED, 1971

This Standard of the American Society for Testing and Materials is issued under the fixed designation D 93; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. This is also a standard of the Institute of Petroleum issued under the fixed designation IP 34. The final number indicates the year of last revision.

This method was adopted as a joint ASTM-IP Standard in 1967.

[ε] NOTE 1—Editorial changes were made throughout in September 1974
NOTE 2—An editorial change was made by adding Section 1.2 in October 1974.

1. Scope

1.1 This method covers the determination of the flash point by Pensky-Martens Closed Cup Tester of fuel oils, lube oils, suspensions of solids, liquids that tend to form a surface film under test conditions, and other liquids. For the determination of the flash point of drying oils and solvent-type waxes refer to Note 1.

NOTE 1—The flash point of drying oils may be determined using Method D 1393 and the flash point of solvent-type liquid waxes may be determined using Method D 1437.

NOTE 2—This method may be employed for the detection of contamination of lubricating oils by minor amounts of volatile materials.

NOTE 3—The U. S. Department of Transportation (OHM)[2] and U. S. Department of Labor (OSHA) have established that liquids with a flash point under 100 F (37.8 C) are flammable as determined by this method for those liquids which have a viscosity of 45 SUS or more at 100 F (37.8 C) or that contain suspended solids, or have a tendency to form a surface film while under test. Other classification flash points have been established by these Department's for liquids using this test.

Liquids having viscosities less than 45 SUS at 100 F (37.8 C), do not contain suspended solids or do not have a tendency to form a surface film while under test are regulated in accordance with Method D 56.

Coast Guard and Consumer Product Safety Committee Regulations are required by law to define flammable liquids as those having a flash point under 80 F (26.7 C) by an Open Cup Method (Method D 1310).

1.2 *This standard should be used to measure and describe the properties of materials, products, or systems in response to heat and flame under controlled laboratory conditions and should not be used for the description or appraisal of the fire hazard of materials, products, or systems under actual fire conditions*[3a]

2. Applicable Documents

2.1 *ASTM Standards:*

D 56 Test for Flash Point by Tag Closed Tester[3]

D 1310 Test for Flash Point of Liquids by Tag Open-Cup Apparatus[3, 4]

D 1393 Test for Flash Point of Drying Oils[5]

D 1437 Test for Flash Point of Solvent-Type Liquid Waxes[6]

E 1 Specification for ASTM Thermometers[7]

3. Summary of Method

3.1 The sample is heated at a slow, con-

[1] This method is under the jurisdiction of ASTM Committee D-2 on Petroleum Products and Lubricants.

Current edition approved Aug. 27, 1973. Published October 1973. Originally published as D 93 - 21 T. Last previous edition D 93 - 72.

In the IP, this method is under the jurisdiction of the Standardization Committee.

In 1971 the scope was revised.

[2] For information concerning regulations of U.S. Department of Transportation see Codes of U.S. Regulations 49 CFR Chapter I and of U.S. Department of Labor see 29 CFR Chapter XVII. Each of these items are revised annually and may be procured from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

[3a] This caveat has been placed in the standard in accordance with a policy established by the ASTM Board of Directors in September 1973. The caveat will remain in this standard until Committee E-39 on Fire Hazard Standards has approved it as a fire hazard standard.

[3] *Annual Book of ASTM Standards*, Parts 23 and 29.

[4] *Annual Book of ASTM Standards*, Part 15.

[5] Discontinued, see 1976 *Annual Book of ASTM Standards*, Part 29.

[6] *Annual Book of ASTM Standards*, Part 30.

[7] *Annual Book of ASTM Standards*, Parts 25 and 44.

stant rate with continual stirring. A small flame is directed into the cup at regular intervals with simultaneous interruption of stirring. The flash point is the lowest temperature at which application of the test flame causes the vapor above the sample to ignite.

4. Apparatus

4.1 *Pensky-Martens Closed Flash Tester*, as described in Appendix A1.

NOTE 4—There are automatic flash point testers available and in use which may be advantageous in the saving of testing time, permit the use of smaller samples, and have other factors which may merit their use. If automatic testers are used, the user must be sure that all of the manufacturer's instructions for calibrating, adjusting, and operating the instrument are followed. In any cases of dispute, the flash point as determined manually shall be considered the referee test.

4.2 *Thermometers*—Two standard thermometers shall be used with the ASTM Pensky-Martens tester, as follows:

4.2.1 For tests in which the indicated reading falls within the limits 20 to 200 F (−7 to +93 C), inclusive, an ASTM Pensky-Martens Low Range or Tag Closed Tester Thermometer having a range from 20 to 230 F (−5 to +110 C) and conforming to the requirements for Thermometers 9F (9C) and as prescribed in ASTM Specification E 1 or 1P Thermometer 15F (15C) conforming to specifications given in Appendix A3, shall be used.

4.2.2 For tests in which the indicated reading falls within the limits 230 to 700 F (110 to 371 C), an ASTM Pensky-Martens High Range Thermometer having a range from 200 to 700 F (90 to 370 C) and conforming to the requirements for Thermometers 10F (10C) as prescribed in Specification E 1 or 1P Thermometer 16F (16C) conforming to specifications given in Appendix A3, shall be used.

4.2.3 For the range 200 to 230 F (93 to 110 C) either thermometer may be used.

5. Preparation of Apparatus

5.1 Support the tester on a level, steady table. Unless tests are made in a draft-free room or compartment, it is good practice, but not required, to surround the tester on three sides with a shield, each section of which is about 18 in. (46 cm) wide and 24 in. (61 cm) high.

6. Preparation of Sample

6.1 Samples of very viscous materials may be warmed until they are reasonably fluid before they are tested. However, no sample should be heated more than is absolutely necessary. It shall never be heated above a temperature of 30 F (16 C) below its expected flash point.

6.2 Samples containing dissolved or free water may be dehydrated with calcium chloride or by filtering through a qualitative filter paper or a loose plug of dry absorbent cotton. Warming the sample is permitted, but it shall not be heated for prolonged periods or above a temperature of 30 F (16 C) below its expected flash point.

NOTE 5—If the sample is suspected of containing volatile contaminants, the treatment described in 6.1 and 6.2 should be omitted.

7. Procedure

7.1 Thoroughly clean and dry all parts of the cup and its accessories before starting the test, being sure to remove any solvent which had been used to clean the apparatus. Fill the cup with the sample to be tested to the level indicated by the filling mark. Place the lid on the cup and set the latter in the stove. Be sure to have the locating or locking device properly engaged. Insert the thermometer. Light the test flame and adjust it to $^{5}/_{32}$ in. (4 mm) in diameter. Supply the heat at such a rate that the temperature as indicated by the thermometer increases 9 to 11 F (5 to 6 C)/min. Turn the stirrer 90 to 120 rpm, stirring in a downward direction.

7.2 If the sample is known to have a flash point of 220 (104 C) or below, apply the test flame when the temperature of the sample is from 30 F (17 C) to 50 F (28 C) below the expected flash point and thereafter at a temperature reading that is a multiple of 2 F (1 C). Apply the test flame by operating the mechanism on the cover which controls the shutter and test flame burner so that the flame is lowered into the vapor space of the cup in 0.5 s, left in its lowered position for 1 s, and quickly raised to its high position. Do not stir the sample while applying the test flame.

7.3 If the sample is known to have a flash point above 220 F (104 C) apply the test flame in the manner just described at each temperature that is a multiple of 5 F (3 C), beginning at a temperature of 30 F (17 C) to 50 F (28 C) below the expected flash point.

NOTE 6—When testing materials to determine if volatile contaminants are present, it is not necessary to adhere to the temperature limits for initial flame application as stated in 7.2 and 7.3.

7.4 Record as the flash point the temperature read on the thermometer at the time the test flame application causes a distinct flash in the interior of the cup. Do not confuse the true flash point with the bluish halo that sometimes surrounds the test flame at applications preceding the one that causes the actual flash.

DETERMINATION OF FLASH POINT OF SUSPENSIONS OF SOLIDS

8. Procedure

8.1 Bring the material to be tested and the tester to a temperature of 60 ± 10 F (15 ± 5 C) or 20 F (11 C) lower than the estimated flash point, whichever is lower. Completely fill the air space between the cup and the interior of the air bath with water at the temperature of the tester and sample. Turn the stirrer 250 ± 10 rpm, stirring in a downward direction. Raise the temperature throughout the duration of the test at a rate of not less than 2 nor more than 3 F (1 to 1.5 C)/min. With the exception of these requirements for rates of stirring and heating, proceed as prescribed in Section 7.

NOTE 7—Solid carbon dioxide (CO_2) (dry ice) shall in no case be used to obtain the proper rate of temperature rise, since CO_2 has a blanketing effect which leads to a false flash point.

9. Calculation and Report

9.1 Observe and record the barometric pressure at the time of the test. When the pressure differs from 760 mm Hg, correct the flash point by means of the following equations:

$$\text{Corrected flash point} = F + 0.06\,(760 - P)$$

or

$$\text{Corrected flash point} = C + 0.03\,(760 - P)$$

where:

F = observe flash point, deg F.
C = observe flash point, deg C.
P = barometric pressure, mm Hg.

9.2 Record the corrected flash point to the nearest 1 F or 0.5 C.

9.3 Report the recorded flash point as the Pensky-Martens Closed Cup Flash Point, ASTM D 93 - IP 34, of the sample tested.

10. Precision

10.1 The following criteria should be used for judging the acceptability of results (95 percent probability):

10.1.1 *Repeatability*—Duplicate results by the same operator should be considered suspect if they differ by more than the following amounts:

Material	Flash Point Range	Repeatability
Suspensions of solids	95 to 110 F (35 to 43.3 C)	4 F (2.0 C)
All others	220 F (104.4 C) and under	4 F (2.0 C)
	Above 220 F (104.4 C)	10 F (5.5 C)

10.1.2 *Reproducibility*—The results submitted by each of two laboratories should be considered suspect if the two results differ by more than the following amounts:

Material	Flash Point Range	Reproducibility
Suspensions of solids	95 to 110 F (35 to 43.3 C)	6 F (3.5 C)
All others	220 F (104.4 C) and under	6 F (3.5 C)
	Above 220 F (104.4 C)	15 F (8.5 C)

10.2 The following criteria should be used for judging the acceptability of results (95 percent confidence) obtained on viscous and/or heavily pigmented (paint or varnish) materials which tend to form a surface film:

10.2.1 *Repeatability*—The average of two tests by the same operator on the same day compared to two tests on another day should be considered suspect if they differ by more than 9 F (5 C).

10.2.2 *Reproducibility*—The average of two tests by an operator on the same day compared to the average of two tests by another operator (or another laboratory) on any one day should be considered suspect if they differ by more than 18 F (10.0 C).

10.2.3 The definition of Repeatability and Reproducibility given here represents different parameters of the variance of the method: those given in 10.1 are derived from standards of ASTM Committee D-2 and the Institute of Petroleum, while those in 10.2 are from ASTM Committee D-1.

APPENDIXES

A1. Apparatus Specifications

A1.1 A typical assembly of the apparatus, gas heated, is shown in Fig. A1. The apparatus shall consist of a test cup, cover, and stove conforming to the following requirements:

A1.1.1 *Cup*—The cup shall be of brass, or other nonrusting metal of equivalent heat conductivity, and shall conform to the dimensional requirements in Fig. A2. The flange shall be equipped with devices for locating the position of the cup in the stove. A handle attached to the flange of the cup is a desirable accessory. The handle shall not be so heavy as to tip over the empty cup.

A1.1.2 *Cover:*

A1.1.2.1 *Cover Proper*—The cover shown in Fig. A3 shall be of brass (A1.1.1.1), and shall have a rim projecting downward almost to the flange of the cup. The rim shall fit the outside of the cup the center of the larger opening A (Fig. A3).

A1.1.2.4 *Pilot Flame*—A pilot flame shall be with a clearance not exceeding 0.014 in. on the diameter. There shall be a locating or locking device, or both engaging with a corresponding device on the cup. The four openings in the cover, *A*, *B*, *C*, and *D*, are shown in Fig. A3. The upper edge of the cup shall be in close contact with the inner face of the cover throughout its circumference.

A1.1.2.2 *Shutter*—The cover shall be equipped with a brass (Section 3) shutter (Fig. A4), approximately $^{3}/_{32}$ in. thick, operating on the plane of the upper surface of the cover. The shutter shall be so shaped and mounted that it rotates on the axis of the horizontal center of the cover between two stops, so placed, that when in one extreme position, the openings *A*, *B*, and *C* in the cover are completely closed, and when in the other extreme position, these openings are completely opened. The mechanism operating the shutter should be of the spring type and constructed so that when at rest the shutter shall exactly close the three openings. When operated to the other extreme, the three cover openings shall be exactly open and the tip of the exposure tube shall be fully depressed.

A1.1.2.3 *Flame-Exposure Device*—The flame-exposure device (Fig. A4) shall have a tip with an opening 0.027 to 0.031 in. in diameter. This tip shall be made preferably of stainless steel, although it may be fabricated of other suitable metals. The flame-exposure device shall be equipped with an operating mechanism which, when the shutter is in the "open" position, depresse so that the center of the orifice is betv planes of the under and upper surfaces cover proper at a point on a radius passing provided for automatic relighting of the flame. A bead $^{3}/_{32}$ in. in diameter may be on the cover so that the size of the test fl be regulated by comparison. The tip of flame shall have an opening the same siz tip of the flame exposure device (0.027 to in diameter).

A1.1.2.5 *Stirring Device*—The cover equipped with a stirring device (Fig. A4) in the center of the cover and carryin bladed metal propellers. A stirrer shaft coupled to the motor by a flexible shaft o ble arrangement of pulleys.

A1.1.3 *Stove*—Heat shall be supplie cup by means of a properly designed sto is equivalent to an air bath. The stove sha of an air bath and a top plate on which t of the cup rests.

A1.1.3.1 *Air Bath*—The air bath shal cylindrical interior and shall conform t mensional requirements in Fig. A1. The may be either a flame or electrically heat casting (Note A1), or an electric-resist ment (Note A2). In either case, the air b be suitable for use at the temperatures to will be subjected without deformation.

NOTE A1—If the heating element is a electrically heated metal casting, it sha designed and used that the temperature bottom and the walls are approximately On this account it should be not less th in thickness. The casting shall be designe products of combustion of the flame ca up and come into contact with the cup.

NOTE A2—If the air bath is of the e sistance heated type, it shall be constr that all parts of the interior surface a uniformly. The wall and bottom of the shall be not less than $^{1}/_{8}$ in. in thickness.

A1.1.3.2 *Top Plate*—The top plate sh metal, and shall be mounted with an air tween it and the air bath. It may be att the air bath by means of three screws a ing bushings. The bushings should be c thickness to define an air gap of $^{1}/_{16}$ in., shall be not more than $^{1}/_{8}$ in. in diameter.

A2. Manufacturing Standardization of Thermometer and Ferrule

A2.1 The low-range thermometer, which conforms also to the specification for the cup thermometer in the Tag closed tester (Method D 56) and which frequently is fitted with a metal ferrule intended to fit the collar on the cover of the Tag flash tester, can be supplemented by an adapter (Fig. A5) to be used in the larger diameter collar of the Pensky-Martens apparatus. Differences in dimensions of these collars, which do not affect test results, are a source of unnecessary trouble to manufacturers and suppliers of instruments, as well as to users.

A2.2 Subcommittee 21 on Metalware Laboratory Apparatus, of ASTM Committee E-1 on Methods of Testing, has studied this problem and has established some dimensional requirements which are shown in Fig. A5. Conformity to these requirements is not mandatory, but is desirable to users as well as suppliers of Pensky-Martens Testers.

A3. Thermometer Specifications

TABLE A1 IP Thermometer Specifications

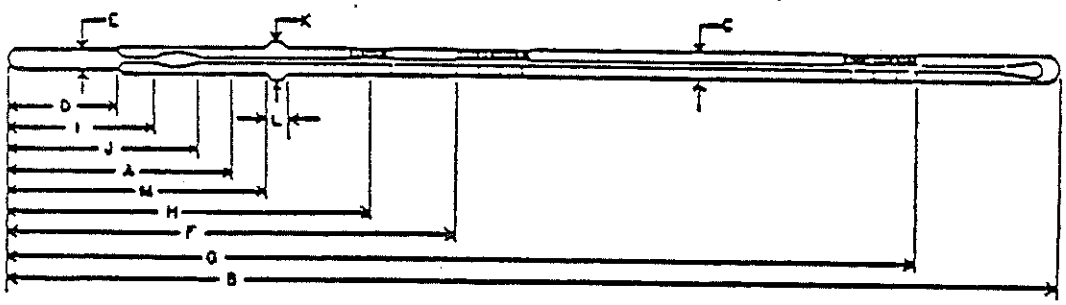
NOTE—The stem shall be made with an enlargement having a diameter of 1.5 to 2.0 mm greater than the stem and a length of 3 to 5 mm, the bottom of the enlargement being 64 to 66 mm from the bottom of the bulb. These dimensions shall be measured with the test gage shown in Fig. 1 of Specification E 1.[4]

Name	IP 15F	IP 15C	IP 16F	IP 16C
	Pensky-Martens Low		Pensky-Martens High	
Range	20 to 230 F	−7 to +110 C	200 to 700 F	90 to 370 C
Graduation	1 F	0.5 C	5 F	2 C
Immersion, mm	57	57	57	57
Over-all length, mm	280	280	280	280
Stem diameter, mm	5.5 to 8.0	5.5 to 8.0	5.5 to 8.0	5.5 to 8.0
Bulb shape	cylindrical	cylindrical	cylindrical	cylindrical
Bulb length, mm	9 to 13	9 to 13	10 max	10 max
Bulb diameter, mm	not less than 5.5 and not greater than stem	not less than 5.5 and not greater than stem	not less than 5.5 and not greater than stem	not less than 5.5 and not greater than stem
Length of graduated portion, mm	143 to 177	143 to 177	143 to 177	143 to 177
Distance bottom of bulb to, mm	20 F	−7 C	200 F	90 C
	75 to 90	75 to 90	75 to 90	75 to 90
Longer lines at each	5 F	1 C and 5 C	25 F	10 and 20 C
Figured at each	10 F	5 C	50 F	20 C
Expansion chamber	Required	Required	Required	Required
Top finish	Ring	Ring	Ring	Ring
Scale error not to exceed ±	1 F	0.5 C	2.5 to 500 C	1 to 260 C
			3.5 F above	2 C above
			500 F	260 C
See notes	1 and see table for emergent stem temperatures	1 and see table for emergent stem temperatures	1 and see table for emergent stem temperatures	1 and see table for emergent stem temperatures

TABLE A2 Specifications for ASTM Thermometers
All dimensions are in millimeters.
See Table A3 for Standardization Temperatures.

ASTM No. and Name	Range	For Test at	Immersion	Graduations			Scale Error max	Special Inscription	Expansion Chamber
				Subdivisions	Long Lines at Each	Number at Each			Permit Heating to
9C – 62 Pensky-Martens, Low Range Tag Closed Tester	−5 to +110 C		57	0.5 C	1 C	5 C	0.5 C	ASTM 9C or 9F 57 MM IMM	160 C
9F – 62	20 to 230 F			1 F	5 F	10 F	1 F		320 F
10C – 62 Pensky-Martens, High Range	90 to 370 C		57	2 C	10 C	20 C	[a]	ASTM 10C or 10F 57 MM IMM	[b]
10F – 62	200 to 700 F			5 F	25 F	50 F	[a]		

[a] Scale error: 1 C up to 260 C; 2 C over 260 C.
[b] Scale error: 2.5 F up to 500 F; 3.5 F over 500 F.
[c] An expansion chamber is provided for relief of gas pressure to avoid distortion of the bulb at higher temperatures. It is not for the purpose of joining mercury separations; and under no circumstances should the thermometer be heated above the highest temperature reading.



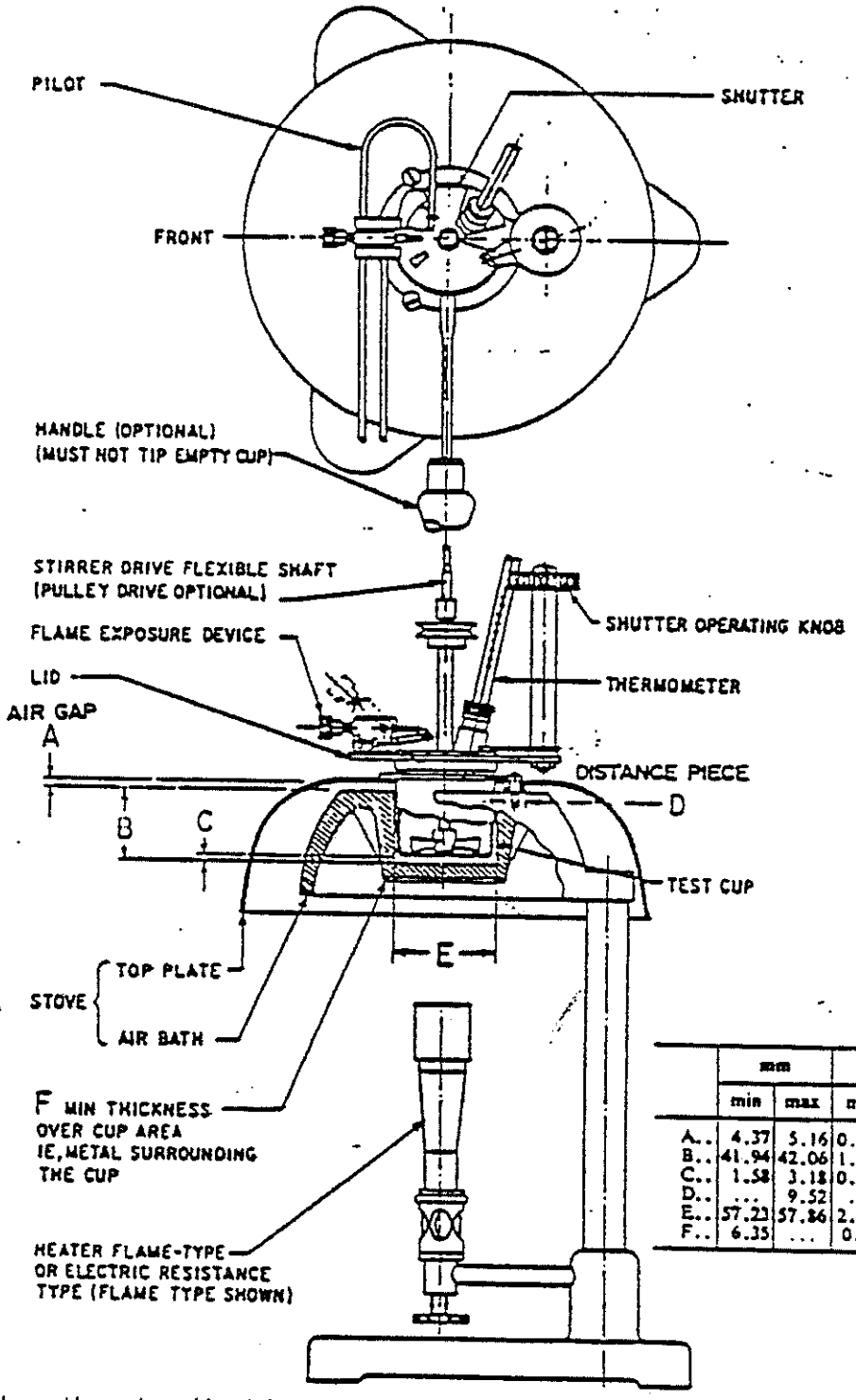
		Bulb		Scale Location				Ice Point Scale		Contraction Chamber		Stem Enlargement		
Total Length, ±5	Stem OD	Length	OD	Bottom of Bulb to Line at	Distance	Bottom of Bulb to Line at	Distance	Range	Bottom of Bulb to Ice Point	Distance to Bottom, min	Distance to Top, max	OD	Length	Distance to Bottom
B	C	D	E		F		G	H		I	J	K	L	M
				0 C		100 C								
	6.0	9.0	>		85		221					7.5	2.5	64
287	to	to	stem		to		to					to	to	to
	7.0	13			98		237					8.5	5.0[a]	66
				32 F		212 F								
				110 C		360 C								
	6.0	8.0	4.5		86		227					7.5	2.5	64
287	to	to	to		to		to					to	to	to
	7.0	10	6.0		99		245					8.5	5.0[a]	66
				230 F		680 F								

[a] The length of the enlargement, and the distance from the bottom of the enlargement to the bottom of the bulb shall be measured with the test gage shown in Fig. A6.

TABLE A3 Standardization Temperatures

NOTE—The emergent column temperatures are those attained when using the thermometers in the test equipment for which the thermometers were originally designed. In some cases these temperatures are markedly different from those realized during standardization.

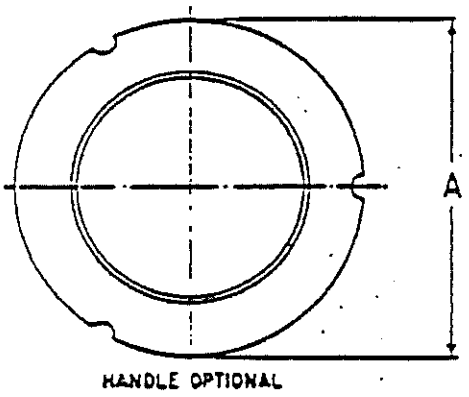
Temperature	Average Temperature of Emergent Column	Temperature	Average Temperature of Emergent Column	Temperature	Average Temperature of Emergent Column	Temperature	Average Temperature of Emergent Column
Thermometer 9F (20 to 230 F)		Thermometer 9C (−5 to +100 C)		Thermometer 10F (200 to 700 F)		Thermometer 10C (90 to 370 C)	
32 F	66 F	0 C	19 C	212 F	141 F	100 C	61 C
100 F	86 F	35 C	28 C	390 F	159 F	200 C	71 C
160 F	106 F	70 C	40 C	570 F	180 F	300 C	87 C
220 F	123 F	105 C	50 C	700 F	220 F	370 C	104 C
IP 15F (20 to 230 F)		IP 15C (−7 to 110 C)		IP 16F (20 to 700 F)		IP 16C (90 to 370 C)	
32 F	66 F	0 C	19 C	200 F	140 F	100 C	61 C
70 F	70 F	20 C	20 C	300 F	149 F	150 C	65 C
100 F	86 F	40 C	31 C	400 F	160 F	200 C	71 C
150 F	104 F	70 C	40 C	500 F	175 F	250 C	78 C
212 F	118 F	100 C	48 C	600 F	195 F	300 C	87 C
				700 F	220 F	350 C	99 C

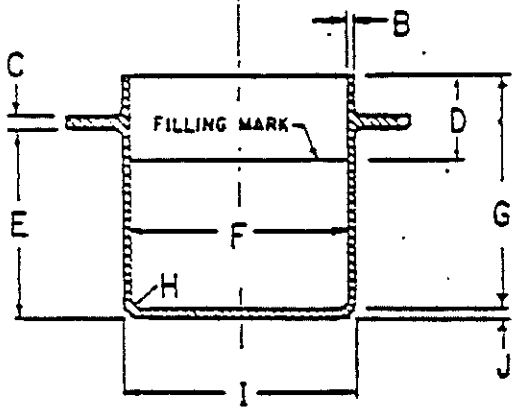


	mm		in.	
	min	max	min	max
A..	4.37	5.16	0.172	0.203
B..	41.94	42.06	1.651	1.656
C..	1.58	3.18	0.062	0.125
D..	...	9.52	...	0.375
E..	57.23	57.86	2.253	2.278
F..	6.35	...	0.25	...

NOTE—Lid assembly may be positioned either right or left-handed.

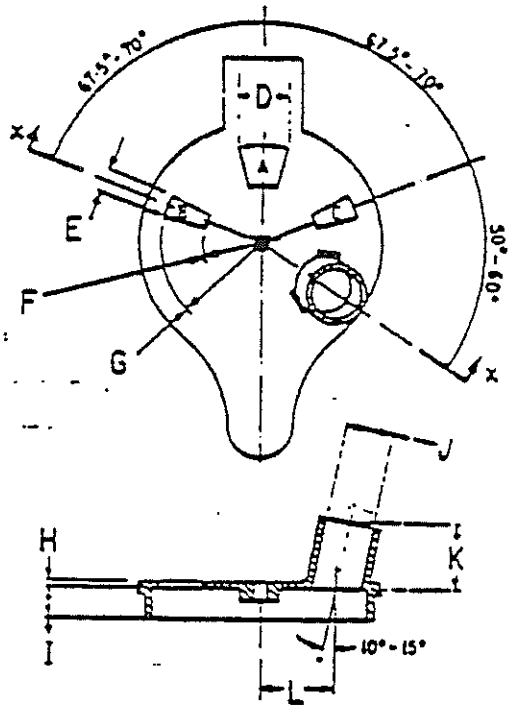
FIG. A1 Pensky-Martens Closed Flash Tester.





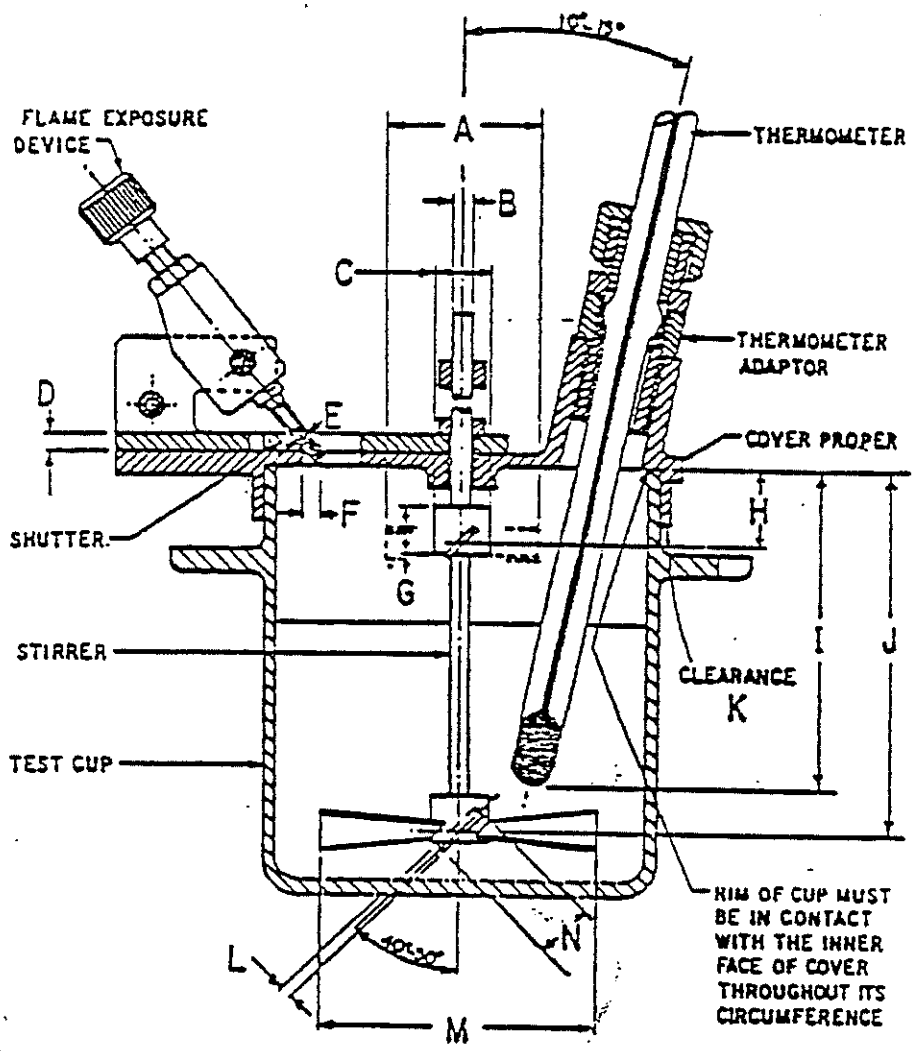
	mm		in.	
	min	max	min	max
A	79.0	79.8	3.11	3.14
B	1.0	...	0.04	...
C	2.8	3.6	0.11	0.14
D	21.72	21.84	0.855	0.860
E	45.47	45.72	1.790	1.800
F	50.72	50.85	1.997	2.002
G	55.75	56.00	2.195	2.205
H	3.8	4.0	0.15	0.16
I	53.90	54.02	2.122	2.127
J	2.29	2.54	0.090	0.100

FIG. A2 Test Cap.



	mm		in.	
	min	max	min	max
D	12.7	13.3	0.50	0.53
E	4.8	5.6	0.19	0.22
F	13.5	14.3	0.53	0.56
G	23.8	24.6	0.94	0.97
H	1.2	2.0	0.05	0.08
I	7.9	...	0.31	...
J	12.27	12.32	0.483	0.485
K	16.38	16.64	0.645	0.655
L	18.65	19.45	0.734	0.766

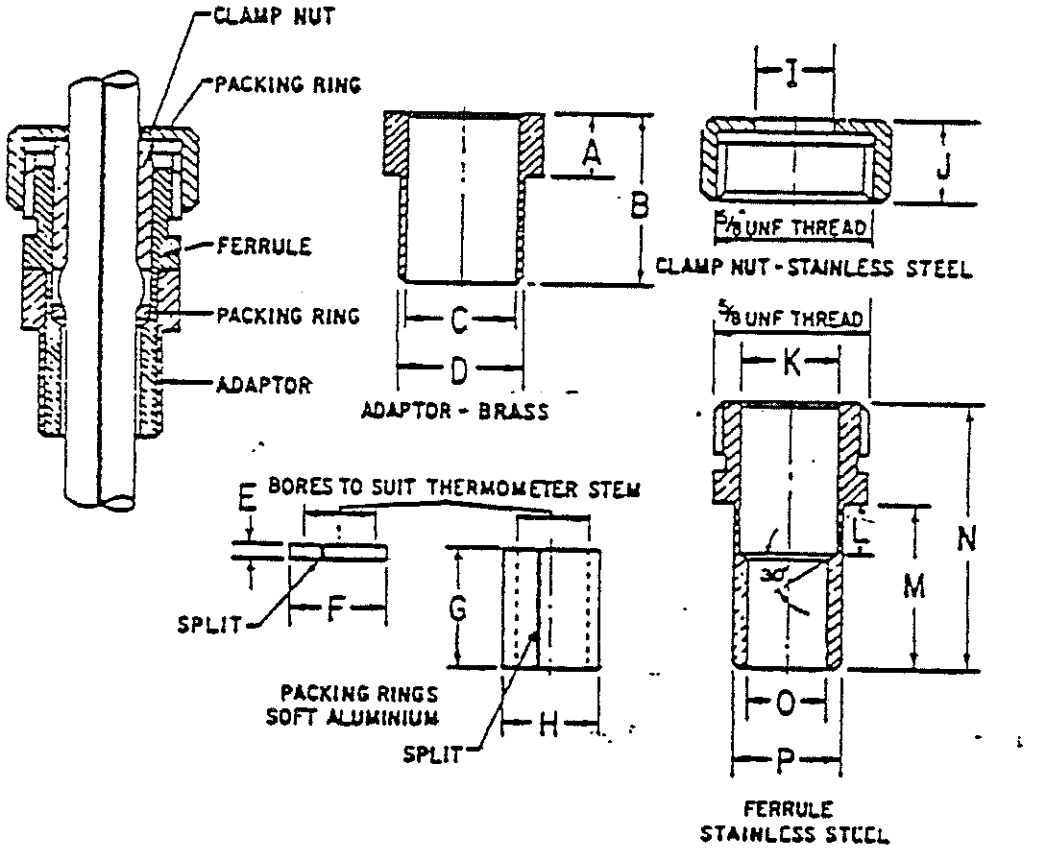
FIG. A3 Cover Proper.



	mm		in.	
	min	max	min	max
A	18.3	19.8	0.72	0.78
B	2.38	3.18	0.094	0.125
C	7.6	8.4	0.30	0.33
D	2.0	2.8	0.08	0.11
E	0.69	0.79	0.027	0.031
F	2.0	2.8	0.08	0.11
G	6.4	10.4	0.25	0.41
H	9.6	11.2	0.38	0.44
I*	43.0	46.0	1.69	1.81
J	50.0	51.6	1.97	2.03
K	...	0.36	...	0.014
L	1.22	2.06	0.048	0.08
M	31.8	44.4	1.25	1.75
N	7.6	8.4	0.30	0.33

* Includes tolerance for length of thermometer given in ASTM Specification E 1,[4] ASTM Thermometers.

FIG. A4 Test Cup and Cover Assembly.



	mm		in.	
	min	max	in.	max
A	6.20	6.50	0.244	0.256
B	17.0	18.0	0.67	0.71
C	9.80	9.85	0.386	0.388
D	12.19	12.24	0.480	0.482
E	1.40	1.65	0.055	0.065
F	8.56	8.61	0.337	0.339
G	12.4	13.0	0.49	0.57
H	8.56	8.61	0.337	0.339
I	8.1	8.6	0.32	0.34
J	9.9	10.7	0.39	0.42
K	8.64	8.69	0.340	0.342
L	5.1	5.6	0.20	0.22
M	17.0	17.5	0.67	0.69
N	27.4	28.2	1.08	1.11
O	7.11	7.16	0.280	0.282
P	9.73	9.78	0.383	0.385

FIG. A5 Dimensions for Thermometer Adaptor, Ferrule, and Packing Ring.

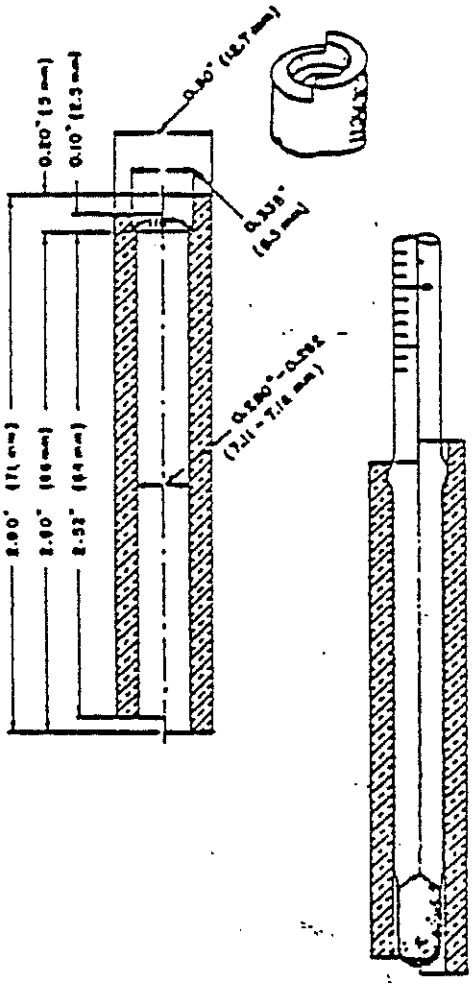


FIG. A6 Test Gage for Checking Enlargements on Thermometers.

By publication of this standard no position is taken with respect to the validity of any patent rights in connection therewith, and the American Society for Testing and Materials does not undertake to insure anyone utilizing the standard against liability for infringement of any Letters Patent nor assume any such liability.

APPENDIX D

Inspection Schedule

INSPECTION SCHEDULE

RESOURCE CONSERVATION

&

RECOVERY ACT

(EPA)

BY: ERNEST R. BOSETTI

DATE: OCTOBER 28, 1981

RCRA INSPECTION SCHEDULE

I. GENERAL

FEDERAL REGULATIONS REQUIRE THE OWNER OR OPERATORS TO INSPECT HIS FACILITY FOR MALFUNCTIONS AND DETERIORATION, OPERATOR ERRORS, AND DISCHARGE WHICH MAY BE CAUSING, OR LEADING TO: (1) RELEASE OF HAZARDOUS WASTE CONSTITUENTS TO THE ENVIRONMENT, OR (2) A THREAT TO HUMAN HEALTH. THE OWNER OR OPERATOR MUST CONDUCT THESE INSPECTIONS OFTEN ENOUGH TO IDENTIFY PROBLEMS IN TIME TO CORRECT THEM BEFORE THEY HARM HUMAN HEALTH OR THE ENVIRONMENT.

THIS PLANT MUST DEVELOP A WRITTEN SCHEDULE FOR INSPECTING ALL CONTAINERS AND EQUIPMENT THAT ARE IMPORTANT TO PREVENTING, DETECTING, OR RESPONDING TO ENVIRONMENTAL OR HUMAN HEALTH HAZARDS. SUCH A SCHEDULE MUST BE KEPT AT THIS PLANT AND IDENTIFY PROBLEMS, FREQUENCY OF INSPECTIONS, AND CORRECTIVE ACTION. THE RECORDS MUST BE RETAINED FOR AT LEAST THREE (3) YEARS FROM DATE OF INSPECTION.

II. AREA TO BE INSPECTED & FREQUENCY

		FREQUENCY	DEPARTMENT RESPONSIBILI
A.	DRUM STORAGE PAD IN BACK OF PAINT MIX BUILDING.	WEEKLY	MATERIAL
B.	ALL TANKS AND DRUMS IN PAINT MIX BUILDING.	WEEKLY	PAINT
C.	GRIT SEPARATOR TANK AND SUMP PUMPS.	WEEKLY	MAINTENAN
D.	SOLVENT AND PAINT CONTAINERS IN PAINT DEPARTMENT.	WEEKLY	PAINT
E.	TANK FARM ADJACENT TO POWER HOUSE.	WEEKLY	MAINTENAN
F.	ELPO AND BONDERITE AREA (TANKS).	WEEKLY	PAINT
G.	PAINTERS CRIB (A-4-5).	WEEKLY	MAINTENAN
H.	POWER HOUSE DRUM STORAGE AREA.	WEEKLY	MAINTENAN
I.	URETHANE DRUMS AT WINDSHIELD AND BACKLITE AREA.	DAILY	TRIM I &
J.	ALL PAINT CIRCULATING SYSTEM MIX TANKS.	WEEKLY	PAINT

II. AREA TO BE INSPECTED & FREQUENCY - (CONTINUED)

		FREQUENCY	DEPARTMENT RESPONSIBILIT
K.	WASTE TREATMENT TANKS AND DISCHARGE EQUIPMENT.	DAILY	MAINTENANC
	WASTE TREATMENT TANK WATER LEVEL.	DAILY	MAINTENANC
L.	REDUNDANT TANKS AND OIL SKIMMER.	WEEKLY	MAINTENANC
	REDUNDANT TANKS WATER LEVEL.	DAILY	MAINTENANC
M.	DRUM UNLOADING AREA AT PAINT MIX BUILDING.	WHEN IN USE	MATERIAL
N.	WASTE TREATMENT TANK BUILDING AT TREATMENT TANKS (PUMPS & CONTROLS).	WEEKLY	MAINTENANC
O.	SECURITY FENCING.	WEEKLY	SECURITY
P.	SPILL SHEDS: ABSORBENT MATERIALS CLEAN-UP TOOLS, ETC.	MONTHLY	MAINTENANC
Q.	FIRE EXTINGUISHERS, FOAM TANKS (2)	WEEKLY	SECURITY
R.	RECORDERS AT STORM SEWER DISCHARGE.	DAILY	MAINTENANC
S.	STRUCTURAL INTEGRITY OF DIKES, BERMS, AND CONCRETE RETAINING WALLS AROUND STORAGE TANKS.	WEEKLY	MAINTENANC
T.	STRUCTURAL INTEGRITY OF STORAGE TANKS.	WEEKLY	MAINTENANC
U.	ALARMS (WATER-FLOW, FIRE AND EVAC SIREN)	MONTHLY	SECURITY

III. PROBLEMS TO LOOK FOR

A. DRUMS STORAGE OR STACKED IMPROPERLY.

B. DRUMS IMPROPERLY LABELED.

C. DRUMS DETERIORATING OR LEAKING.

D. DRUMS NOT CLOSED PROPERLY.

E. SUMP PUMPS INOPERATIVE.

III. PROBLEMS TO LOOK FOR - (CONTINUED)

F. DIKES ERODING.

G. STORAGE TANKS RUSTING OR VALVES LEAKING.

H. OVERFLOW OF STORAGE TANKS.

IV. CORRECTIVE ACTION

A. RESTACK OR RELOCATE DRUMS

B. LABEL DRUMS PROPERLY.

C. TRANSFER LEAKING DRUM CONTENTS TO SECURE D.O.T. DRUM, LABEL PROPERLY, CLEAN-UP SPILL, CLOSE DRUM PROPERLY AND TRANSFER SPILL.

D. REPAIR SUMP PUMPS.

E. REPAIR LEAKS IN DIKE, BERMS, OR CONCRETE RETAINING WALLS.

F. REPLACE LEAKING VALVES.

V. REPONSIBILITY

EACH USER DEPARTMENT AS ASSIGNED, WILL PERFORM ITS OWN INSPECTION ON A DAILY AND WEEKLY BASIS USING THE ATTACHED INSPECTION SCHEDULE SHEETS. BY THE 5TH DAY OF EACH MONTH, EACH USER DEPARTMENT WILL SUBMIT ITS INSPECTION SCHEDULE TO PLANT ENGINEERING. PLANT ENGINEERING WILL HAVE THE RESPONSIBILITY OF OVERSEERING INSPECTIONS TO INSURE COMPLIANCE WITH EPA REGULATIONS. PLANT ENGINEERING WILL ALSO MAINTAIN A FILE OF ALL INSPECTION RECORDS FOR THE MINIMUM RETENTION TIME.

VI. RETENTION TIME

THESE INSPECTION RECORDS MUST BE RETAINED FOR AT LEAST THREE (3) YEARS FROM THE DATE OF INSPECTION.

REF: FEDERAL REGISTER, VOL. 45, NO. 98, EPA, HAZARDOUS WASTE AND CONSOLIDATED PERMIT REGULATIONS, DATED MAY 19, 1980, PAR. 265.174 AND 265.194.

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL. 19899

DRUM AREA: _____

RCRA INSPECTION SCHEDULE

		FREQUENCY:	WEEKLY		WEEKLY		WEEKLY		WEEKLY		DAILY, WHEN IN USE				
DATE	TIME	NAME OF OPERATOR	DRUMS STORED PROPERLY		DRUMS LABELED PROPERLY		DRUMS LEAKING		DRUMS CLOSED PROPERLY		DRUM AREA FREE FROM SPILLS		REPAIRS, OR RECOMMENDED ACTION TAKEN	DATE REPAIRS COMPLETED	REMARKS
			YES	NO	YES	NO	YES	NO	YES	NO	YES	NO			

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL.19899

RCRA INSPECTION SCHEDULE

FREQUENCY: DAILY DAILY DAILY WEEKLY DAILY MONTHLY

DATE	TIME	NAME OF INSPECTOR	WASTE TREATMENT DISCHARGE EQUIPMENT-"OK"		RECORDERS AT STORM DISCHARGE "OK"		WASTE TREATMENT TANK LEVEL-"OK"		STRUCT. INTEG. OF W.T. TANK "OK"		DIKES, BERMS C.WALLS "OK"		ALARMS "OK"		REPAIRS TAKEN	DATE OF REPAIRS	REMARKS
			YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO			

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL. 19899
PAGE #3 OF

RCRA INSPECTION SCHEDULE

FREQUENCY:			WEEKLY		WEEKLY		WEEKLY		WEEKLY		WEEKLY				
DATE	TIME	NAME OF INSPECTOR	STRUCT. INTEG. OF STORAGE TANKS -OK		GRIT SEPARATOR TANK & SUMP PUMP "OK"		TANK FARM POWER HOUSE-"OK"		ELPO & BOND. TANKS "OK"		PAINT MIX TANKS & STORAGE TANKS-"OK"		REPAIRS TAKEN	DATE OF REPAIRS	REMARKS
			YES	NO	YES	NO	YES	NO	YES	NO	YES	NO			

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL. 19899

RCRA INSPECTION SCHEDULE

FREQUENCY: WEEKLY WEEKLY WEEKLY MONTHLY

DATE	TIME	NAME OF OPERATOR	WASTE WATER T.T. BLDG. AT TREAT. TANKS, PUMPS CONTROLS - "OK"		SECURITY FENCING - "OK"		FIRE EXTINGUISHERS FOAM TANKS - "OK"		SPILL SHEDS "OK"		REPAIRS TAKEN	DATE OF REPAIRS	REMARKS
			YES	NO	YES	NO	YES	NO	YES	NO			

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL. 19899
PAGE #5 of _____

RCRA INSPECTION SCHEDULE

FREQUENCY: WEEKLY DAILY

DATE	TIME	NAME OF INSPECTOR	REDUNDANT TANKS & OIL SKIMMER - "OK"		REDUNDANT TANK WATER LEVEL-"OK"		REPAIRS TAKEN	DATE OF REPAIRS	REMARKS
			YES	NO	YES	NO			

GMAD - WILMINGTON
P. O. BOX 1512
WILMINGTON, DEL. 19899

RCRA INSPECTION SCHEDULE

FREQUENCY: WEEKLY DAILY

DATE	TIME	NAME OF INSPECTOR	REDUNDANT TANKS & OIL SKIMMER - "OK"		REDUNDANT TANK WATER LEVEL-"OK"		REPAIRS TAKEN	DATE OF REPAIRS	REMARKS
			YES	NO	YES	NO			

APPENDIX E

Contingency Plan

CONTINGENCY PLAN

(EPA)

BY: ERNEST R. BOSETTI
DATE: NOVEMBER 20, 1981

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2. EMERGENCY PROCUEDURES..... 2 THRU 4

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4. EVACUATION PLAN..... 10

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II. SPILL PREVENTION CONTROL AND COUNTER-MEASURE PLAN .....

INTRODUCTION

THIS CONTINGENCY PLAN HAS BEEN ESTABLISHED TO SATISFY AN EPA REQUIREMENT AS STATED IN THE FEDERAL REGISTER, HAZARDOUS WASTE AND CONSOLIDATED PERMIT REGULATIONS, VOL. 45, NO. 98, DATED MAY 19, 1980, SUBPART D, PAR. 265.50.

THIS PLAN SHALL BE IMPLEMENTED AS DIRECTED HEREIN TO HANDLE ALL HAZARDOUS MATERIAL RELEASES, FIRE, EXPLOSIONS, OR SIMILAR DISASTERS.

EMERGENCY COORDINATOR:

THE EMERGENCY COORDINATOR FOR THIS PLANT MUST BE THOROUGHLY FAMILIAR WITH:

1. ALL ASPECTS OF THE FACILITY'S CONTINGENCY PLAN,
2. ALL OPERATIONS AND ACTIVITIES AT THE FACILITY,
3. THE LOCATION AND CHARACTERISTICS OF WASTE HANDLE,
4. THE LOCATION OF ALL RECORDS WITHIN THE FACILITY, AND
5. THE FACILITY LAYOUT.

IN ADDITION, THE EMERGENCY COORDINATOR MUST HAVE THE AUTHORITY TO COMMIT THE RESOURCES NEEDED TO CARRY OUT THE CONTINGENCY PLAN. THIS PERSON MUST BE ON THE FACILITY PREMISES OR ON CALL WITH SHORT RESPONSE TIME TO COORDINATE ALL EMERGENCY MEASURES.

THE EMERGENCY COORDINATOR FOR THIS PLANT IS:

HAZARDOUS MATERIALS: MR. RONALD G. NARDI, PLANT ENGINEER
HOME PHONE: (302) 764-7892
WORK PHONE: (302) 998-8831 (EXT. 212)
PAGER: 6-100

THEN:

FIRES/EXPLOSIONS:

1. MR. JOSEPH MULLINS, FIRE CHIEF
HOME PHONE: (302) 998-8550
WORK PHONE: (302) 998-8831 (EXT. 472, 206, 211)

2. PLANT SECURITY SARGEANT ON DUTY
WORK PHONE: (302) 998-8831 (EXT. 206, 211)

EMERGENCY PROCEDURES:

A. WHENEVER THERE IS AN IMMINENT OR ACTUAL SITUATION, THE EMERGENCY COORDINATOR (OR HIS DESIGNEE) MUST IMMEDIATELY:

1. ACTIVATE INTERNAL FACILITY ALARMS OR COMMUNICATIONS SYSTEMS, WHERE APPLICABLE, TO NOTIFY ALL FACILITY PERSONNEL; AND

2. NOTIFY APPROPRIATE STATE OR LOCAL AGENCIES WITH DESIGNATED RESPONSE ROLES IF THEIR HELP IS NEEDED.

B. WHENEVER THERE IS A RELEASE, FIRE, OR EXPLOSION, THE EMERGENCY COORDINATOR MUST IMMEDIATELY IDENTIFY THE CHARACTER, EXACT SOURCE, AMOUNT, AND A REAL EXTENT OF ANY RELEASED MATERIALS. HE MAY DO THIS BY OBSERVATION OR REVIEW OF FACILITY RECORDS OR MANIFESTS AND, IF NECESSARY, BY CHEMICAL ANALYSIS.

C. CONCURRENTLY, THE EMERGENCY COORDINATOR MUST ASSESS POSSIBLE HAZARDS TO HUMAN HEALTH OR THE ENVIRONMENT THAT MAY RESULT FROM THE RELEASE, FIRE, OR EXPLOSION. THIS ASSESSMENT MUST CONSIDER BOTH DIRECT AND INDIRECT EFFECTS OF THE RELEASE, FIRE, OR EXPLOSION (E.G. THE EFFECTS OF ANY TOXIC, IRRITATING OR ASPHYXIATING GASES THAT ARE GENERATED, OR THE EFFECTS OF ANY HAZARDOUS SURFACE WATER RUN-OFFS FROM WATER OR CHEMICAL AGENTS USED TO CONTROL FIRE AND HEAT-INDUCED EXPLOSIONS).

D. IF THE EMERGENCY COORDINATOR DETERMINES THAT THE FACILITY HAS HAD A RELEASE, FIRE OR EXPLOSION WHICH COULD THREATEN HUMAN HEALTH, OR THE ENVIRONMENT, OUTSIDE THE FACILITY, HE MUST REPORT HIS FINDINGS AS FOLLOWS:

1. IF HIS ASSESSMENT INDICATES THAT EVACUATION OF LOCAL AREAS MAY BE ADVISABLE, HE MUST IMMEDIATELY NOTIFY APPROPRIATE LOCAL AUTHORITIES, HE MUST BE AVAILABLE TO HELP APPROPRIATE OFFICIALS DECIDE WHETHER LOCAL AREAS SHOULD BE EVACUATED; AND

2. HE MUST IMMEDIATELY NOTIFY EITHER THE GOVERNMENT OFFICIAL DESIGNATED AS THE ON-SCENE COORDINATOR FOR THAT GEOGRAPHICAL AREA (IN THE APPLICABLE REGIONAL CONTINGENCY PLAN UNDER PART 1510 OF THIS TITLE), OR THE NATIONAL RESPONSE CENTER (USING THEIR 24-HOUR TOLL FREE NUMBER 800/424-8802). THE REPORT MUST INCLUDE:

INDUSTRIAL SITES

Type of Unit: Automobile Assembly Plant (General Motors)

Location: P. O. Box 1512, Boxwood & Dodson Rds. Wilmington, New Castle Co.

Date of Count: December 5, 1972

Peak Day of Week: Friday - 7988 vehicles

Peak Hours: AM 5-6 PM 3-4

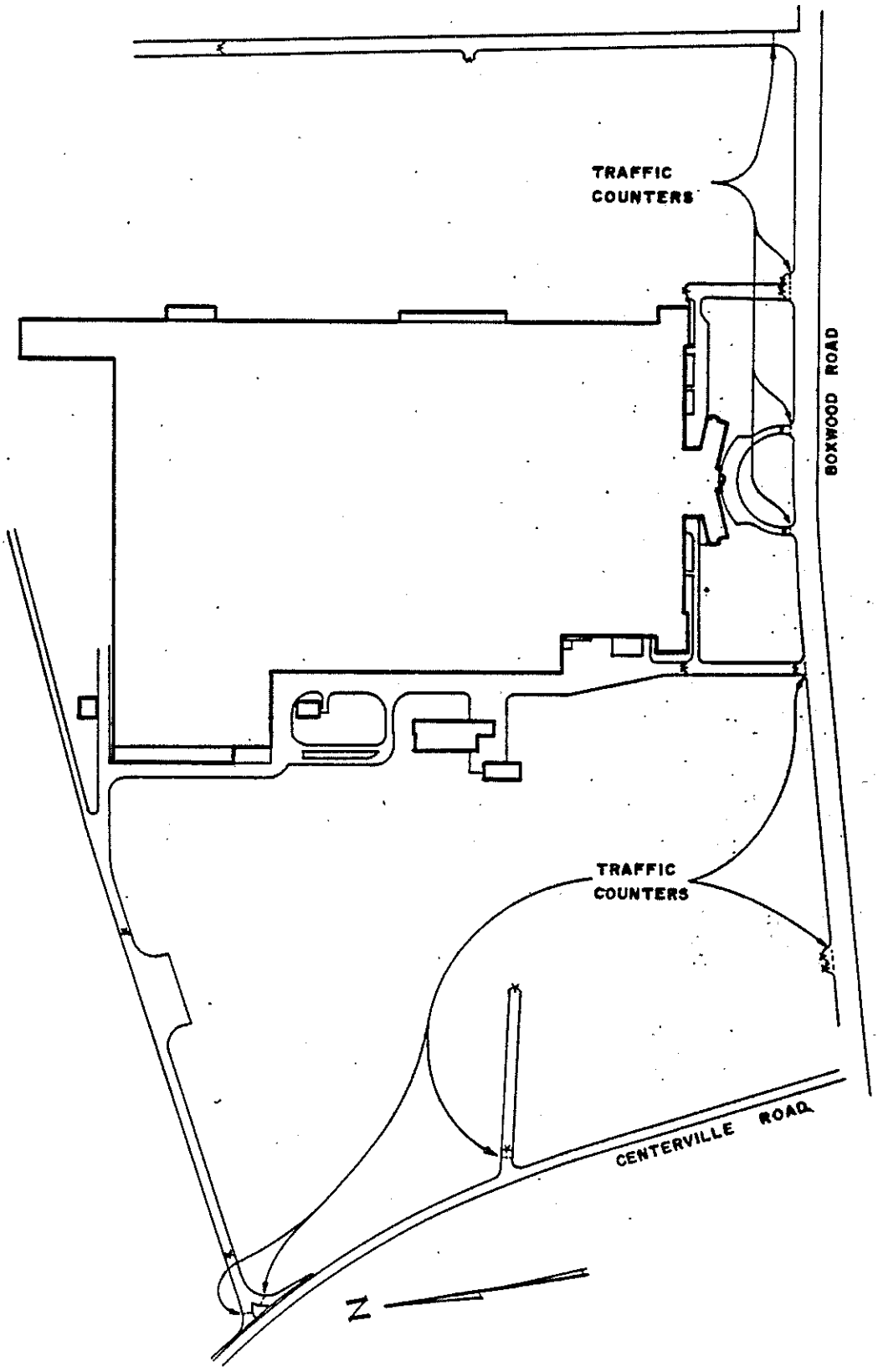
Description: Modern Auto Assembly Plant

Total Plant Employees	3985
Total Office Employees	607
Total Employees	4592
Average Visitors Daily	125
Average Trucks Daily	120
Parking Spaces	2170
Gross Acres	148.83 acres
Square Feet Floor Area (Production)	1,909,878 Sq. ft.
Square Feet Floor Area (Storage)	
Square Feet Floor Area (Office)	112,675 Sq. ft.
Total Square Feet Floor Area	2,022,553 Sq. ft.
Other	----------

	AM PEAK	PM PEAK	ADWT	ADT
Vehicle Volumes	1403	1588	7444	6052
Ratios Trips Per Unit				
Trips/Plant Employee	.4	.4	1.9	1.5
Trips/Office Employee	2.3	2.6	12.3	10.0
Trips/Total Employee	.3	.4	1.6	1.3
Trips/Visitor	11.2	12.7	59.6	48.4
Trips/Truck	11.7	13.2	62.0	50.4
Trips/Parking Space	.7	.7	3.4	2.8
Trips/Gross Acre	9.4	10.7	50.0	40.7
Trips/Floor Area Production (1,000 Sq.ft.)	.7	.8	3.9	3.2
Trips/Floor Area Storage (1,000 Sq.ft.)	--	--	--	--
Trips/Floor Area Office (1,000 Sq.ft.)	12.5	14.1	66.1	53.7
Trips/Total Floor Area (1,000 Sq.ft.)	.7	.8	3.7	3.0
Trips/				

All trips represent total one-way trips in both directions.

GENERAL MOTORS ASSEMBLY PLANT



ADWT-7444

ADT-6052

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
P. O. Box 778
DOVER, DELAWARE 19901

OFFICE OF THE DIRECTOR

TELEPHONE: 4361

RECEIVED
MAR 29 1982
G. B. HOMEWOOD
DEPUTY DIRECTOR

March 25, 1982

MEMORANDUM

TO: Mr. Gary B. Homewood, Deputy Director

FROM: Mr. Raymond S. Pusey, Chief Traffic Engineer

REF: BOXWOOD ROAD

Attached are counts comparing the traffic when the GM Plant is operating and closed.

The counts were made during the afternoon shift change. The day shift ended at 3:00 PM and the evening shift started at 3:42 PM.

For the purposes of presentation, both the eastern entrance and Ahlers Boulevard are shown on the same sheet. The volumes between them do not necessarily add because the volumes represent traffic served, not traffic demand. Volumes in queues are, thus, the primary difference.

Our purpose in proposing the traffic improvements is to encourage vehicles away from local residential streets. The GM traffic should be handled directly by Route 141. Aerial observations as well as complaints indicate that substantial volumes use residential streets as far away as Maryland Avenue.

As long as the drivers perceive that alternate routes are quicker, the misuse of these local streets will continue. Thus, the capacity of the Route 141 - Boxwood Road connection must be excellent.

During the 3:00 to 3:15 PM period, the problem is clear at the east gate. The 55 vehicles crossing directly to Augustine Street are shortcutting. Many of the 97 vehicles turning left will also shortcut. At least 12 of the vehicles turning into Ahlers Boulevard are shortcutting.

The arrival pattern on Augustine Street during the 3:15 to 3:30 PM period shows the same abuse.

The west gate shows a similar pattern. It is important to note the conflicts between the left in and the thru traffic. Plant operation is often felt to be highly directional. Clearly that is not the case here.

[redacted]

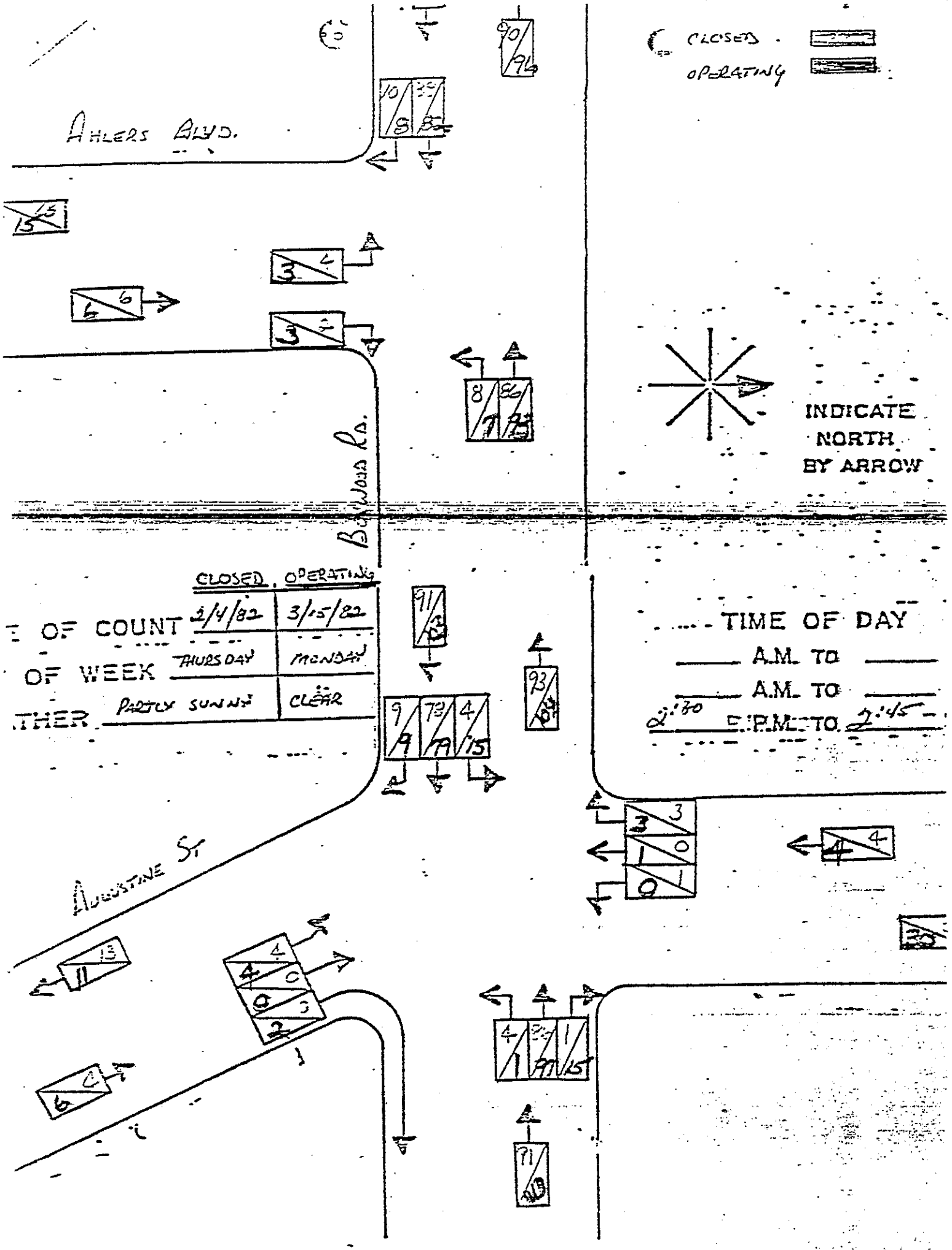
these are volumes served, not demand for service.

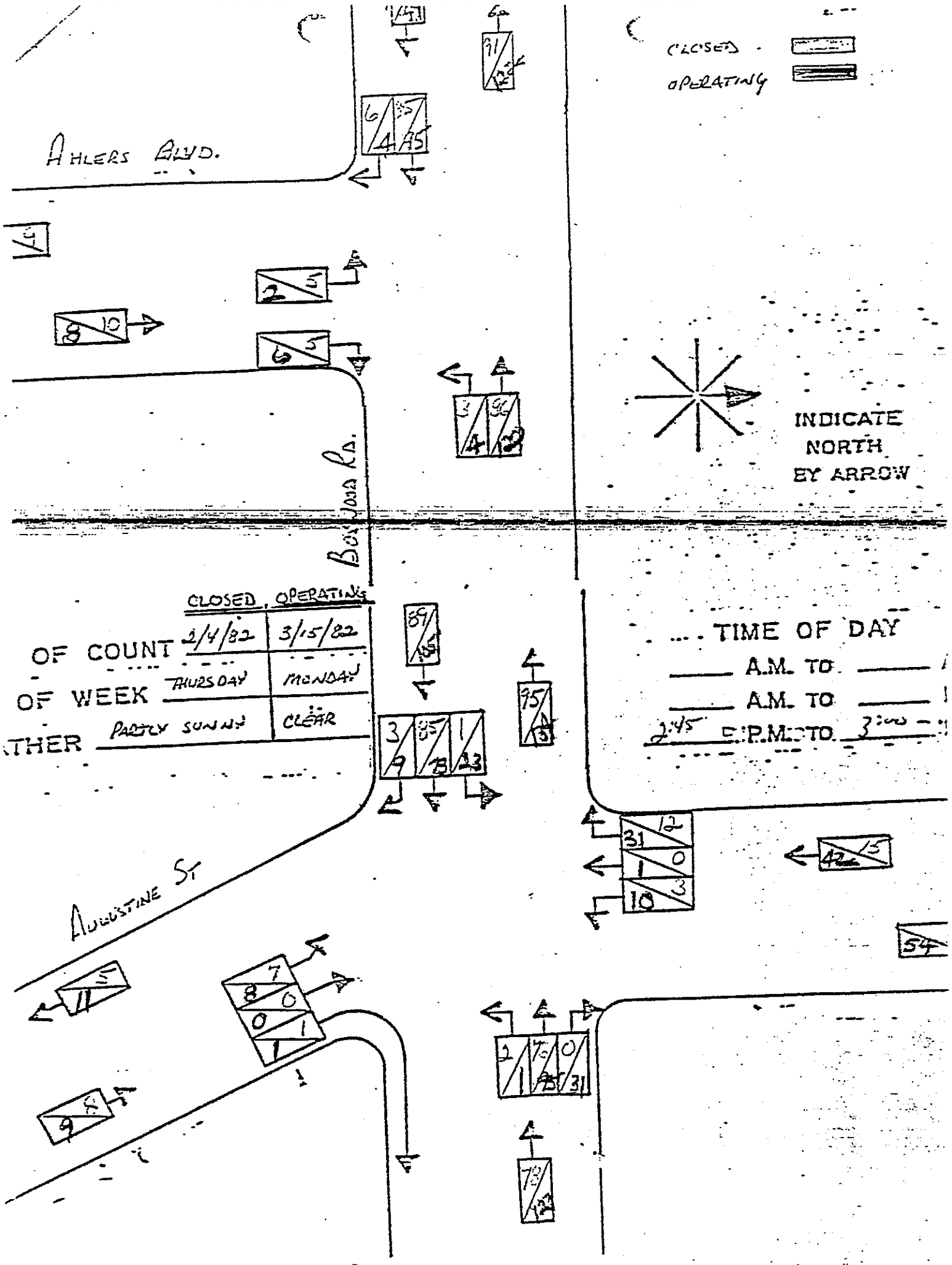
While it can be argued that the peak is so short that work to aid it is unnecessary, human nature is otherwise.

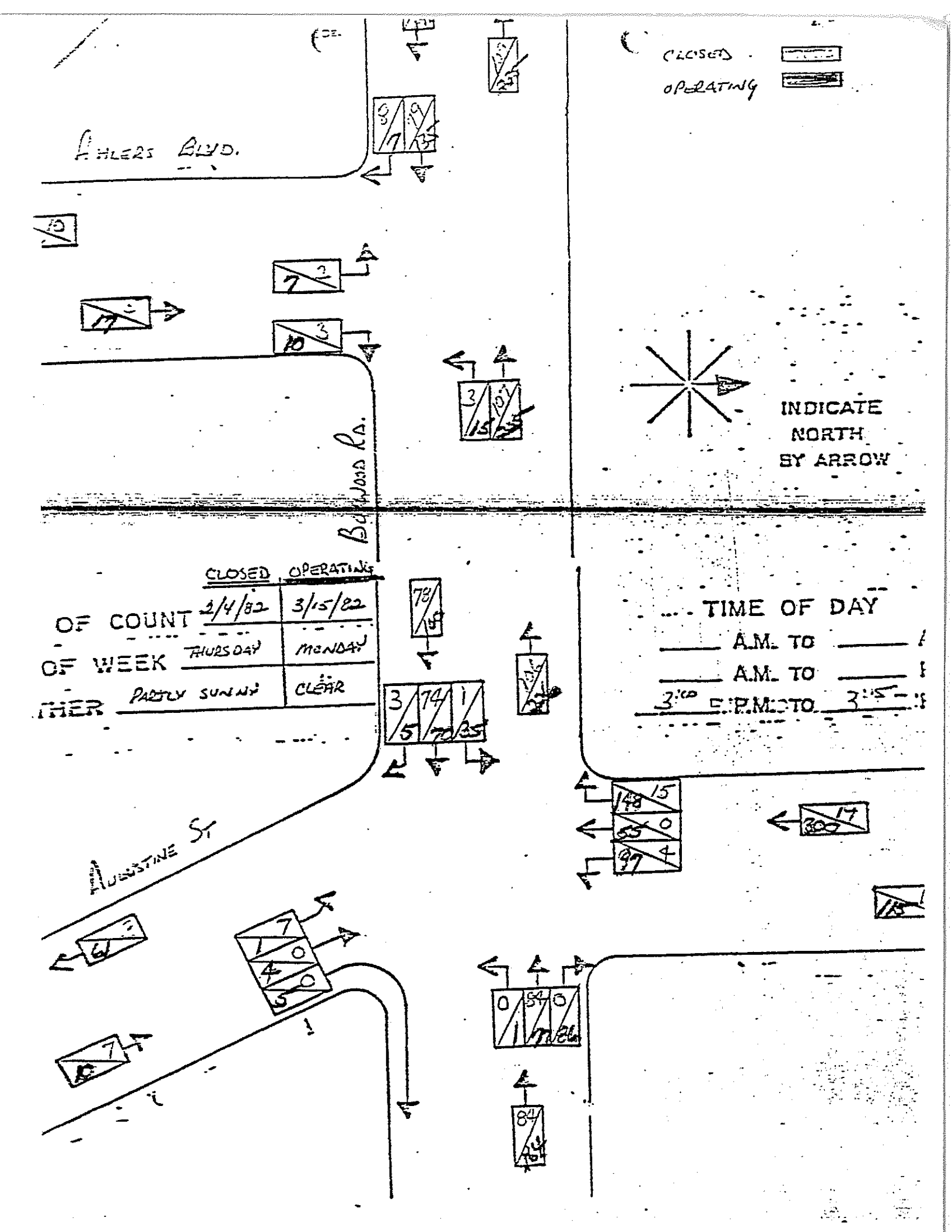
If you have any questions, please do not hesitate to contact us.

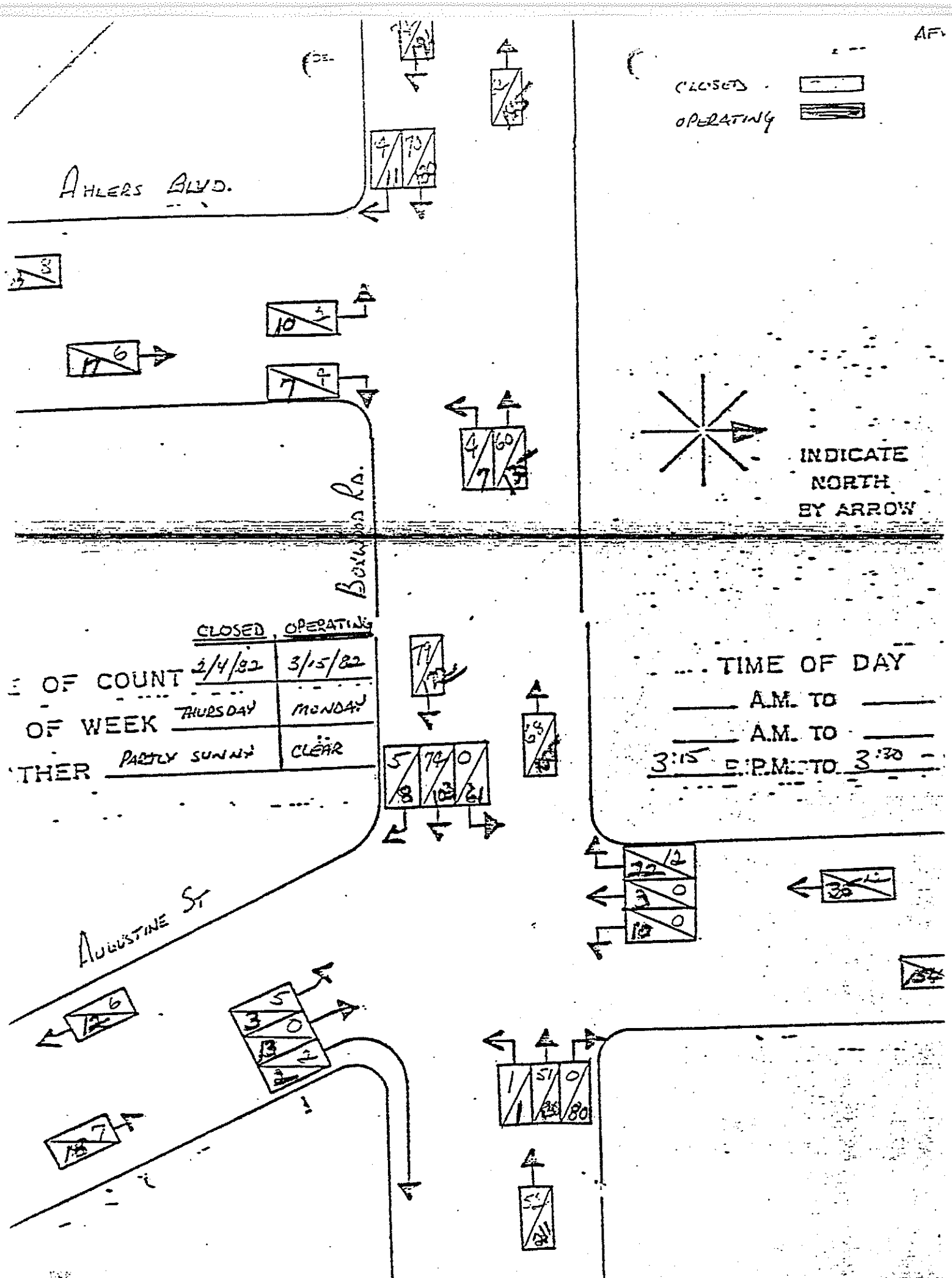
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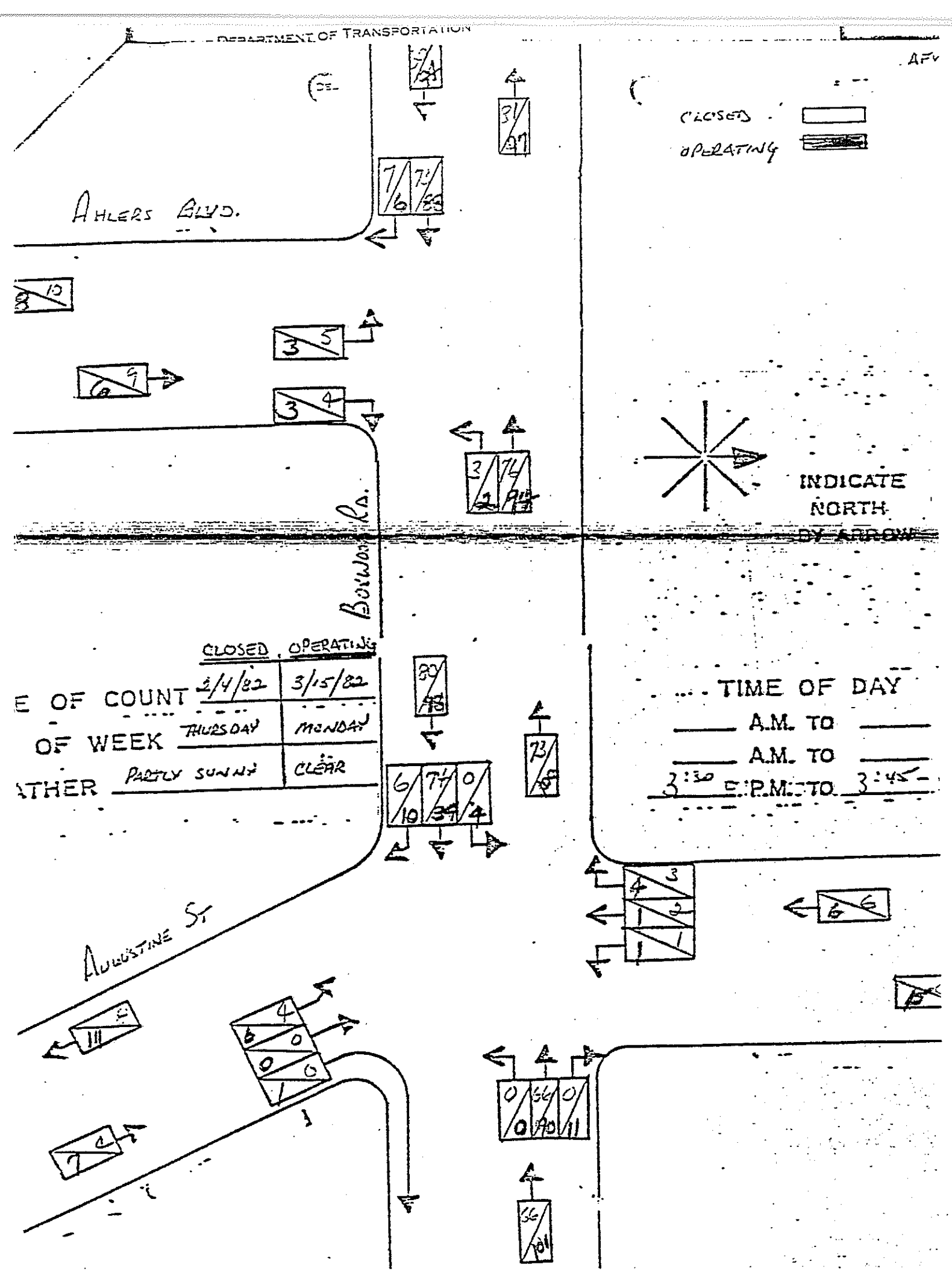
attachments


CLOSED
OPERATING
AHLERS BLVD.
INDICATE NORTH BY ARROW
CLOSED . OPERATING
E OF COUNT 2/4/82 3/15/82
OF WEEK THURSDAY MONDAY
THER PARTLY SUNNY CLEAR
TIME OF DAY
A.M. TO
A.M. TO
2:30 P.M. TO 2:45
AUGUSTINE ST


CLOSED
OPERATING
AHLERS BLVD.
BOSTON RD.
AUGUSTINE ST
INDICATE NORTH BY ARROW
CLOSED, OPERATING
OF COUNT 2/4/82 3/15/82
OF WEEK THURSDAY MONDAY
THER PARTLY SUNNY CLEAR
TIME OF DAY
A.M. TO
A.M. TO
2:45 P.M. TO 3:00


CLOSED
OPERATING
AHLERS BLVD.
INDICATE NORTH BY ARROW
BUNDY RD.
AUGUSTINE ST
CLOSED
OPERATING
OF COUNT
2/4/82
3/15/82
OF WEEK
THURSDAY
MONDAY
THER
PARTLY SUNNY
CLEAR
TIME OF DAY
A.M. TO
A.M. TO
3:00 P.M. TO 3:15


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OPERATING
AHLERS BLVD.
BOXWOOD RD.
AUGUSTINE ST
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THURSDAY
MONDAY
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TIME OF DAY
A.M. TO
A.M. TO
3:15 P.M. TO 3:30


DEPARTMENT OF TRANSPORTATION
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BOWLES RD.
AUGUSTINE ST
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3/15/82
OF WEEK
THURSDAY
MONDAY
ATHER
PARTLY SUNNY
CLEAR
TIME OF DAY
A.M. TO
A.M. TO
3:30 P.M. TO 3:45

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Lincoln Ln & West Gate (G.M.)

DATE OF COUNT 3/11/92 2/16/92

DAY OF WEEK ~~THURSDAY~~ TUES

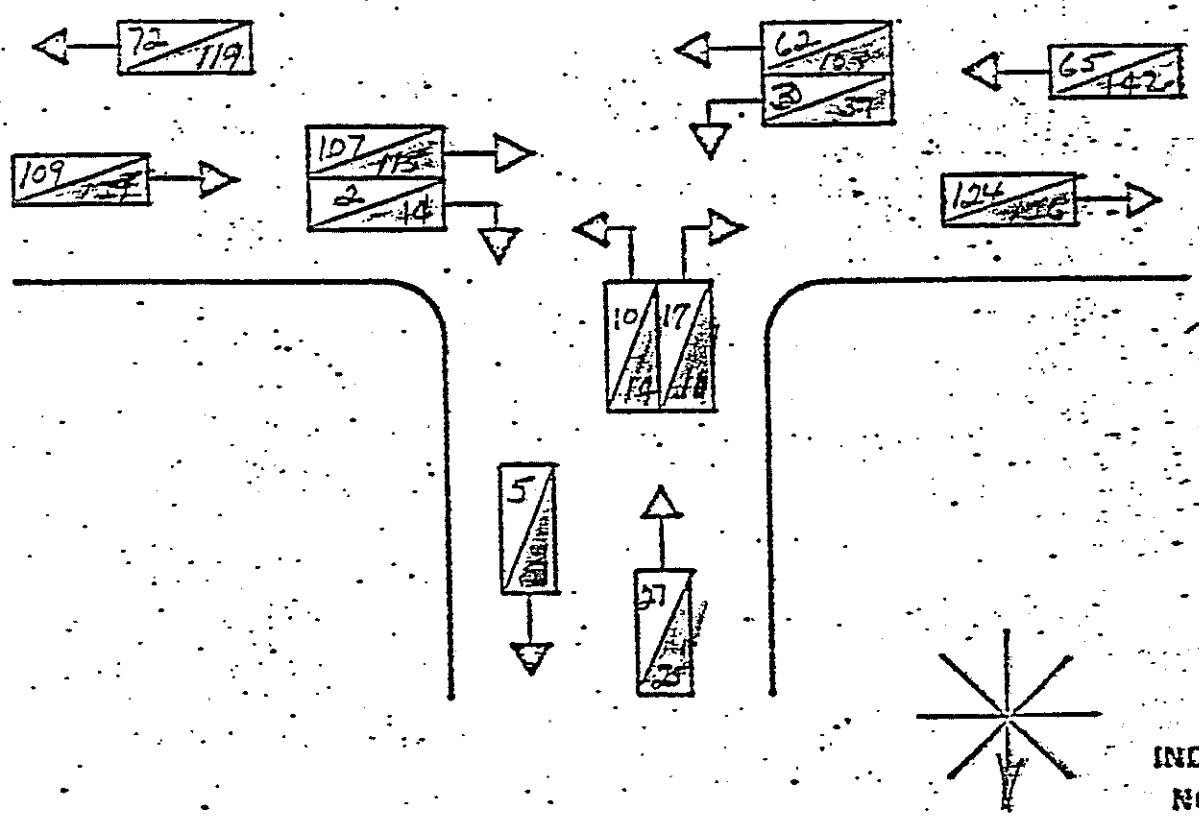
WEATHER Clear Partly Sunny

TIME OF DAY

— A.M.	— A.M.
— A.M.	— P.M.
1430 P.M.	1445 P.M.

Before — (Counts)

After — (Location)



INDICATE NORTH BY ARROW

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Redwood Rd. & GM WEST GATE

DATE OF COUNT 2/16/62 ~~3/1/62~~

DAY OF WEEK TUES ~~THURSDAY~~

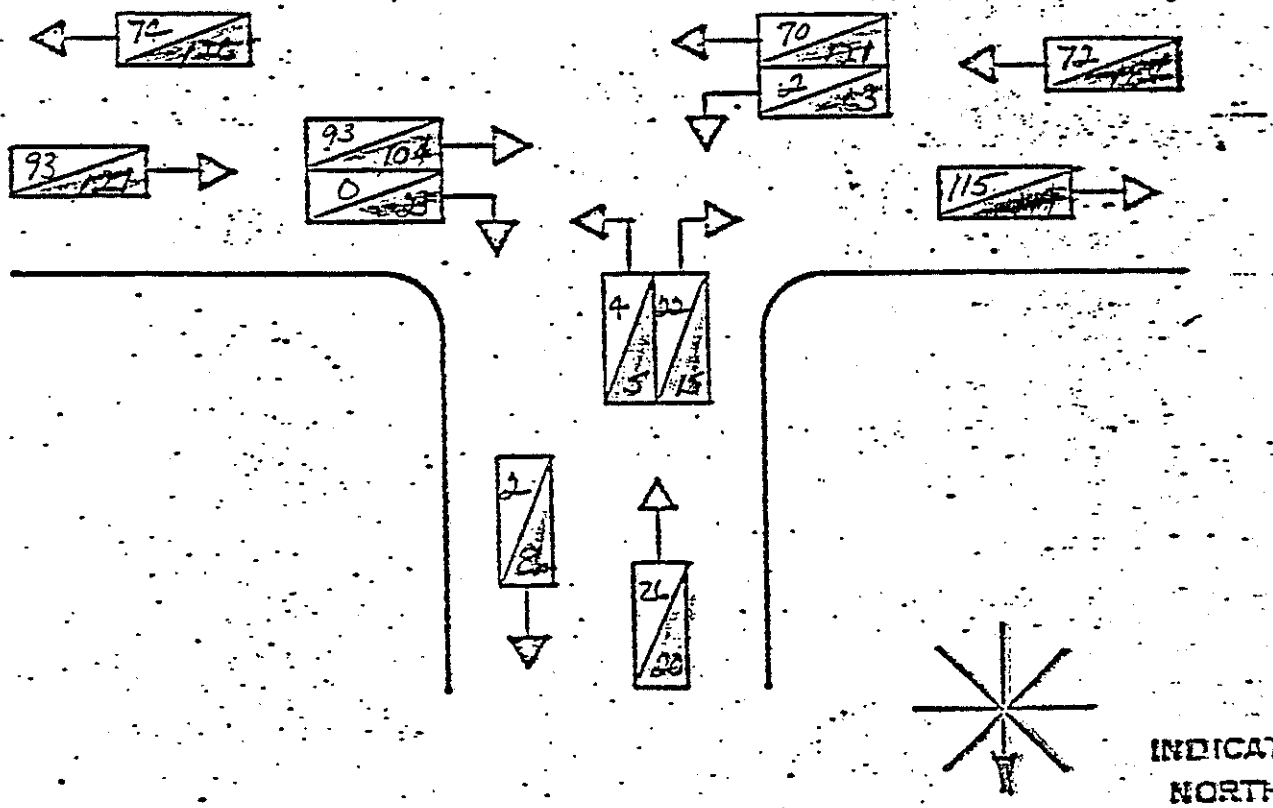
WEATHER Partly Sunny ~~CLEAR~~

TIME OF DAY

____ A.M.	____ A.M.
____ A.M.	____ P.M.
1445 P.M.	1500 P.M.

PLANT CLOSED —

PLANT OPERATING —



INDICATE NORTH BY ARROW

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Box Woods Rd. & GM WEST GATE

DATE OF COUNT 2/16/22 3/2/22

DAY OF WEEK ~~TUES~~ ~~FRI~~ THURS

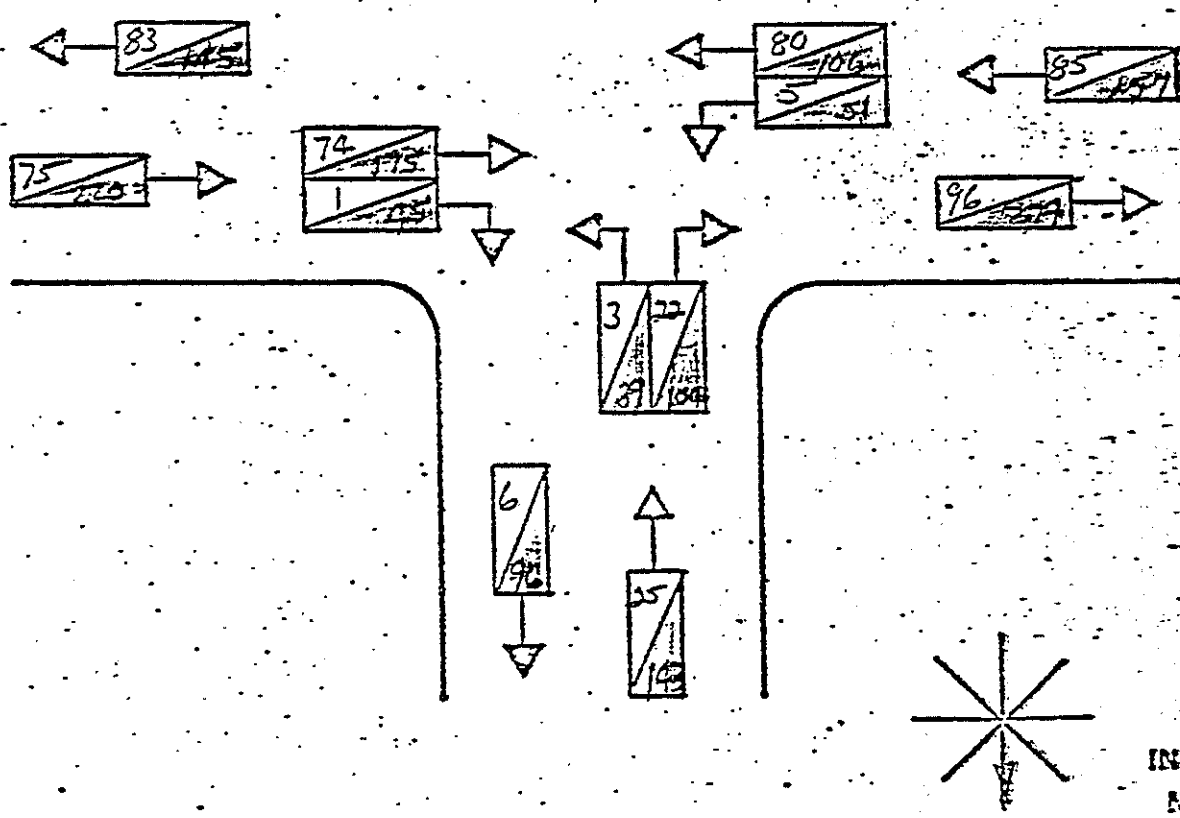
WEATHER ~~PARTLY SUNNY~~ ~~CLEAR~~

TIME OF DAY

____ A.M.	____ A.M.
____ A.M.	____ P.M.
1500 P.M.	1515 P.M.

PLANT CLOSED

PLANT OPERATING



INDICATE NORTH BY ARROW

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Boxwood Rd. & Gill West Gate

DATE OF COUNT 2/16/82 ~~3/17/82~~

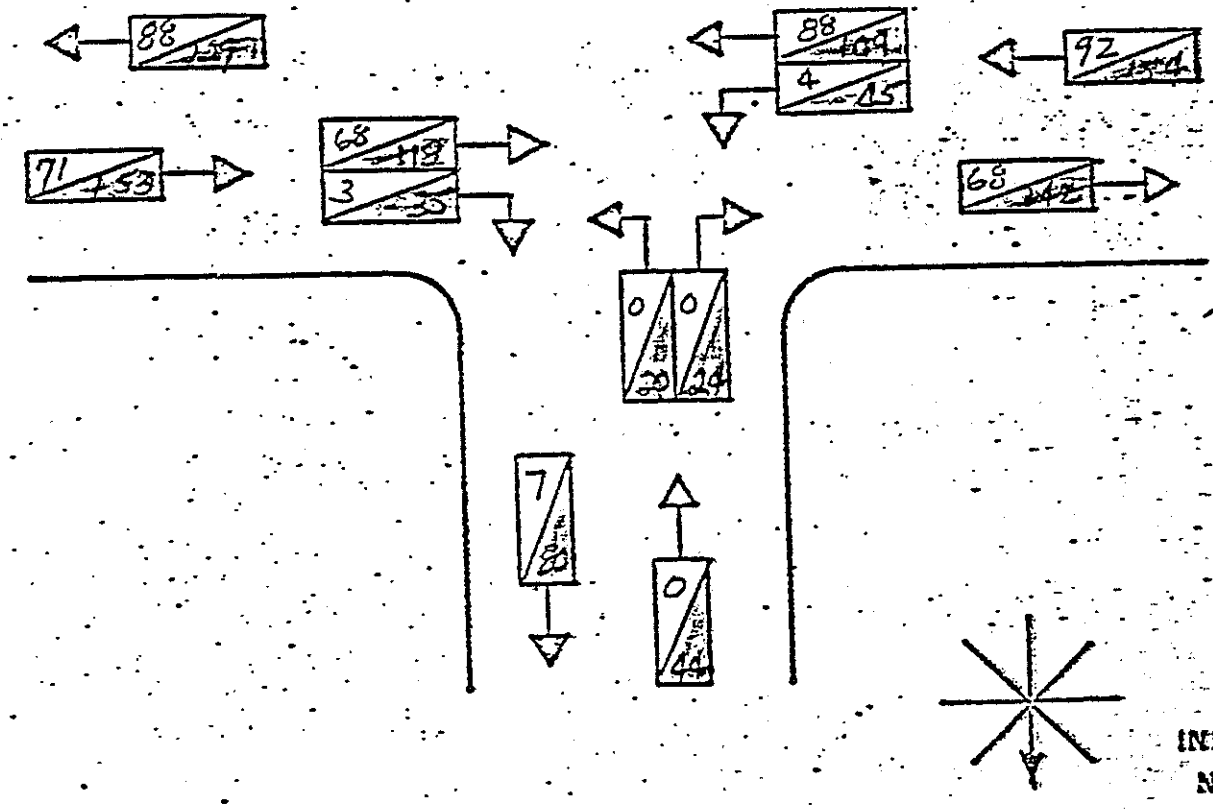
DAY OF WEEK Tues ~~Thurs~~

WEATHER Partly Sunny ~~Cloudy~~

TIME OF DAY

____ A.M.	____ A.M.
____ A.M.	____ P.M.
1515 P.M.	1530 P.M.

PLANT CLOSED — PLANT OPERATING



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Ramsdell Rd. & GM West Gate

DATE OF COUNT 3/16/82 3/17/82

DAY OF WEEK TUES THURS

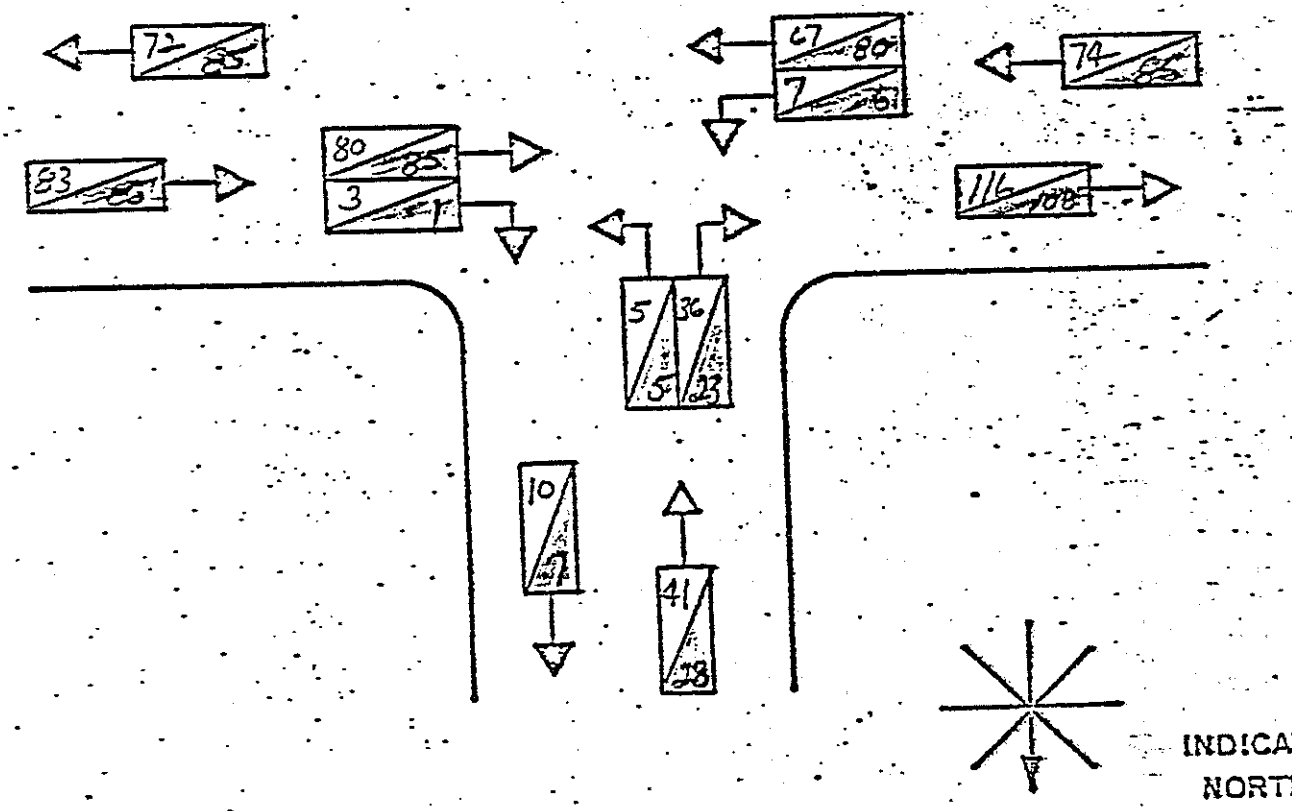
WEATHER Partly Sunny Clear

TIME OF DAY

____ A.M.	____ A.M.
____ A.M.	____ P.M.
1530 P.M.	1545 P.M.

PLANT CLOSED

PLANT OPERATING



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BY ARR

DIVISION OF HIGHWAYS
BUREAU OF TRAFFIC

TURNING MOVEMENT COUNT

LOCATION Borden Rd / West Gate

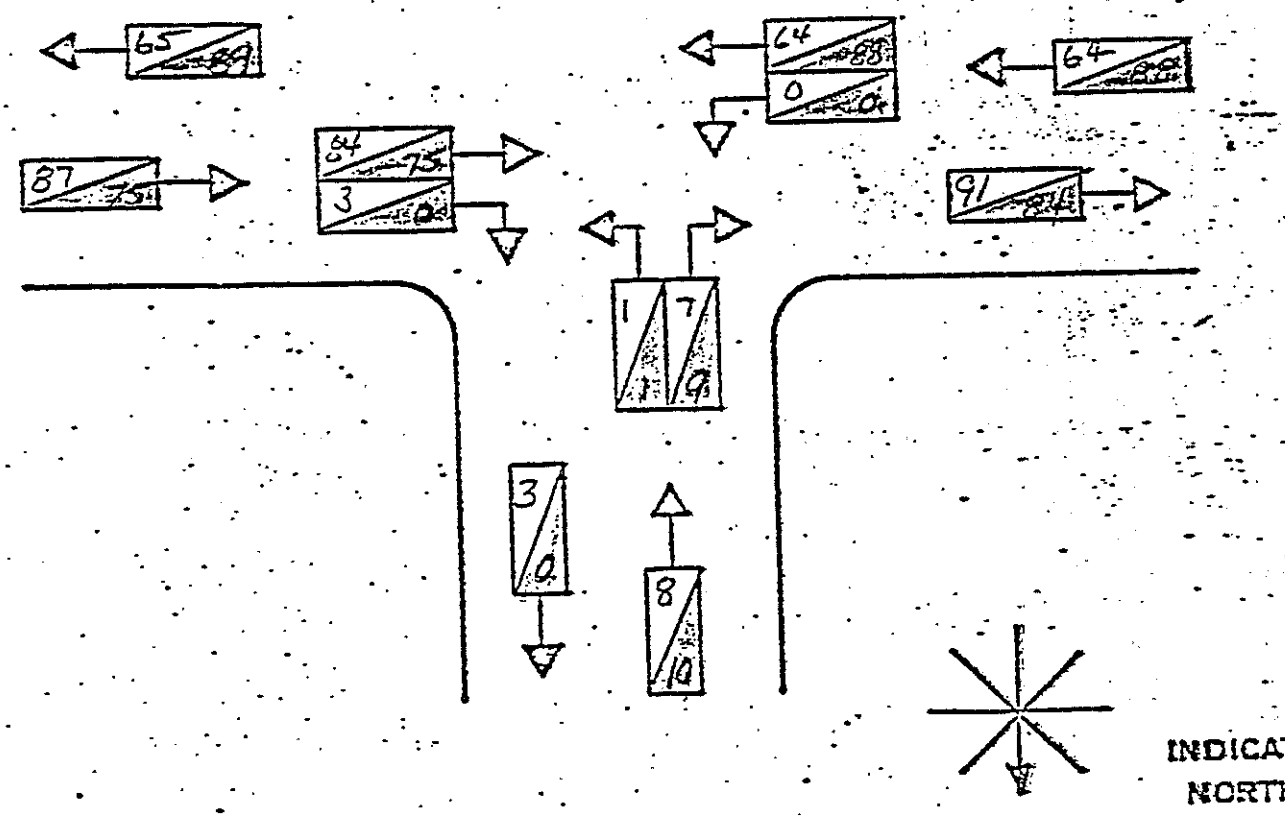
DATE OF COUNT	2/12/92	3/11/92
DAY OF WEEK	TUE	TUE
WEATHER	Partly Sunny	Clear

TIME OF DAY

____ A.M.	____ A.M.
____ A.M.	____ P.M.
1545 P.M.	1600 P.M.

Plant Co.

Plant Operating



INDICATE NORTH BY ARROW

APPENDIX G

Operating Record

OPERATING RECORD

FOR

HAZARDOUS WASTE MATERIALS

(EPA)

BY: ERNEST R. BOSETTI

DATE: NOVEMBER 3, 1981

OPERATING RECORD

FOR

HAZARDOUS WASTE MATERIALS

I. GENERAL:

FEDERAL REGULATIONS REQUIRE THIS PLANT TO KEEP A RUNNING LOG FOR THE GENERATION AND DISPOSAL OF ALL HAZARDOUS WASTES. SUCH A LOG, OR OPERATING RECORD, MUST BE MAINTAINED UNTIL CLOSURE OF THIS PLANT.

ALL RECORDS AND PERTINENT PLANS MUST BE FURNISHED UPON REQUEST TO ANY EPA REPRESENTATIVE WHO IS DULY DESIGNATED BY THE EPA ADMINISTRATION. A COPY OF WASTE DISPOSAL LOCATIONS AND QUANTITIES MUST BE SUBMITTED TO THE REGIONAL ADMINISTRATOR AND LOCAL LAND AUTHORITY UPON CLOSURE OF THE FACILITY.

THIS PLANT MUST PREPARE AND SUBMIT A SINGLE COPY OF AN ANNUAL REPORT TO THE REGIONAL ADMINISTRATOR, EPA BY 1 MARCH OF EACH YEAR. THE ANNUAL REPORT MUST COVER FACILITY ACTIVITIES DURING THE PREVIOUS CALENDAR YEAR.

THIS PLANT WILL NOT ACCEPT ANY HAZARDOUS WASTE FROM AN OFF-SITE SOURCE FOR TREATMENT, STORAGE, OR DISPOSAL.

II. OPERATING RECORD:

THE FOLLOWING INFORMATION MUST BE RECORDED AS IT BECOMES AVAILABLE AND MAINTAINED IN THE OPERATING RECORD UNTIL CLOSURE OF THE FACILITY:

A. DESCRIPTION AND QUANTITY OF EACH HAZARDOUS WASTE GENERATED.

B. METHOD AND DATE OF ITS TREATMENT, STORAGE, OR DISPOSAL.

C. LOCATION OF EACH HAZARDOUS WASTE WITHIN THE FACILITY AND THE QUANTITY AT EACH LOCATION. AT EACH LOCATION, A RUNNING LOG MUST BE MAINTAINED TO REGISTER ALL INPUT AND OUTPUT OF HAZARDOUS WASTES. THE LOG MUST BE LOCATED AT EACH SPECIFIC LOCATION AT ALL TIMES. FOR SPECIFIC LOCATION(S) OF HAZARDOUS WASTE SITES, REFER TO THE HAZARDOUS WASTE PERMIT APPLICATION.

II. OPERATING RECORD - (CONTINUED)

D. RECORDS AND RESULTS OF WASTE ANALYSES AND TRIAL TESTS PERFORMED.

E. SUMMARY REPORTS AND DETAILS OF ALL INCIDENTS THAT REQUIRE IMPLEMENTING THE CONTINGENCY PLAN (SPILL PLAN), RESULTING FROM A RELEASE, FIRE, OR EXPLOSION OF A HAZARDOUS WASTE.

F. RECORDS AND RESULTS OF INSPECTIONS OF THIS FACILITY FOR MALFUNCTIONS AND DETERIORATION, OPERATOR ERRORS, AND DISCHARGES WHICH MAY BE CAUSING OR LEAD TO (1) THE RELEASE OF HAZARDOUS WASTE CONSTITUENTS TO THE ENVIRONMENT OR (2) A THREAT TO HUMAN HEALTH. THESE RECORDS MUST BE KEPT FOR A PERIOD OF THREE (3) YEARS.

G. SUBMIT OPERATING RECORD TO THE ENVIRONMENTAL ENGINEER ON MONDAY, THE PREVIOUS WEEK'S REPORT.

H. A MANIFEST SYSTEM, AS ESTABLISHED BY THE STATE OF DELAWARE FOR EPA, MUST BE UTILIZED FOR ALL SHIPMENTS OF HAZARDOUS WASTES. SUCH A SYSTEM WILL BE THE RESPONSIBILITY OF THE PURCHASING DEPARTMENT. PURCHASING WILL ALSO MAINTAIN RECORDS OF ALL MANIFESTS.

REF: FEDERAL REGISTER VOL. 45, NO. 98, EPA, HAZARDOUS WASTE AND CONSOLIDATED PERMIT REGULATIONS, DATED MAY 19, 1980, P265.73.

III. ANNUAL REPORT:

THIS PLANT MUST SUBMIT AN ANNUAL REPORT BY MARCH 1ST OF EACH YEAR, OF THE FACILITY ACTIVITIES DURING THE PREVIOUS CALENDAR YEAR. THE ANNUAL REPORT MUST INCLUDE:

A. THE EPA IDENTIFICATION NUMBER.

B. THE CALENDAR YEAR COVERED.

III. ANNUAL REPORT - (CONTINUED)

C. A DESCRIPTION AND THE QUANTITY OF EACH HAZARDOUS WASTE STORED DURING THE YEAR.

D. THE METHOD OF TREATMENT, STORAGE, OR DISPOSAL FOR EACH HAZARDOUS WASTE.

E. THE MOST RECENT CLOSURE COST ESTIMATE.

F. THE CERTIFICATION SIGNED BY THE OWNER OF FACILITY OR HIS AUTHORIZED REPRESENTATIVE.

NOTE: USE EPA FORM 8700-13 AND 13B

REF: FEDERAL REGISTER VOL. 45, NO. 98, EPA, HAZARDOUS WASTE AND CONSOLIDATED PERMIT REGULATIONS, DATED MAY 19, 1980. P265.75.

OPERATING RECORD - HAZARDOUS WASTE

DESCRIPTION	QUANTITY (LBS.)	METHOD OF TREATMENT, STORAGE OR DISPOSAL	LOCATION

APPENDIX H

Closure Plan

CLOSURE PLAN

FOR

GENERAL MOTORS ASSEMBLY DIVISION

WILMINGTON PLANT

BOXWOOD & DODSON ROADS

WILMINGTON, DELAWARE

CLOSURE PLAN
GMAD -WILMINGTON

I. INTRODUCTION

UNDER THE US EPA REGULATIONS, 40 CFR PART 265, SUBPART G, SECTIONS 265.110 THRU 265.120, EACH FACILITY WHICH STORES, TREATS, OR DISPOSES OF HAZARDOUS WASTE MUST HAVE A CLOSURE PLAN ON FILE. THIS CLOSURE PLAN HAS BEEN PREPARED TO COVER THE FOLLOWING FACILITY:

1. EPA ID NUMBER: DED002369205

2. OWNER'S NAME: GENERAL MOTORS CORPORATION
ASSEMBLY DIVISION
WILMINGTON PLANT AND ADDRESS
P. O. BOX 1512, BOXWOOD @ DODSON ROADS
WILMINGTON, DEL. 19899

3. THIS PLAN HAS BEEN PREPARED BY: ERNEST R. BOSETTI, SENIOR ENGINEE
JULY 17, 1981

THIS PLAN HAS BEEN REVISED BY _____
(NAME AND JOB TITLE)

_____
DATE

4. THE ATTACHED CHART SHOWS THE FACILITIES FOR STORAGE OF HAZARDOUS WASTES.

   A. SEE ATTACHMENT I FOR LOCATION AND SIZE OF DRUM STORAGE AREA.

   B. SEE ATTACHMENT II FOR GEOGRAPHICAL COORDINATES OF GM ASSEMBLY DIVISION PROPERTY.

II. MAXIMUM WASTE INVENTORY

THE FOLLOWING TABLE SHOWS THE MAXIMUM QUANTITY OF WASTES ON HAND AT ANY ONE TIME:

USED THINNERS CONTAINING SOME PAINT SLUDGE	240 DRUMS
SEALERS	10 DRUMS
SEALERS	10 PALES
WASTE OILS (TRANSMISSION, POWER STEERING, & MISCELLANEOUS MAINTENANCE OILS)	25 DRUMS
FLOCCULENT 328	16 DRUMS
RIDOLENE 1055 AND 1049 (SHORT SHELF LIFE AND OBSOLETE)	14 DRUMS
RUBBER SOLVENT (OBSOLETE)	12 DRUMS
1-1-1 TRICHLORETHANE (USED)	16 DRUMS
PAINT SLUDGE	10 - 800-GAL. HOPPERS (HOPPERS ARE NOT GM PROPERTY)

III. SCHEDULE FOR CLOSING:

THIS FACILITY DOES NOT HAVE A DEFINITE CLOSURE DATE. THE FOLLOWING SCHEDULE IS OPEN-ENDED. IT LISTS THE TIMETABLE FOR CLOSURE IN TERMS OF ELAPSED TIME SUBSEQUENT TO THE TIME THAT EPA OR AN EPA AUTHORIZED STATE AGENCY, HAS APPROVED THIS CLOSURE PLAN.

DAY 1 - PLANT TERMINATION OF HAZARDOUS WASTE ACTIVITY

DAY 2-5:

PHOSPHATING MACHINE - CLEAN ALL SURFACES PIPING AND TANKS IN THE PHOSPHATING AND CHROME STAGES. PLACE ALL SLUDGES IN DUMPSTER TANKS FOR DISPOSAL.

URETHANE SEALER/ADHESIVE SYSTEM - PURGE ALL PIPING OF URETHANE MATERIAL AND ALLOW TO CURE FOR 72 HOURS. SOLVENT AND DETERGENT CLEAN URETHANE SYSTEM PIPING. REMOVE SOLVENT AND DETERGENT FROM PIPING AND STORE IN BULK TANK OR DRUMS FOR DISPOSAL.

III. SCHEDULE FOR CLOSING - (CONTINUED)

DAY 2 - 5: (CONTINUED)

PAINT LINE WASH THINNER SYSTEM - DRAIN THE ONE 6000 GAL. TANK AND ASSOCIATED PIPING CONTAINING SOLVENTS USED TO WASH PAINT LINES. DETERGENT RINSE TANK AND LINES, THEN DRAIN INTO A BULK TANK OR DRUMS FOR DISPOSAL.

PAINT DEPT. SOLVENT DISPENSERS - DRAIN ALL SOLVENT DISPENSERS IN SPRAY BOOTHS AND PAINT DEPARTMENT PROPER INTO A BULK TANK OR DRUMS. DETERGENT RINSE THESE FACILITIES AND DRAIN INTO A BULK TANK OR DRUMS.

D.I. WATER GENERATOR - DEACTIVATE THE DEIONIZED WATER GENERATOR DRAIN EFFLUENT CONTAINING SULFURIC ACID SODIUM HYDROXIDE TO 100,000 GAL. TREATMENT TANK FOR NEUTRALIZATION. THIS IN TURN DRAINS TO THE WASTE-WATER TREATMENT SYSTEM.

DAY 6 - 9:

CAUSTIC STRIPPING TANKS - DRAIN CAUSTIC LIQUIDS INTO A BULK TANK OR DRUMS. RINSE WITH A NEUTRALIZING AGENT, THEN DRAIN TO BULK TANK OR DRUMS FOR DISPOSAL.

HEAT EXCHANGER EFFLUENT - DRAIN HEAT EXCHANGER EFFLUENT COLLECTING TANKS (2) TO BULK TANKS OR DRUMS FOR DISPOSAL.

WASTE OILS - COLLECT ALL WASTE OILS FROM MAINTENANCE AND PRODUCTION DEPARTMENTS PLUS POWER HOUSE AND PLACE IN BULK TANK OR DRUMS FOR DISPOSAL.

SKIMMER & INTERCEPTOR OIL TANKS - PUMP OU OIL SKIMMER TANK AND OIL INTERCEPTOR TANK AT THE REDUNDANT WASTE SYSTEM AT THE END OF THE STORM DITCH INTO A BULK TANK TRUCK.

OLEUM BOOTH - CAP ALL DRUMS RECEIVING DRAINAGE (KEROSENE, VARSOL, ETC.) FROM OLEUM BOOTH FOR DISPOSAL.

CONVEYOR PITS - SPREAD OIL DRY IN ALL CONVEYOR PITS TO ABSORB OIL DRIPPINGS. COLLECT RESIDUE IN BULK CONTAINER OR DRUMS FOR DISPOSAL.

III. SCHEDULE FOR CLOSING - (CONTINUED)

DAY 10 - 15:

WASTE WATER STORAGE - DRAIN THE FOLLOWING TANKS:

A. 100,000 GAL. TANK, TOTAL OF 1

B. 600,000 GAL. TANK, TOTAL OF 2

DAY 16 - 18:

WASTE WATER STORAGE - PUMP OUT SLUDGES IN THE BOTTOM OF 1-100,000 GALLON AND 2 - 600,000 GALLON WASTE WATER TANKS FOR DISPOSAL.

DAY 19 - 25:

HAUL-A-WAY - CONTRACTOR REMOVAL OF ALL SOLVENTS, CAUSTICS, SLUDGES, OILS, ETC., COLLECTED BETWEEN DAYS 2 - 18 TO DISPOSAL SITES FOR DISPOSAL.

DAY 26 - 46:

MANIFESTS - FILE ALL MANIFESTS WITH RETURNED COPY FOR SAFE KEEPING.

DAY 46:

CLOSURE COMPLETED

DAY 50:

CERTIFICATION OF CLOSURE BY INDEPENDENT REGISTERED PROFESSIONAL ENGINEER OR STATE REPRESENTATIVE.

IV. DECONTAMINATION OF FACILITY AND EQUIPMENT:

1. PRETREATMENT OF WASTE HYDROCARBON TANKS:

TANKS CONTAINING SCRAP SOLVENTS, WASTE OILS, ETC. SHALL BE DRAINED AS COMPLETELY AS POSSIBLE. ONCE THE TANKS ARE DRAINS, THEIR CONTENTS SHALL BE SHIPPED TO A PERMITTED DISPOSAL FIRM. POTENTIAL FIRMS ARE:

1. BROWNING FERRIS INDUSTRIES, BALTIMORE, MD.
2. ROLLINS ENVIRONMENTAL SERVICES, BRIDGEPORT, N.J.
3. EAST COAST POLLUTION CONTROL, CLAYTON, N.J.
4. OIL RECOVERY COMPANY, CLAYTON, N.J.
5. AMERICAN RECOVERY COMPANY, BALTIMORE, MD.

THE TANKS WILL THEN BE WASHED AND FILLED WITH A 5% ALKALI DETERGENT CLEANING COLUTION. THE SOLUTION WILL BE ALLOWED TO SIT IN THE RESPECTIVE TANK FOR 48 HOURS. THE SOLUTION WILL THEN BE PUMPED OUT AND TRANSPORTED TO THE WASTEWATER TREATMENT AREA. THE PORTABLE TANKS USED FOR THIS WORK WILL ALSO BE WASHED OUT WITH A DETERGENT AFTER USE. THE TANKS WILL THEN BE RINSED WITH CITY WATER. THIS LAST WATER RINSE WILL BE CHECKED BY ROY F. WESTON, INC. WEST CHESTER, PENNSYLVANIA. THE TOTAL AMOUNT OF WASH SOLUTION IS 8125 GALLONS. THE CLEAN TANKS WILL BE EITHER:

A. FILLED WITH DRY SAND, AND THE FILL AND DRAIN LINES WILL BE WELDED SHUT, OR

B. REMOVE THE TANK (THIS OPTION SHOULD ONLY BE CONSIDERED IF THE TANKS CANNOT BE DECONTAMINATED).

THE SOIL IMMEDIATELY AROUND THE TANK FILL LINES WILL BE REMOVED. THE SOIL WILL BE DRUMMED AND LANDFILLED.

THE CHART BELOW SHOWS THE ESTIMATED VOLUMES OF SOIL TO BE REMOVED:

IV. DECONTAMINATION OF FACILITY & EQUIPMENT - (CONTINUED)

1. PRETREATMENT OF WASTE HYDROCARBON TANKS - (CONTINUED)

SKIMMER TANK (STORM DITCH)	25 YD^3
OIL INTERCEPTOR TANK (STORM DITCH)	25 YD^3
TANK FARM RECEPTACLES	75 YD^3

2. STORAGE AND MARSHALLING AREAS:

THE CONCRETE DRUM STORAGE PAD WILL BE CLEANED UP BY SWEEPING THIS ENTIRE AREA. THIS PAD WILL THEN BE STEAM CLEANED AND RINSED WITH CITY WATER. THE VALVE ON THE DRAIN LINE SHALL BE OPENED SO THAT FLOW IS DIRECTED TO THE WASTE WATER TREATMENT SYSTEM FOR NEUTRALIZATION.

3. TESTING:

TO VERIFY THE COMPLETENESS OF THE DECONTAMINATION PROCESS, ALL RINSE SOLUTIONS AND PLANT WASTE-WATER WILL BE EXAMINED BY ROY F. WESTON, INC. WEST CHESTER, PENNSYLVANIA. THE FOLLOWING TESTS ARE APPLICABLE:

SKIMMER TANK	FLASH POINT ASTM_____;	_____PPM
INTERCEPTOR TANK	FLASH POINT _____;	_____PPM
DRUM STORAGE PAD	ASTM	_____
	PH	_____
	METALS	_____

V. COST ESTIMATE FOR CLOSURE
(TO BE UNDATED ANNUALLY ON 1 AUG. 82)

PREPARED BY: ERNEST R. BOSETTI, PLANT ENGINEERING
SR. ENGINEER, ENVIRONMENTAL

_____, FINANCIAL DEPARTMENT

PHOSPHATING MACHINE - BODY	$ 12,336
PHOSPHATING MACHINE - SMALL PARTS	$ 4,112
URETHANE ADHESIVE	$ 2,110
PAINT LINE WASH THINNER SYSTEM	$ 6,764
PAINT DEPT. SOLVENT DISPENSERS	$ 1,816
D.I. WATER GENERATOR	$ 3,632
CAUSTIC STRIPPING TANKS	$ 772
HEAT EXCHANGER EFFLUENT TANKS	$ 1,316
WASTE OIL	$ 3,264
SKIMMER & INTERCEPTOR OIL TANKS	$ 13,220
OLEUM BOOTH	$ 1,044
CONVEYOR PITS	$ 32,200
WASTEWATER STORAGE TANKS	$ 15,000
HAUL-A-WAY OF WASTES	$ 45,000
MANIFEST FILING	$ 272
TOTAL:	$142,858
OR	$177,858

IF SUBMERGED SKIMMER AND OIL INTERCEPTOR TANKS ARE REMOVED

VI. POST-CLOSURE PLAN

THIS PLANT IS NOT A DISPOSAL FACILITY AND, AS SUCH, DOES NOT HAVE ANY SURFACE IMPOUNDMENTS, LANDFILLS, LAND TREATMENT FACILITIES, ETC. THEREFORE, A POST-CLOSE PLAN IS NOT REQUIRED FOR THIS PLANT.

A. GROUNDWATER MONITORING IS NOT REQUIRED

B. MAINTENANCE OF MONITORING SYSTEMS IS NOT REQUIRED

C. 6-MONTH INSPECTIONS BY A CORPORATE OR AUTHORIZED REPRESENTATIVE WILL BE MADE TO INSURE CAPPED AND/OR FINAL COVER INTEGRITY IS MAINTAINED

VII. FACILITY CONTACT - (AFTER CLOSURE)

GMAD - CENTRAL OFFICE
30009 VAN DYKE AVENUE
WARREN, MICH. 48090

ATT: DIRECTOR OF FACILITIES

PHONE: 313-492-7100

APPENDIX I

Insurance Documentation

APPENDIX J

Bonderite and Chrome Waste Effluent Tank Specifications

Field testing of these tanks shall conform to the testing methods and procedures established in the AWWA Standards. Where leaks are detected, the welds must be repaired as recommended by AWWA D-100.

The steel rolled ring required for anchoring in the concrete floor of each steel tank shall be furnished by this Contractor and shipped in advanced time for placement in concrete by others.

TANK ACCESSORIES

Tank connections shall be oriented by the Architect-Engineer.

Tank shall be provided with the following:

1. One (1) approved 24" inspection hatch with flanged bolted cover.
2. One (1) 8" outlet pipe, with flanged connection.
3. Supporting side brackets for one (1) 4" and one (1) 6" inlet pipes.
4. One (1) 3" drain line, flanged connection and 3" threaded male dairy hose connection with cap and chain, similar to OPW 83 or as approved.
5. Outside steel stairway, platform and hand rails.
6. Inside ladder from platform to bottom of tank side.

MATERIALS OF CONSTRUCTION

Materials used in the construction and fabrication of these steel tanks shall be of American Manufacture and of grades and qualities required by the AWWA Standards. Components of these tanks shall conform to the following other National Standards, such as, but not limited to:

Steel tanks (in general).....AWWA D-100

Flanged pipe connections.....ASTM A-181, Grade 1 (125 psi)

Piping.....ASTM A-53 (schedule 40)

Steel supports & framing.....ASTM A-36

Reinforcing plates.....ASTM A-283C

Minimum allowable plate thickness is 1/4 inch.

Pipe nozzles and other type connections shall extend a minimum of six (6) inches outside of tank to face of flange.

WELDING

All welds must be made by welders or welding operators who have been been previously qualified by tests as prescribed in the "AWWA Standards" or the "Standard Code for Welding in Steel Tank Construction of the American Welding Society."

Qualifying records of welders performing the work on these tanks shall be made avaiable to the Architect-Engineer or Owner upon request.

Welds shall be cleaned by removing all scalf, slag, weld spatter, or burrs this Contractor shall allow for sufficient grinding to remove all sharp or rough welded surface both internally and externally on tanks. Generally all surface, especially seam welds, corners, crevices, etc., shall be left suitable for application of special coatings.

Welding shall be performed by the accepted methods established by the AWWA Standards. All welds shall be continuous and full penetration overall.

WELD TYPES

Skip or tack welding is not acceptable for attaching any mechanisms, components, reinforcements, or other apparatus to any tank. This Contractor shall be herein required to make all such seams and joints continuous fillets as recommended in the AWWA Standards.

Welding of joints for wall shell plates shall be double butt welds and continuous over all horizontal and vertical seams.

Welding at the junctions of tanks such as nozzles, brackets, manholes, etc., shall be continuous and fillet type (inside and outside) as recommended in the AWWA Standards. Full fillet thickness in the AWWA Standard shall be adhered to. Welds at pipe couplings, flanged connections, and other penetrating openings thru plates shall be reinforced with another thickness of plate welded around the opening as recommended by the AWWA Standards, and the perimeter edge of all reinforcing plates shall also be welded continuously with a fillet type weld.

MANHOLE

The tank shall be equipped with a 24" diameter manhole either built-up or prefabricated press type. Manhole shall have a reinforcing plate as required by the AWWA Standards and shall be complete with cover plate and handles with gasket made of composition asbestos or neoprene and required heavy duty bolts and wing nuts to seal manhole cover securely to tank connection without leaking.

(b) Prufcoat:

(1) One (1) coat wash primer P-10, Dry to .3 - .4 mils and

(2) One (1) coat vinyl weld primer P-62, Dry to 1.0 - 1.5 mils thickness.

2. Exterior Surface

(a) Koppers

One (1) coat rust inhibitive primer, No. 621, Dry to 1.5 mils thickness

OR

(b) Prufcoat:

One (1) coat primer P-50, Dry to 1.5 - 2.0 mil thickness.

C. Field Preparation, Touch-Up and Finish Painting

After erection and welding of tanks, clean all rust, dirt and grease from the interior and exterior surfaces, sandblast all welds and bare areas to a commerical finish; apply touch-up primer paints to all bare metal, then finish paint overall, as noted hereinafter.

1. Interior Surfaces

(a) Koppers

(1) One (1) coat Koppers tank solution dry to 2 mils thickness (touch-up).

(2) Two (2) finish coats tank solution 6 mils total thickness.

(b) Prufcoat

(1) One (1) primer coat No. P-50, dry to 1.5, dry to 1.5 mils thickness (touch-up)

(2) Two (2) finish coats HSA vinyl, dry to 6.0 - 8.0 mil total thickness.

2. Exterior Surfaces

(a) Koppers

(1) One (1) primer coat No. 621 dry to 1.5 mils thickness (touch-up)

(2) Two finish coats Rustarmor, dry to 1.5 mils thickness each coat

OR

APPENDIX K

Wastewater Treatment Tank
General Specifications

Chevrolet·Pontiac·Canada Group
Wilmington Plant
General Motors Corporation
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

October 28, 1988

Mr. Phillip G. Retallick, Director
State of Delaware Department of Natural
Resources & Environmental Control
Division of Air and Waste Management
89 Kings Highway
P. O. Box 1401
Dover, Delaware 19903

Subject: Notice of Violation: State of Delaware
Regulations Governing Hazardous Waste

Dear Mr. Retallick:

In response to the subject notice dated September 20, 1988, the following comments are submitted:

1. Hazardous waste signs have been placed on each of the two 6,000 gallon spent solvent tanks.

2. A number of signs have been placed in the areas of the spent solvent tanks and the hazardous waste pad so that anyone could quickly locate telephones in order to summon help in the case of an emergency.

3. A written procedure has been written for inspecting, documenting and recordkeeping of the contents of the hazardous materials spill containment cabinets. A copy of this procedure is enclosed.

4. The 2 mew 6,000 gallon tanks and the concrete pad for 55 gallon container placement were installed and are used for accumulation purposes only. As such their installation does not require a revision to Part A.

5. When the Wilmington Plant first filed its' Part A application in the early 1980's, wastewater treatment plants were included as a precaution. It is clear, however, that wastewater treatment plants are excluded from the RCRA permitting requirements. This plant does not view it as necessary to revise its' Part A as the plant intends to withdraw its' Part A application as explained below.

This plant disposes of all hazardous waste in less than 90 days. There is no treatment, storage, or disposal of hazardous waste at this plant. Because of this mode of operation, this plant intends to withdraw its Part A and Part B submittals. A Closure Plan will be submitted for this plant in the near future.

If clarification of the aforementioned text is required, please call me at 302-428-7406.

Respectfully,

Ernest R. Bosetti

Ernest R. Bosetti
Senior Engineer

ERB/lsn
enclosure

cc: Mr. A. Simpson, DNREC
File

FEB 18 1991

SWIDLER & BERLIN
CHARTERED
3000 K STREET, N.W.
SUITE 300
WASHINGTON, D.C. 20007-3851
(202) 944-4300

JULIE A. WEISMAN
ATTORNEY-AT-LAW

DIRECT DIAL
(202) 944-4421
TELEX: 701131
TELECOPIER: (202) 944-4296

February 12, 1991

Deborah Buniski
Clean Technologies, Inc.
DSG Building Annex
University of Delaware
Newark, Delaware 19716

Re: Protective Filing Under RCRA

Dear Deb:

As we discussed, I have enclosed the Federal Register notice that discusses the status of "protective filers" vis-a-vis Section 3005(e)(2) of RCRA (loss of interim status). Obviously, since I have not seen the documents that you obtained from Ernie, I cannot judge whether this provision might be applicable to GM's situation.

I still look forward to "doing breakfast" with you and Ernie in Wilmington. The next time a meeting in Philadelphia is scheduled, I will give you both a call.

Sincerely,

Julie Weisman

Julie A. Weisman

Enclosure

February 19, 1991

Mr. Philip G. Retallick, Director
Division of Air and Waste Management
DNREC
89 Kings Highway
P.O. Box 1401
Dover, DE 19903

SUBJECT: Hazardous Waste Permit Application Withdrawal-EPA ID#-DED002369205

Dear Mr. Retallick:

The purpose of this letter is to clarify General Motor's request for withdrawal of its hazardous waste applications for Part A and B permits. The facility in question is located on Boxwood Road in Wilmington, Delaware. To fully understand the basis of our request we have constructed a chronology of events as related to the permit status of the facility beginning with our submittal of Part A of the application. The events proceed as follows:

EPA receipt of Part A Application for Hazardous Waste Permit (12/15/80)
Part B application submitted to EPA by GM (9/23/82)
DNREC requests additional application information (9/20/88)
GM responds to above request (10/28/88)
GM requests permit application withdrawal of Part A & B (4/5/89)

On April 5, 1989 GM requested withdrawal of its Part A and Part B hazardous waste permit applications (copy attached). The letter contained additional clarification to questions on the changes made to various forms originally filed for the Part A and B Applications. The applications were filed originally to notify EPA of the types of activities and materials present at the plant as so stated in this letter. It was subsequently determined that the plant had neither conducted or operated a regulated activity requiring a permit nor stored hazardous waste at the facility for more than 90 days.

Therefore as allowed under the Federal Regulations, we are hereby formally requesting a revocation of the Part A & B permit applications. The basis for our request concerns our protective filing status. As stated in the Federal register section 3005 (e) (2) of RCRA (loss of Interim Status). This provision states that a facility will lose interim status on November 8, 1985, if permit requirements are not met by that date. This Section further states that protective filers who have submitted their applications but have never conducted a regulated activity are not considered to be in Interim Status and are not subject to the Loss of Interim Status provision which would require the submission of a closure plan. Therefore, based on the fact that GM is eligible to file under the protective filing status ruling, we are not required to submit a closure plan for the purpose of withdrawing our permit applications.

We would appreciate your attention to this matter as soon as possible so that we may resolve this issue as quickly as possible. Please contact us if there are any questions on this matter.

Very truly yours,

Part II Maximum Waste Storage Inventory

The maximum amount of waste stored at the facility at any one time is presented below:

Used paint thinners containing some pant sludge	240 drums
Sealers	10 drums
Sealers	10 pales
Waste oils (power steering, transmission and miscellaneous maintenance oils)	25 drums
Flocculent 328	16 drums
Ridolene 1055 and 1049 (short shelf life and obsolete)	14 drums
Rubber solvent (obsolete)	12 drums
1-1-1 Trichloroethane (used)	16 drums
Paint Sludge	10 800 gal. hoppers*

* Hoppers are not General Motors Property.

Part III Routine Maintenance of Storage Facility

Yearly: Steam cleaning/decontamination of the hazardous waste storage areas. Wash-down water is disposed of at the wastewater treatment plant. The effluent from the wastewater treatment plant is monitored for selected parameters to verify treatment efficiencies. The following parameters are monitored:

Total Toxic Organics
Lead
Chromium
Nickel
Cadmium
Copper
Silver
Zinc
Total cyanide
pH

Monthly: Inspections are made of the storage facility such that any cracks or defects in the drum storage pad are repaired. Records are reviewed to ascertain storage capacity of the drum disposal area. Drums that require immediate shipment are so noted.

Facility Contact (Corporate)

GMAC - Central Office
30009 Van Dyke Avenue
Warren, Michigan 48090

ATTN: Director of Facilities

PHONE: 313-492-7100

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR & WASTE MANAGEMENT
89 KINGS HIGHWAY
P.O. BOX 1401
DOVER, DELAWARE 19903

WASTE MANAGEMENT
SECTION

TELEPHONE: (302) 736 - 4781

October 23, 1990

Mr. Ernest R. Bosetti
Senior Staff Assistant
Environmental Plant Engineering
General Motors Corporation
P. O. Box 1512, Boxwood Road
Wilmington, DE 19899

SUBJECT: Request for a RCRA closure plan

Reference: DED002369205, Code 15

Dear Mr. Bosetti:

It is our understanding that General Motors will be developing a RCRA closure plan in accordance with Delaware Regulations Governing Hazardous Waste (DRGHW).

A Closure Plan for your storage facility must comply with the requirements of DRGHW Part 265, subpart G-closure and post-closure. Enclosed find a compliance checklist for your use. This checklist should be filled out and submitted to the Department along with the closure plan.

One of the requirements under Part 265, subpart G is that the applicant must submit a certification of closure by both the applicant and an independent professional engineer registered in the State of Delaware. It may be to your benefit to retain services of a reputable consulting engineering firm to fulfill the purposes of this requirement.

Should you have any questions or comments, please do not hesitate to contact me at 739-3689.

Sincerely,

Guy Lee, IV
Program Manager I
Hazardous Waste TSD Group

GL:JRB:eg
JRB90057

cc: John Kinney
Jay Brahmbhatt

Facility Name _____
ID No. _____

INTERIM STATUS (40 CFR PART 265) CLOSURE/POST-CLOSURE PLANS

	Provided (Y/N) or NA	Location	Comments
. GENERAL CLOSURE REQUIREMENTS			
A. Partial and/or Final Closure			
A-1. Closure performance standards [§265.111]			
A-2. Contents of plan [§265.112(b)]			
A-2a. Maximum inventory of wastes [§265.112(b)(3)]			
A-2b. Removal/decontamination procedures [§265.112(b)(4)]			
A-2c. Other activities during closure period [§265.112(b)(5)]			
A-2d. Closure schedule for each unit/final closure [§265.112(b)(6) and (7)]			
A-3. Amendment of closure plan [§265.112(c)]			
A-4. Notification of partial and final closure [§265.112(d)]			
A-5. Closure activities performed prior to closure plan approval [§265.112(e)]			
B. Time Allowed for Closure [§265.113]			
B-1. Extension of closure timeframes [§265.113(a) and (b)]			
B-2. Timeframes for demonstrations for extensions [§275.113(c)]			
C. Disposal or Decontamination of Equipment, Structures and Soils [§265.114]			
D. Certification of Closure			
E. Survey Plat and Certification by Professional Land Surveyor [§265.116]			
F. Notices [§265.119]			
F-1. Record of wastes [§265.119(a)]			
F-2. Notice in deed [§265.119(b)]			

Facility Name _____
ID No. _____

INTERIM STATUS (40 CFR PART 265) CLOSURE/POST-CLOSURE PLANS

		Provided (Y/N) or NA	Location	Comments
F-3.	Certification of notice [§265.119(b)(2)]	____	_____	_____
+G.	Closure Cost Estimate [§265.142]	____	_____	_____
G-1.	Adjustments to closure cost estimates [§265.142(b)]	____	_____	_____
G-2.	Revisions to closure cost estimates [§265.142(c)]	____	_____	_____
H.	Financial Assurance for Closure [§265.143]	____	_____	_____
I.	Liability Coverage [§265.147]	____	_____	_____

Facility Name _____
ID No. _____

INTERIM STATUS (40 CFR PART 265) CLOSURE/POST-CLOSURE PLANS

		Provided (Y/N) or NA	Location	Comments
II.	**GENERAL POST-CLOSURE REQUIREMENTS**			
A.	Post-closure Care and Use of Property [§265.117]			
A-1.	Length of post-closure period specified [§265.117(a)(1)]			
A-2.	Increasing/decreasing length of post-closure period [§§265.117(a)(2), 265.118(g)]			
A-3.	Security requirements [§265.117(b)]			
A-4.	Property use restrictions [§265.117(c)]			
B.	Submittal of Post-closure Plan [§265.118(a)]			
C.	Availability of Post-closure Plan			
D.	Content of Post-closure Plan [§§265.117(a)(1), 265.118(c)]			
D-1.	Monitoring activities described [§265.118(c)(1)]			
D-2.	Maintenance activities described [§265.118(c)(2)]			
D-3.	Post-closure contact identified [§265.118(c)(3)]			
E.	Amendment of Post-closure Plan [§265.118(d) and (g)]			
F.	Post-closure Notices [§265.119]			
F-1.	Notice to local zoning authority/record of wastes [§265.119(a)]			
F-2.	Notice in deed [§265.119(b)(1)]			
F-3.	Certification of notice [§265.119(b)(2)]			
F-4.	Removal of wastes from a closed landfill [§265.119(c)]			
G.	Certifications of Completion of Post-closure Care [§265.120]			

Facility Name _____
ID No. _____

INTERIM STATUS (40 CFR PART 265) CLOSURE/POST-CLOSURE PLANS

		Provided (Y/N) or NA	Location	Comments
+H.	Post-closure Care Cost Estimate [§265.144]	____	_____	_____
H-1.	Adjustments to post-closure care cost estimates [§265.144(b)]	____	_____	_____
+H-2.	Revisions to post-closure care cost estimates [§265.144(c)]	____	_____	_____
I.	Financial Assurance for Post-closure Care [§265.145]	____	_____	_____

Facility Name _____
ID No. _____

INTERIM STATUS (40 CFR PART 265) CLOSURE/POST-CLOSURE PLANS

		Provided (Y/N) or NA	Location	Comments
III.	CLOSURE OF CONTAINER STORAGE AREAS			
A.	Contents of Plan [§264.112(b)]			
A-1.	Description of how each unit will be closed [§265.112(b)(1)]			
A-2.	Description of how final closure will be conducted [§265.112(b)(2)]			
A-3.	Identification of the maximum extent of operation [§265.112(b)(2)]			
A-4.	Estimate of the maximum inventory of hazardous wastes [§265.112(b)(3)]			
A-5.	Detailed description of removal of waste inventory [§265.112(b)(3)]			
A-6.	Detailed description of removal of waste residues [§§265.112(b)(4), 265.114]			
A-7.	Detailed description of other necessary activities [§265.112(b)(5)]			
A-8.	Schedule for closure of each unit [§265.112(b)(6)]			
A-9.	Estimate of expected year of final closure [§265.112(b)(7)]			
B.	Decontamination Procedures [§§265.112(b)(4), 265.114]			
B-1.	Procedures for cleaning equipment and removing contaminated soils [§265.112(b)(4)]			
B-2.	Management of generated wastes [§265.114]			
B-3.	Methods for sampling and testing to demonstrate success of decontamination [§265.112(b)(4)]			
B-4.	Criteria for determining the extent of decontamination necessary [§265.112(b)(4)]			

Environmental Activities Staff
General Motors Corporation
General Motors Technical Center
30400 Mound Road
Box 9015
Warren, Michigan 48090-9015

Date: May 10, 1991

Subject: Corrective Action & Property Transfer

From: J. M. Mullins, Industrial Waste Activity

To: U. S. Plant and Environmental Engineers

The RCRA corrective action program established by the Hazardous and Solid Waste Amendments of 1984 (i.e., § 3004(u) and § 3008(h) of RCRA) can have consequences relevant to the transfer of property. The following is provided to promote the recognition of these implications; it is not the result of new regulatory requirements or new understanding of existing requirements. Some of the U. S. EPA positions below may change as regulations governing the corrective action program are finalized. For details on the corrective action program, please see the references below. For guidance on property transfers, please see Attachment C of EAS Bulletin EM-90-1 (12/14/90). Questions may be directed to the IWA and Legal Staff representatives responsible for assisting your facility.

RCRA CORRECTIVE ACTION: FACTS RELEVANT TO PROPERTY TRANSFER

1) According to the EPA, facilities which disposed, treated, or stored hazardous waste and were required to obtain interim status are subject to corrective action. (53 FR 23978, June 24, 1988)

   These facilities are subject to corrective action regardless of:

   a) whether withdrawal of the Part A application has been acknowledged by the EPA or the State; or

   b) the extent or quality of any environmental site assessments conducted by the owner/operator of the facility as part of the property transfer. An environmental assessment is not expected to reduce the likelihood that EPA will conduct an RCRA Facility Assessment (RFA) of the facility; it may limit the extent of the corrective action process. For example, it may reduce the scope of the owner/operator conducted RCRA Facility Investigation (RFI) and cleanup.

   "Protective filers" (who had interim status but can demonstrate that they never treated, disposed, or stored for more than 90 days) are not subject to RCRA corrective action. (53 FR 23978, June 24, 1988)

Let's Get It Together
SAFETY BELTS SAVE LIVES

FAC 91-080

Date: March 5, 1991

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To Debbie Buniski	From Ernie
Co. Clean Tech.	Co.
Dept.	Phone # 428-7406
Fax # 302-368-7962	Fax # 302-428-7246

Subject: *Withdrawal of RCRA Permit Application*

To: E. R. Bosetti - B-O-C Wilmington

In reviewing your letter of February 27, 1991, the following are my comments, as well as those of S. Song and D. LeDuc:

- The Federal Register attachment, page 38946-38949 of September 25, 1985 applies only to land disposal facilities. These would be surface impoundments and landfills.
- We couldn't find any sunset for tank and container permit application withdrawal.
- The last full paragraph on the first page of the letter to DNREC can be deleted since it refers to the Federal Register which is no longer applicable.
- One change in the third paragraph that might strengthen our position is to change the word "neither" in the 5th line. It would now read "...that the plant has never conducted or operated...".
- It is not necessary to submit the inspection records for the waste accumulation areas, but it is likely that DNREC will come out to review the records and inspect the waste management areas.

Other than that, type the letter on B-O-C letterhead and send it in without the Federal Register. Like I mentioned on the phone, credibility is everything. Good luck.

Ball - - - - !

If you have any questions, I can be reached at 8-227-9240 after March 18, 1991.

51-2 5.10

Fred Rindhage

F. W. Rindhage
Senior Staff Engineer

FWR/bp18

cc: J. Martone
R. Phillips

Debbie,

This is the only reply to date. Call me Thurs. A.M.; I'll come down to discuss this.

Ernie

CLEAN TECHNOLOGIES

DGS BUILDING • ACADEMY STREET
P.O. BOX 4694 • NEWARK, DELAWARE 19715
(302) 368-7961

February 19, 1991

Mr. Philip G. Retallick, Director
Division of Air and Waste Management
DNREC
89 Kings Highway
P.O. Box 1401
Dover, DE 19903

SUBJECT: Hazardous Waste Permit Application Withdrawal-EPA ID#-DED002369205

Dear Mr. Retallick:

The purpose of this letter is to clarify General Motor's request for withdrawal of its hazardous waste applications for Part A and B permits. The facility in question is located on Boxwood Road in Wilmington, Delaware. To fully understand the basis of our request we have constructed a chronology of events as related to the permit status of the facility beginning with our submittal of Part A of the application. The events proceed as follows:

EPA receipt of Part A Application for Hazardous Waste Permit (12/15/80)
Part B application submitted to EPA by GM (9/23/82)
DNREC requests additional application information (9/20/88)
GM responds to above request (10/28/88)
GM requests permit application withdrawal of Part A & B (4/5/89)

On April 5, 1989 GM requested withdrawal of its Part A and Part B hazardous waste permit applications (copy attached). The letter contained additional clarification to questions on the changes made to various forms originally filed for the Part A and B Applications. The applications were filed originally to notify EPA of the types of activities and materials present at the plant as so stated in this letter. It was subsequently determined that the plant had neither conducted or operated a regulated activity requiring a permit nor stored hazardous waste at the facility for more than 90 days.

Therefore as allowed under the Federal Regulations, we are hereby formally requesting a revocation of the Part A & B permit applications. The basis for our request concerns our protective filing status, as stated in the Federal register section 3005 (e) (2) of RCRA (loss of Interim Status). This provision states that a facility will lose interim status on November 8, 1985, if permit requirements are not met by that date. This Section further states that protective filers who have submitted their applications but have never conducted a regulated activity are not considered to be in Interim Status and are not subject to the Loss of Interim Status provision which would require the submission of a closure plan. Therefore, based on the fact that GM is eligible to file under the protective filing status ruling, we are not required to submit a closure plan for the purpose of withdrawing our permit applications.

We would appreciate your attention to this matter as soon as possible so that we may resolve this issue as quickly as possible. Please contact us if there are any questions on this matter.

Very truly yours,

Deborah A. Buniski, P.E.
Clean Technologies

Ernest R. Bosetti, P.E.
Sr. Staff Assistant
General Motors

April 5, 1989

Mr. Phillip G. Retallick, Director
Division of Air and Waste Management
Delaware Department of Natural Resources
& Environmental Control
89 Kings Highway
P. O. Box 1401
Dover, DE 19903

Subject: Hazardous Waste Permit Application Withdrawal

Dear Mr. Retallick:

The General Motors Corporation C-P-C Wilmington Plant hereby requests withdrawal of its Part A and Part B hazardous waste permit applications.

As stated in my October 28, 1988 letter to you, this plant disposes of all hazardous wastes in less than 90 days. Engineering, Purchasing, and Transporter files have been checked to insure that hazardous waste was not retained for 90 days or more. Likewise, accumulation areas are of such size that they cannot retain hazardous waste for more than 30 days. There is currently no treatment, storage or disposal of hazardous waste at this plant, nor has there been in the past. The permit applications were submitted as precautionary filings, due to the uncertainties associated with future regulatory requirements and plant operations.

I understand, based upon my telephone discussion of December 8, 1988 with Mr. Alan H. Simpson of the Department of Natural Resources and Environmental Control (DNREC), that the plant is not required to submit a closure plan, if it can be shown that this plant never treated, stored, or disposed of hazardous waste. Because no permitted activities have occurred on site, no closure is required.

Enclosed is a revised Form 1 of the Part A application updating the status of the facility. There are no past or current treatment, storage or disposal activities to be described on a revised Part A or Part B application, nor do

Subject: Hazardous Waste Permit Application Withdrawal

we wish to treat, store or dispose in the future. Therefore, the plant does not intend to submit fully revised Part A or Part B applications, unless directed otherwise by the State.

The remainder of this letter addresses: 1) the changes made to Form 1 (attached) to update identifying information and the plant's status; and 2) an explanation of why the process codes and hazardous wastes listed on the original Form 3 are not and were not permitted activities.

1) Form 1

a. Page 1, Section II, Item E, has been revised to reflect that the plant does not and will not treat, store, or dispose of hazardous wastes.

b. Page 1, Sections III & IV, has been revised to reflect the current plant name, facility contact, and telephone number, respectively.

c. Page 2, Section VIII has been revised to reflect the current plant name and telephone number.

d. Attachment 1 has been revised to reflect current wastewater and air permits. (The NPDES permit is noted in Item X, Page 2, Form 1.)

2) Explanation of Why Items Listed on Original Form 3 Were Not and Are Not Permitted Activities

The following is an item by item description of changes to the Form 3 originally filed in 1980:

Item III. 1. Storage tanks with capacity of 1,310,000 gallons: These holding tanks are part of the wastewater treatment unit which is subject to regulation under the Clean Water Act and, therefore, excluded from regulation under federal and state hazardous waste regulations. (The metal precipitate sludge from these tanks - the capacity of which was subsequently expanded - has always been shipped off site as a hazardous waste within substantially less than 90 days of removal from the wastewater treatment unit.)

Subject: Hazardous Waste Permit Application Withdrawal

Item III. 2. Treatment tank with capacity of 31,470 gallons per day: This tank was also part of the wastewater treatment unit and, therefore, not subject to hazardous waste permitting activities. The sludge from this activity, likewise, was disposed of in less than 90 days. Presently, this operation no longer exists.

Item III. 3. Container storage with capacity of 190,000 gallons: This was the original drum storage area. Drums of hazardous wastes have never been stored for longer than 90 days. Therefore, this activity did not and does not require a permit for hazardous waste storage.

Item IV. 1. through 11. F-, U-, and D-code solvents stored in containers: These solvents were stored at the drum storage pad, but not for longer than 90 days. The mix of solvent wastes generated at the plant has changed since submittal of the permit application: however, none of the solvent wastes are stored longer than 90 days.

Item IV. 12. through 15. F-code wastes stored in containers and tanks and treated in a treatment tank: The F017 waste listed in item 12--paint residues or sludges--was suspended by EPA on January 16, 1981 and has not been listed as a hazardous waste since then. The F009, F007 and F008 wastes listed in items 13 through 15 are wastes from electroplating operations. The plant has never conducted cyanide electroplating operations nor generated these wastes. These waste codes were listed originally due to the question of whether wastes from the plant's phosphating operation were regulated as electroplating wastes. The "treatment" shown for these items referred to the waste water treatment unit, which does not require a hazardous waste permit.

In summary, the plant's submittal of permit applications was a precautionary filing due to the uncertainties in future plant operations and in the regulatory requirements.

As stated in my October 28, 1988, letter, the 6,000 gallon waste solvent tanks were installed for accumulation only and, as such, their installation does not require a revision to the Part A.

Subject: Hazardous Waste Permit Application Withdrawal

If there are any questions regarding the management of any of the above wastes at this facility, please call me at 302-428-7406.

Respectfully,

Ernest R. Bosetti

ERNEST R. BOSETTI
Senior Staff Assistant

ERB/lhw

cc: Mr. A. Simpson, DNREC
file/57/11

bcc: Ms. J. Caulfield, GM-EAS
Ms. L. Garey, C-P-C Hdqtrs.
Mr. M. Cooke, GM-Legal Staff

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F D E D 0 0 2 5 6 9 2 0 5 (F/A) (C) D

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (*the area to the left of the label space lists the information that should appear*), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (*except VI-B which must be completed regardless*). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility (*either existing or proposed*) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
D. Is this a proposed facility (*other than those described in A or B above*) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: GMC C-P-C WILMINGTON PLANT

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 YOUNGS RUSS PLANT ENGINEER	3 0 2 4 2 3 7 4 7 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
3 P. O. BOX 1512			
B. CITY OR TOWN	**C. STATE**	**D. ZIP CODE**	
4 WILMINGTON	DE	19899	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
5 BOXWOOD ROAD			
B. COUNTY NAME			
NEW CASTLE			
C. CITY OR TOWN	**D. STATE**	**E. ZIP CODE**	**F. COUNTY CODE (if known)**
6 WILMINGTON	DE	19899	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

	A. FIRST	B. SECOND
	3711 (specify) MOTOR VEHICLE ASSEMBLY	(specify) N/A
	C. THIRD	D. FOURTH
	(specify) N/A	(specify) N/A

VIII. OPERATOR INFORMATION

A. NAME: GMC CPC WILMINGTON PLANT

B. Is the name listed in Item VIII-A also the owner? YES NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL, M = PUBLIC (other than federal or state), S = STATE, C = OTHER (specify), P = PRIVATE: P (specify) N/A

D. PHONE (area code & no.): A 302 428 7477

E. STREET OR P.O. BOX: P O BOX 1512

F. CITY OR TOWN: WILMINGTON

G. STATE: DE

H. ZIP CODE: 19899

IX. INDIAN LAND

Is the facility located on Indian lands? YES NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	D. PSD (Air Emissions from Proposed Sources)	
9 N: DE0000523	9 P: NA	
E. UIC (Underground Injection of Fluids)	F. OTHER (specify)	(specify)
9 U: N/A	9: N/A	SEE ATTACHMENT I
G. RCRA (Hazardous Wastes)	H. OTHER (specify)	(specify)
9 R: N/A	9: N/A	

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

MOTOR VEHICLE ASSEMBLY

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
RALPH J. HARTING, JR. - PLANT MANAGER	Ralph J Harting Jr	4/5/89

COMMENTS FOR OFFICIAL USE ONLY

C1:

ATTACHMENT

Water Permits:

1. Wastewater Discharge Permit - WDP 76-018

Air Permits:

1. APC - 80/851, Boiler No. 1
2. APC - 80/852, Boiler No. 2
3. APC - 80/853, Boiler No. 3
4. APC - 80/569, Boiler No. 4
5. APC - 86/242, Boiler No. 5
6. APC - 85/083, Automotive Coating System - Construction
7. APC - 82/1224, Third Color Booth & Oven - Operating
8. APC - 82/034, Blu-Surf Oven - Operating
9. APC - 81/849, Primer Surfacer Booth & Oven - Operating
10. APC - 81/656, Cathodic Electrode position Primer - Operating
11. APC - 80/145, Final Paint Booth & Oven - Operating

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

121 ELVIE BOSETTI

EPA I.D. # DED002369205

December 15, 1980

GMC GM Assembly Division
Mr. Ronald Nardi
P.O. Box 1512
Wilmington, De. 19899

Re: Acknowledgment of Application for a Hazardous Waste Permit

This is to acknowledge that the Environmental Protection Agency has received: (1) A notification pursuant to Section 3010 of the Resource Conservation and Recovery Act for the facility located at the address shown above; and (2) Part A of a Hazardous Waste Permit Application for that facility, including a signed statement that the operation of the facility, or its construction, began prior to November 19, 1980. While the information provided by these submissions has not been fully reviewed for completeness or accuracy, EPA will accept this information as an initial qualification for interim status pursuant to Section 3005 of the Act. If after further review of this information, EPA determines that the owner or operator did not fulfill all the requirements for interim status, EPA may treat the owner or operator as not having qualified for interim status pursuant to that section and will advise the owner or operator of that determination. Facility owners and operators with interim status must comply with the standards set forth at 40 CFR Part 265 until a permit is issued. Interim status may be terminated if the owner or operator fails to furnish any additional information requested by EPA in order to process a permit application.

April 5, 1989

Mr. Phillip G. Retallick, Director
Division of Air and Waste Management
Delaware Department of Natural Resources
& Environmental Control
89 Kings Highway
P. O. Box 1401
Dover, DE 19903

Subject: Hazardous Waste Permit Application Withdrawal

Dear Mr. Retallick:

The General Motors Corporation C-P-C Wilmington Plant hereby requests withdrawal of its Part A and Part B hazardous waste permit applications.

As stated in my October 28, 1988 letter to you, this plant disposes of all hazardous wastes in less than 90 days. Engineering, Purchasing, and Transporter files have been checked to insure that hazardous waste was not retained for 90 days or more. Likewise, accumulation areas are of such size that they cannot retain hazardous waste for more than 30 days. There is currently no treatment, storage or disposal of hazardous waste at this plant, nor has there been in the past. The permit applications were submitted as precautionary filings, due to the uncertainties associated with future regulatory requirements and plant operations.

I understand, based upon my telephone discussion of December 8, 1988 with Mr. Alan H. Simpson of the Department of Natural Resources and Environmental Control (DNREC), that the plant is not required to submit a closure plan, if it can be shown that this plant never treated, stored, or disposed of hazardous waste. Because no permitted activities have occurred on site, no closure is required.

Enclosed is a revised Form 1 of the Part A application updating the status of the facility. There are no past or current treatment, storage or disposal activities to be described on a revised Part A or Part B application, nor do

Subject: Hazardous Waste Permit Application Withdrawal

we wish to treat, store or dispose in the future. Therefore, the plant does not intend to submit fully revised Part A or Part B applications, unless directed otherwise by the State.

The remainder of this letter addresses: 1) the changes made to Form 1 (attached) to update identifying information and the plant's status; and 2) an explanation of why the process codes and hazardous wastes listed on the original Form 3 are not and were not permitted activities.

1) Form 1

a. Page 1, Section II, Item E, has been revised to reflect that the plant does not and will not treat, store, or dispose of hazardous wastes.

b. Page 1, Sections III & IV, has been revised to reflect the current plant name, facility contact, and telephone number, respectively.

c. Page 2, Section VIII has been revised to reflect the current plant name and telephone number.

d. Attachment 1 has been revised to reflect current wastewater and air permits. (The NPDES permit is noted in Item X, Page 2, Form 1.)

2) Explanation of Why Items Listed on Original Form 3 Were Not and Are Not Permitted Activities

The following is an item by item description of changes to the Form 3 originally filed in 1980:

Item III. 1. Storage tanks with capacity of 1,310,000 gallons: These holding tanks are part of the wastewater treatment unit which is subject to regulation under the Clean Water Act and, therefore, excluded from regulation under federal and state hazardous waste regulations. (The metal precipitate sludge from these tanks - the capacity of which was subsequently expanded - has always been shipped off site as a hazardous waste within substantially less than 90 days of removal from the wastewater treatment unit.)

Subject: Hazardous Waste Permit Application Withdrawal

Item III. 2. Treatment tank with capacity of 31,470 gallons per day: This tank was also part of the wastewater treatment unit and, therefore, not subject to hazardous waste permitting activities. The sludge from this activity, likewise, was disposed of in less than 90 days. Presently, this operation no longer exists.

Item III. 3. Container storage with capacity of 190,000 gallons: This was the original drum storage area. Drums of hazardous wastes have never been stored for longer than 90 days. Therefore, this activity did not and does not require a permit for hazardous waste storage.

Item IV. 1. through 11. F-, U-, and D-code solvents stored in containers: These solvents were stored at the drum storage pad, but not for longer than 90 days. The mix of solvent wastes generated at the plant has changed since submittal of the permit application: however, none of the solvent wastes are stored longer than 90 days.

Item IV. 12. through 15. F-code wastes stored in containers and tanks and treated in a treatment tank: The F017 waste listed in item 12--paint residues or sludges--was suspended by EPA on January 16, 1981 and has not been listed as a hazardous waste since then. The F009, F007 and F008 wastes listed in items 13 through 15 are wastes from electroplating operations. The plant has never conducted cyanide electroplating operations nor generated these wastes. These waste codes were listed originally due to the question of whether wastes from the plant's phosphating operation were regulated as electroplating wastes. The "treatment" shown for these items referred to the waste water treatment unit, which does not require a hazardous waste permit.

In summary, the plant's submittal of permit applications was a precautionary filing due to the uncertainties in future plant operations and in the regulatory requirements.

As stated in my October 28, 1988, letter, the 6,000 gallon waste solvent tanks were installed for accumulation only and, as such, their installation does not require a revision to the Part A.

Subject: Hazardous Waste Permit Application Withdrawal

If there are any questions regarding the management of any of the above wastes at this facility, please call me at 302-428-7406.

Respectfully,

Ernest R. Bosetti

ERNEST R. BOSETTI
Senior Staff Assistant

ERB/lhw

cc: Mr. A. Simpson, DNREC
file/57/11

bcc: Ms. J. Caulfield, GM-EAS
Ms. L. Garey, C-P-C Hdqtrs.
Mr. M. Cooke, GM-Legal Staff

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 charac /inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F	D	E	D	0	0	2	3	6	9	2	0	5	F/A	C
														LD

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (*the area to the left of the label space lists the information that should appear*), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (*except VI-B which must be completed regardless*). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
B. Does or will this facility (*either existing or proposed*) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
D. Is this a proposed facility (*other than those described in A or B above*) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: GMC C-P-C WILMINGTON PLANT

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 YOUNGS' RUSS PLANT ENGINEER	3 0 2 4 2 3 7 4 7 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	
3 P. O. BOX 1512	

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 WILMINGTON	DE	19899

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	
5 BOXWOOD ROAD	

B. COUNTY NAME	
NEW CASTLE	

B. CITY OR TOWN	C. STATE	D. ZIP CODE	F. COUNTY CODE (if known)
6 WILMINGTON	DE	19899	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

	A. FIRST	B. SECOND
	3711 (specify) MOTOR VEHICLE ASSEMBLY	(specify) N/A
	C. THIRD	**D. FOURTH**
	(specify) N/A	(specify) N/A

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also owner?
GMC CPC WILMINGTON PLANT	X YES NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL M = PUBLIC (other than federal or state)
S = STATE O = OTHER (specify)
P = PRIVATE

C. STATUS	(specify)	D. PHONE (area code & no.)
P	N/A	A 302 428 7477

E. STREET OR P.O. BOX

P O BOX 1512

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
WILMINGTON	DE	19899	Is the facility located on Indian lands? X NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	B. PSD (Air Emissions from Proposed Sources)	C.
9 N DE0000523	9 P NA	

D. UIC (Underground Injection of Fluids)	E. OTHER (specify)	
9 U N/A	9 N/A	(specify) SEE ATTACHMENT I

F. RCRA (Hazardous Wastes)	G. OTHER (specify)	
9 R N/A	9 N/A	(specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

MOTOR VEHICLE ASSEMBLY

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
RALPH J. HARTING, JR. - PLANT MANAGER	Ralph J Harting Jr	4/5/89

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (6-80) REVERSE

ATTACHMENT

Water Permits:

1. Wastewater Discharge Permit - WDP 76-018

Air Permits:

1. APC - 80/851, Boiler No. 1
2. APC - 80/852, Boiler No. 2
3. APC - 80/853, Boiler No. 3
4. APC - 80/569, Boiler No. 4
5. APC - 86/242, Boiler No. 5
6. APC - 85/083, Automotive Coating System - Construction
7. APC - 82/1224, Third Color Booth & Oven - Operating
8. APC - 82/034, Blu-Surf Oven - Operating
9. APC - 81/849, Primer Surfacer Booth & Oven - Operating
10. APC - 81/656, Cathodic Electrode position Primer - Operating
11. APC - 80/145, Final Paint Booth & Oven - Operating

Divi[illegible] of
Bu[illegible]dsmobile•Cadillac Group
Ge[illegible] Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

GM
B·O·C LANSING AUTOMOTIVE

March 8, 1991

Mr. Philip G. Retallick, Director
Division of Air and Waste Management
DNREC
89 Kings Highway
P. O. Box 1404
Dover, Del. 19903

SUBJECT: HAZARDOUS WASTE PERMIT APPLICATION WITHDRAWAL-EPA ID#-DED002369205

Dear Mr. Retallick:

The purpose of this letter is to clarify General Motor's request for withdrawal of its hazardous waste applications for Part A and B permits. The facility in question is located on Boxwood Road in Wilmington, Delaware. To fully understand the basis of our request, we have constructed a chronology of events as related to the permit status of the facility beginning with our submittal of Part A of the application. The events proceed as follows:

EPA receipt of Part A Application for Hazardous Waste Permit (12/15/80)
Part B application submitted to EPA by GM (9/23/82)

DNREC requests additional application information (9/20/88)

GM responds to above request (10/28/88)

GM requests permit application withdrawal of Part A and B (4/15/89)

On April 5, 1989 GM requested withdrawal of its Part A and Part B hazardous waste permit applications (copy attached). The letter contained additional clarifications to question on the changes made to various forms originally filed for the Part A and B Applications. The applications were filed originally to notify EPA of the types of activities and materials present at the plant as so stated in this letter. It was subsequently determined that the plant had neither conducted or operated a regulated activity requiring a permit nor stored hazardous waste at the facility for more than 90 days.

Therefore as allowed under the Federal Regulations, we are hereby formally requesting revocation of the Part A and B permit applications. The basis for our request concerns our protective filing status, as stated in the Federal register section 3005(e) (2) of RCRA (loss of Interim Status). This provision states that a facility will lose interim status on November 8, 1985, if permit requirements are not met by that date. This Section further states that protective filers, who have submitted their applications but have never conducted a regulated activity, are not considered to be in Interim Status and are not subject to the Loss of Interim Status provision which would require the submission of a closure plan. Therefore, based on the fact that GM is eligible to file under the protective filing status ruling, we are not required to submit a closure plan for the purpose of withdrawing our permit applications.

We would appreciate your attention to this matter as soon as possible so that we may resolve this issue as quickly as possible. Please contact me if there are any questions on this matter.

Very truly yours,

Ernest R. Bosetti

Ernest R. Bosetti, P.E.
Sr. Staff Assistant
302-428-7406

cc: Guy Lee - DNREC

bcc: D. Buniski - Clean Tech.
F. Rindhage- BOC-Hdqtrs.
b:erb65

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 265 and 270

[SWH-FRL 2868-3]

Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities; EPA Administered Permit Programs: the Hazardous Waste Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of implementation and enforcement policy.

SUMMARY: On November 8, 1984, the Hazardous and Solid Waste Amendments of 1984 (HSWA) were enacted (Pub. L. 98-616). These Amendments made changes to section 3005(e) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. 6925(e). Under the amendment to section 3005(e), an interim status land disposal facility will lose interim status on November 8, 1985 unless the facility applies for a final determination regarding the issuance of a permit and certifies compliance with all applicable ground-water monitoring and financial responsibility requirements by that date. This notice sets forth the Environmental Protection Agency's (EPA) policy regarding the implementation of this provision as it applies to interim status land disposal facilities.

DATE: All interim status land disposal facilities are required to submit an application for a final determination and the applicable certifications by November 8, 1985, or interim status will be terminated by statute. In the case of each land disposal facility which is in existence on the effective date of statutory or regulatory changes under RCRA that render the facility subject to the requirement to have a permit under section 3005, facilities will have 12 months after the date on which the facility first becomes subject to permit requirements to submit an application for a final determination and the applicable certification, or interim status will be terminated by law.

FOR FURTHER INFORMATION CONTACT:

Region I: Jerry Levy, Chief, Compliance Monitoring and Enforcement Section HSE/Causeway, U.S. EPA, John F. Kennedy Federal Building, Boston, MA 02203, (617) 223-1591, FTS 223-1591.

Region II: Stanley Siegel, Chief, NY Compliance Enforcement Section 2AWM, U.S. EPA, 26 Federal Plaza, Room 1043, New York, NY 10278, (212) 264-8356, FTS 264-8356.

Region III: Peter Schaul, Hazardous Waste Enforcement Branch 3H-WLL, U.S. EPA, 841 Chestnut Street, Philadelphia, PA 19107, (215) 597-8334, FTS 597-8334.

Region IV: Allan Antley, Chief, Waste Compliance Section, U.S. EPA, 345 Courtland St., NE, Atlanta, GA 30365, (404) 881-4552, FTS 257-4552.

Region V: Bill Muno, Chief, RCRA Enforcement Section, 5HE-12, U.S. EPA, 230 South Dearborn Street, Chicago, IL 60604, (312) 886-4434, FTS 886-4434.

Region VI: William Rhea, Chief, Hazardous Materials Branch 6AW-H, U.S. EPA, 1201 Elm Street, Dallas, TX 75270, (214) 767-9732, FTS 729-9732.

Region VII: Wayne Kaiser, RCRA Compliance Section, Waste Management Division, U.S. EPA, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 236-2891, FTS 757-2891.

Region VIII: Diana Shannon, Chief, RCRA Compliance Monitoring 8HWM-WM, U.S. EPA, Denver Place, Suite 1300, 999 18th Street, Denver, CO 80202-2413, (303) 293-1502, FTS 564-1500.

Region IX: Judy Walker/Industry Assistance, Toxics and Waste Management Division T-2-1, U.S. EPA, 215 Fremont Street, San Franscisco, CA 94105, (415) 974-7472, FTS 454-7472.

Region X: Charles Rice, Chief, RCRA Compliance Section M/S-533, U.S. EPA, 1200 6th Avenue, Seattle, WA 98101, (206) 442-0695, FTS 399-0695.

SUPPLEMENTARY INFORMATION: The contents of today's Notice are listed in the following outline:

I. Background
II. Statutory Interpretations
  A. Land Disposal Facility
  B. Interim Status
    1. Class I Hazardous Waste Underground Injection Wells
    2. Waste Exclusions
    3. Late and Non-Notifiers
    4. Protective Filers
  C. Application for Final Determination Regarding the Issuance of a Permit
  D. Certification of Compliance with all Applicable Ground-Water Monitoring and Financial Responsibility Requirements
III. Failure to Satisfy Statutory Requirements

I. Background

Under section 3005(a) of RCRA, owners or operators of hazardous waste treatment, storage or disposal facilities are required to obtain a RCRA permit. Recognizing that EPA would not be able to issue permits to all hazardous waste management facilities at once, section 3005(e) of RCRA provides that a hazardous waste management facility that meets certain requirements will be treated as having been issued a permit. This statutorily-conferred authorization to operate pending issuance or denial of a permit is known as "interim status." A facility may lawfully operate only if it has a permit or interim status.

Prior to the enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA) a facility's interim status could be terminated only when final administrative disposition of the permit application was made, or if the facility failed to furnish the necessary application information. HSWA amended section 3005(e) to provide additional grounds for termination of interim status for land disposal facilities.

Section 3005(e)(2) which is referred to, hereafter, as the Loss of Interim Status provision states:

> In the case of each land disposal facility which has been granted interim status under this subsection before the date of enactment of the Hazardous and Solid Waste Amendments of 1984, interim status shall terminate on the date 12 months after the date of enactment of such Amendments unless the owner or operator of such facility
>
> "(A) applies for a final determination regarding and issuance of a permit under subsection (c) for such facility before the date 12 months after the date of enactment of such Amendments; and
>
> "(B) certifies that such facility is in compliance with all applicable ground-water monitoring and financial responsibility requirements."

Interim status land disposal facilities must satisfy these requirements by November 8, 1985. Under section 3005(e)(3) each land disposal facility which is in existence on the effective date of statutory or regulatory changes under this Act that render the facility subject to the requirement to have a RCRA permit and which qualifies for interim status must apply for a final determination and submit the applicable certifications within twelve months after the date on which the facility first becomes subject to such RCRA permit requirements or interim status terminates.

The owner/operator of each interim status land disposal facility is responsible for applying for the final permit determination and satisfying certification requirements. In view of the importance of proper and timely filings of permit applications and certifications, and to provide an orderly process for

the submittal of both permit applications and compliance certifications for interim status land disposal facilities, the Agency is today publishing this policy on the Loss of Interim Status provision.

II. Statutory Interpretations

This section defines key terms which appear in the statute.

A. Land Disposal Facility

The statute specifies that ". . . all interim status land disposal facilities . . ." are subject to the requirements of the Loss of Interim Status provision. For the purpose of section 3005(e), the Agency interprets the term "land disposal facilities" to encompass the following types of facilities: landfills; land treatment units; surface impoundments for disposal, treatment, or storage; waste piles; and Class I hazardous waste underground injection wells. EPA believes this interpretaton is consistent with RCRA statutory definitions of land disposal (see sections 1004(3), 3004(k)), the legislative history of section 3005(e)(2) and (3) and the general objective of this provision (i.e., to facilitate prompt processing of permits for the compliance by land-based facilities).

B. Interim Status

A treatment, storage or disposal facility that was in existence on November 19, 1980, or on the effective date of statutory or regulatory changes that rendered the facility subject to the requirement to have a RCRA permit, notified EPA as required by RCRA section 3010, and filed a timely application for a RCRA permit (Part A application), is considered to be in interim status until final administrative disposition of the permit application or until interim status is terminated for failure to submit information required to process the permit application. These facilities are subject to the Loss of Interim Status provision. In addition, in States or territories with EPA-authorized RCRA programs, land disposal facilities that have not yet been granted or denied a final RCRA permit (including land disposal facilities that were issued State permits after November 8, 1984) are to submit certifications and Part B applications.

1. Class I Hazardous Waste Underground Injection Wells

Class I hazardous waste injection wells that were in existence on November 19, 1980, or the effective date of statutory or regulatory changes that rendered the facility subject to the requirement to have a RCRA permit, notified EPA as required by § 3010, and filed a Part A RCRA application are considered to be in interim status under RCRA until such time as final administrative disposition of a RCRA section 3005(c) permit application is made. Such facilities must comply with the applicable sections of Subparts A-E of Part 265 interim status requirements. They are exempted under 40 CFR 265.430 from the RCRA interim status closure/post-closure and financial responsibility requirements of Subpart G and H and are not subject to the ground-water monitoring requirements of Subpart F.

Every state and jurisdiction has an Underground Injection Control (UIC) program in place, either state-administered or EPA-administered, so that all Class I hazardous waste wells are also subject to the UIC requirements. The requirements at 40 CFR 144.21 authorize existing Class I injection wells to operate, subject to certain conditions, until the effective date of UIC permit issuance or denial, in States with approved UIC programs, for five years after approval or promulgation of the UIC program (but not thereafter unless a complete permit application is pending). In States with EPA-administered UIC programs, injection is authorized under the same section, subject to certain conditions, for one year after promulgation of the UIC program and is prohibited thereafter unless a complete permit application is pending. Therefore, until the UIC permit is issued as stated above, the Class I hazardous waste underground injection well is operating under authorization by rule and must comply with UIC program requirements specified, *inter alia*, under 40 CFR 144.28.

Under previous regulations, once a well received a UIC permit, the well was deemed to have a permit-by-rule under RCRA. However, the regulations have been changed due to the enactment of section 3004(u) of RCRA, which provides that corrective action requirements for all solid waste management units must be addressed in any section 3005(c) RCRA permit. The regulations, therefore, have been amended to provide that until such time as a corrective action plan at a given facility addresses corrective action for *all* units, UIC permits issued to Class I hazardous waste underground injection wells after November 8, 1984 will be considered valid permits under the Safe Drinking Water Act, but will not be section 3005(c) RCRA permits-by-rule. 50 FR 28702, 28715-16, 28752 (July 15, 1985) (amending 40 CFR 270.60(b)). Therefore, wells at facilities which have not yet met corrective action requirements for *all* units at the facility, consistent with State law under approved UIC program, retain RCRA interim status, whether or not they have been issued a UIC permit. Such well operators who have interim status must, therefore, certify compliance with the "applicable" ground-water monitoring and financial responsibility requirements. The specific ground-water monitoring and financial responsibility requirements with which the facility must certify compliance are discussed in detail below in section D.

2. Waste Exclusions

Sections 260.20 and 260.22 of EPA's hazardous waste regulations provide a regulatory mechanism whereby the Agency may temporarily exclude a hazardous waste generated at a specific facility from being treated as a hazardous waste under the RCRA regulations. Interim status land disposal facilities handling wastes that have received "temporary" exclusions are also subject to the Loss of Interim Status provision. A "temporary" exclusion granted under 40 CFR 260.20 and 260.22 by EPA does not terminate the interim status of facilities handling that waste. Thus, the requirements of section 3005(e)(2) apply to these facilities, including facilities where the temporarily excluded waste is the only "hazardous" waste managed.

Facilities which only handle "hazardous" waste subject to a temporary exclusion, however, are not considered to be managing hazardous waste under EPA regulations. Thus they are not currently required to meet Part 265 standards (including ground-water monitoring and financial responsibility requirements), or to obtain a permit. In order words, facilities whose only "hazardous" waste has been "temporarily" excluded, while subject to the Loss of Interim Status provision, are not required to certify compliance with groundwater monitoring and financial responsibility requirements and/or submit a Part B application by November 8, 1985 in order to retain interim status after that date unless their exclusion is revoked prior to this time. If such waste exclusion is revoked, this regulatory action will immediately subject the facility to the requirements of section 3005(e)(3) of RCRA.

3. Late and Non-Notifiers

The Agency believes that the intent of the Loss of Interim Status provision was to bring all unpermitted land disposal facilities into compliance with ground-water monitoring and financial responsibility requirements or to close them. In order to advance this purpose, the Agency believes that it should also

address the problem of those facilities which never qualified for interim status, or who are operating under Interim Status Compliance Letters or section 3008 compliance orders. 40 CFR 265.1(b) states that "the standards in this Part apply to those owners and operators of facilities in existence on November 19, 1980, who have failed to provide timely notification as required by Section 3010 of RCRA, and/or failed to file Part A of the Permit Application as required by 40 CFR 270.10 (e) and (g).

The December 12, 1981 "Guidance on the Applicability of the Interim Status Standards (40 CFR Part 265) to Facilities which have Failed to Qualify for Interim Status" to EPA Regional Enforcement Division Directors also addresses the problem of "non-notifiers." The guidance directed that the Agency would enforce the interim status requirements through the use of Interim Status Compliance Letters (ISCL) and 3008 compliance orders including the assessment of penalties, where appropriate. This use of penalties was emphasized to eliminate the competitive advantage that might otherwise be enjoyed by the "non-notifiers" over facilities that complied with all notification and filing requirements.

In keeping with that policy, EPA believes it reasonable to require owners and operators of land disposal facilities to submit a Part B application and the ground-water monitoring and financial responsibility compliance certifications as a condition of EPA's continued forbearance from enforcement action. Therefore, those facilities which have not fully qualified for interim status should also submit certifications and permit applications if they wish to continue operating.

4. Protective Filers

Protective filers, i.e., facilities that were in existence on November 19, 1980, notified the Agency of their activities according to section 3010, and submitted their Part A application, but have never conducted a regulated activity requiring a permit are not considered by the Agency to be in Interim Status and are not subject to the Loss of Interim Status provision.

C. Application for Final Determination Regarding the Issuance of a Permit

Prior to the enactment of the HSWA, land disposal facilities were not required to submit their Part B permit applications to EPA (or a State) until 6 months after EPA (or the State) requested it. Section 3005(e)(2) now provides that land disposal facilities must "apply for final determination regarding the issuance of a permit" by November 8, 1985 or lose their interim status, regardless of whether the EPA Regional Office or authorized State has requested the Part B application.

Land disposal facilities wishing to retain interim status and continue operations as a hazardous waste land disposal facility after November 8, 1985, are required to submit a Part B permit application (or in an authorized State, the State equivalent of the Part B application) by November 8, 1985, to satisfy this requirement. These permit applications need to address all applicable requirements, including those set forth in the Hazardous and Solid Waste Amendments of 1984. In States where EPA manages the RCRA program, the Part B application is to be sent to the EPA Regional Office. In authorized States that manage the RCRA program, the permit application is to be sent to both the EPA Regional Office and to the State.

Some facilities have indicated that they plan to continue receiving waste after November 8, 1985, but intend to stop waste receipt and close shortly thereafter. Such facilities must submit an application for a final operating permit, as noted above. This is necessary because, as of November 8, 1985, it is assumed that an operating permit of some kind will be issued to them if they have not closed in a manner that precludes the duty to obtain a permit. The content of the application, however, may be affected by the expected remaining operating life of the facility. For example, if the facility will close before November 1988 and this is reflected in the application (e.g., in the closure plan), then there would be no need to address the HSWA requirement to retrofit existing surface impoundments (section 3005(j)). Applicants planning to continue waste receipt after November 8, 1985, and to close shortly thereafter should discuss the applicability of permit provisions with the EPA Regional Office (and the Authorized State, if appropriate) as soon as possible.

D. Certification of Compliance With All Applicable Ground-Water Monitoring and Financial Responsibility Requirements

In accordance with the requirements of the Loss of Interim Status provision, land disposal facilities must also "certify compliance with all applicable ground-water monitoring and financial responsibility requirements." All applicable ground-water monitoring and financial responsibility requirements are defined as 40 CFR Part 265 Subparts F and H, or the State analogue thereto. The requirements that are considered applicable depend upon the authorization status of the State in which the facility is located.

- *Facilities located in a State with a Federally managed RCRA program* must certify compliance with 40 CFR Subparts F and H ground-water monitoring and financial responsibility requirements.
- *Facilities located in a State with Only Phase I Authorization* under the RCRA program must certify compliance with the authorized State ground-water monitoring requirements. In States with financial responsibility requirements incorporated as a part of their RCRA programs, facilities must certify compliance with authorized State financial responsibility requirements.
- *Facilities located in a State with Phase II or Final Authorization* must certify compliance with authorized State ground-water monitoring and financial responsibility requirements.

As stated in section II. A., Land Disposal Facility, Class I hazardous waste underground injection wells must comply with a different set of interim authorization requirements.

- Facilities located in States with Federally managed underground injection control (UIC) programs must certify compliance with 40 CFR 144.28(g)(1)(iii) ground-water monitoring requirements, as required by the Director. To certify compliance with financial responsibility requirements, Class I hazardous waste underground injection wells must be in compliance with 40 CFR 144.28(d) and 40 CFR Part 144 Subpart F financial responsibility requirements.
- In primacy States, facilities with Class I hazardous waste underground injection wells must certify compliance with requirements that are the equivalent of 40 CFR 144.28(g)(h)(iii) ground-water monitoring and Part 144 Subpart F and 144.28(d) financial responsibility requirements.
- Facilities issued a UIC permit after November 8, 1984, but which are still under RCRA interim status (see Section II. B. 1) must certify compliance with 40 CFR 146.13(b)(4), ground-water monitoring requirements, where applicable, and 40 CFR 144 Subpart F financial responsibility requirements; or, in primacy States, with equivalent State requirements.

To certify compliance with all applicable requirements a facility must be in "physical" compliance. "Physical" compliance, for the purpose of certification under this provision, means that a facility has "physically" in place all that is specified in the applicable Federal or State ground-water

monitoring and financial responsibility requirements.

A facility that is not in compliance with applicable ground-water monitoring and/or financial responsibility requirements of 40 CFR Part 265 or applicable State requirements may not certify compliance. For example, a facility lacking monitoring wells and a valid waiver may not certify. Similarly, a facility failing to meet financial responsibility requirements may not certify. If a representative of a facility has admitted noncompliance in an enforcement action the facility may not certify unless it achieves and maintains compliance.

Compliance with the financial responsibility requirements is the second pre-requisite for retaining interim status after November 8. The Agency recognizes that some facilities are encountering difficulties in obtaining insurance to satisfy the financial responsibility requirement governing liability coverage (40 CFR 264.17 and 265.17). EPA has recently published a proposed rule which solicits comment on five options the Agency is considering to remedy the problem regarding the availability of liability insurance for RCRA facilities. (See 50 FR 33907.)

For the purpose of this provision, facilities are urged to certify compliance with all applicable ground-water monitoring and financial responsibility requirements for the facility as a whole. If the owner/operator submits the application and the applicable certifications of compliance for some but not all land disposal units, the termination of Interim Status only affects the unit or units at the hazardous waste management facility for which the application and/or certification were not submitted.

EPA believes that this interpretation is reasonable. EPA sees no evidence in the legislative history to suggest that Congress meant to stop all operations at a multi-unit facility because a Part B or applicable certifications had not been properly submitted for one unit. Furthermore, this interpretation of taking action at facilities on a unit-by-unit basis has precedent in EPA's hazardous waste regulations. Section 270.1 allows EPA to deal with permit issuance to a facility on a unit-by-unit basis. With regard to permit issuance, § 270.1(c)(4) states that "EPA may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility."

Facilities should certify compliance by typing or printing a certification statement as shown in Appendix A. These forms should be signed by the individuals specified in 40 CFR 270.11. An original certification will be required for each submission (no photocopies of signatures will be acceptable).

Copies of a facility's certification and Part B or state final operating permit application must be submitted to both the EPA Regional Office *and* the State in which the facility is located. However, facilities in a State with a Federally run RCRA program need only submit these documents to the Region.

III. Failure To Satisfy Statutory Loss of Interim Status Requirements

All owners/operators of land disposal facilities or units that do not apply for a final determination with regard to a permit and certify compliance with all applicable ground-water monitoring and financial requirements, must comply with all applicable closure and post-closure requirements as specified in 40 CFR Part 265 Subpart G or the equivalent State requirement, as applicable, and must stop introducing wastes into facilities or units not retaining interim status on and after November 8, 1985. The owner/operator of the facility or affected units will be required to submit a closure plan within 15 days of loss of interim status (40 CFR 265.112), i.e., by November 23, 1985. In addition, facilities that closed after January 26, 1983, must submit their post-closure permit application (upon request by the Region or authorized States). Post-closure permit applications must address continuing releases as required by the newly amended section 3004(u) of RCRA. (Facilities losing interim status remain subject to corrective action orders and civil actions.)

Owners and operators of facilities should be aware that false certification and operation without interim status are criminal offenses. In addition, the Agency intends to take enforcement action regarding inadequate closures.

Dated: September 16, 1985.

Lee M. Thomas,

Administrator.

Appendix A—Certification Statement

I _____, am the owner/operator of _____ _____ (EPA ID #) located at: _____. I certify that the _____ (name of unit(s) as identified on the attached surface topography map) at this facility is in compliance with: (1) (All applicable ground-water monitoring and financial responsibility requirements in 40 CFR Part 265 Subparts F and H; or (2) all applicable State ground-water monitoring and financial responsibility requirements which are part of the State's authorized hazardous waste program under section 3006 of RCRA.

I, _____, as owner-operator of _____, located at _____, knowingly and willfully make this true and accurate certification to the United States Environmental Protection Agency pursuant to section 3005(e) of the Hazardous and Solid Waste Disposal Act, as amended.

(Date)

(Signature)

Note: Federal Law subjects anyone who falsely makes or uses this certification to a fine and imprisonment under SWDA, 18 U.S.C. 1001 and 18 U.S.C. 1341.

[FR Doc. 85-22869 Filed 9-24-85; 8:45 am]

BILLING CODE 6560-50-M

April 5, 1989

Mr. Phillip G. Retallick, Director
Division of Air and Waste Management
Delaware Department of Natural Resources
& Environmental Control
89 Kings Highway
P. O. Box 1401
Dover, DE 19903

Subject: Hazardous Waste Permit Application Withdrawal

Dear Mr. Retallick:

The General Motors Corporation C-P-C Wilmington Plant hereby requests withdrawal of its Part A and Part B hazardous waste permit applications.

As stated in my October 28, 1988 letter to you, this plant disposes of all hazardous wastes in less than 90 days. Engineering, Purchasing, and Transporter files have been checked to insure that hazardous waste was not retained for 90 days or more. Likewise, accumulation areas are of such size that they cannot retain hazardous waste for more than 30 days. There is currently no treatment, storage or disposal of hazardous waste at this plant, nor has there been in the past. The permit applications were submitted as precautionary filings, due to the uncertainties associated with future regulatory requirements and plant operations.

I understand, based upon my telephone discussion of December 8, 1988 with Mr. Alan H. Simpson of the Department of Natural Resources and Environmental Control (DNREC), that the plant is not required to submit a closure plan, if it can be shown that this plant never treated, stored, or disposed of hazardous waste. Because no permitted activities have occurred on site, no closure is required.

Enclosed is a revised Form 1 of the Part A application updating the status of the facility. There are no past or current treatment, storage or disposal activities to be described on a revised Part A or Part B application, nor do

Subject: Hazardous Waste Permit Application Withdrawal

we wish to treat, store or dispose in the future. Therefore, the plant does not intend to submit fully revised Part A or Part B applications, unless directed otherwise by the State.

The remainder of this letter addresses: 1) the changes made to Form 1 (attached) to update identifying information and the plant's status; and 2) an explanation of why the process codes and hazardous wastes listed on the original Form 3 are not and were not permitted activities.

1) Form 1

a. Page 1, Section II, Item E, has been revised to reflect that the plant does not and will not treat, store, or dispose of hazardous wastes.

b. Page 1, Sections III & IV, has been revised to reflect the current plant name, facility contact, and telephone number, respectively.

c. Page 2, Section VIII has been revised to reflect the current plant name and telephone number.

d. Attachment 1 has been revised to reflect current wastewater and air permits. (The NPDES permit is noted in Item X, Page 2, Form 1.)

2) Explanation of Why Items Listed on Original Form 3 Were Not and Are Not Permitted Activities

The following is an item by item description of changes to the Form 3 originally filed in 1980:

Item III. 1. Storage tanks with capacity of 1,310,000 gallons: These holding tanks are part of the wastewater treatment unit which is subject to regulation under the Clean Water Act and, therefore, excluded from regulation under federal and state hazardous waste regulations. (The metal precipitate sludge from these tanks - the capacity of which was subsequently expanded - has always been shipped off site as a hazardous waste within substantially less than 90 days of removal from the wastewater treatment unit.)

Subject: Hazardous Waste Permit Application Withdrawal

Item III. 2. Treatment tank with capacity of 31,470 gallons per day: This tank was also part of the wastewater treatment unit and, therefore, not subject to hazardous waste permitting activities. The sludge from this activity, likewise, was disposed of in less than 90 days. Presently, this operation no longer exists.

Item III. 3. Container storage with capacity of 190,000 gallons: This was the original drum storage area. Drums of hazardous wastes have never been stored for longer than 90 days. Therefore, this activity did not and does not require a permit for hazardous waste storage.

Item IV. 1. through 11. F-, U-, and D-code solvents stored in containers: These solvents were stored at the drum storage pad, but not for longer than 90 days. The mix of solvent wastes generated at the plant has changed since submittal of the permit application: however, none of the solvent wastes are stored longer than 90 days.

Item IV. 12. through 15. F-code wastes stored in containers and tanks and treated in a treatment tank: The F017 waste listed in item 12--paint residues or sludges--was suspended by EPA on January 16, 1981 and has not been listed as a hazardous waste since then. The F009, F007 and F008 wastes listed in items 13 through 15 are wastes from electroplating operations. The plant has never conducted cyanide electroplating operations nor generated these wastes. These waste codes were listed originally due to the question of whether wastes from the plant's phosphating operation were regulated as electroplating wastes. The "treatment" shown for these items referred to the waste water treatment unit, which does not require a hazardous waste permit.

In summary, the plant's submittal of permit applications was a precautionary filing due to the uncertainties in future plant operations and in the regulatory requirements.

As stated in my October 28, 1988, letter, the 6,000 gallon waste solvent tanks were installed for accumulation only and, as such, their installation does not require a revision to the Part A.

Subject: Hazardous Waste Permit Application Withdrawal

If there are any questions regarding the management of any of the above wastes at this facility, please call me at 302-428-7406.

Respectfully,

Ernest R. Bosetti

ERNEST R. BOSETTI
Senior Staff Assistant

ERB/lhw

cc: Mr. A. Simpson, DNREC
file/57/11

bcc: Ms. J. Caulfield, GM-EAS
Ms. L. Garey, C-P-C Hdqtrs.
Mr. M. Cooke, GM-Legal Staff

Please print or type in the unshaded areas only
(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F D E D 0 0 2 3 6 9 2 0 5

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill—in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill—in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B, which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is the facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: GIC C-P-C WILMINGTON PLANT

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 YOUNGS' RUSS ' PLANT ENGINEER	3 0 2 | 4 2 3 | 7 4 7 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
3 P. O. BOX 1512			
B. CITY OR TOWN	**C. STATE**	**D. ZIP CODE**	
4 WILMINGTON	DE	19899	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
5 BOXWOOD ROAD			
B. COUNTY NAME			
NEW CASTLE			
C. CITY OR TOWN	**D. STATE**	**E. ZIP CODE**	**F. COUNTY CODE (if known)**
6 WILMINGTON	DE	19899	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

	A. FIRST	B. SECOND
	3711 (specify) MOTOR VEHICLE ASSEMBLY	(specify) N/A
	C. THIRD	**D. FOURTH**
	(specify) N/A	(specify) N/A

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
GMC CPC WILMINGTON PLANT	[X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL M = PUBLIC (other than federal or state)
S = STATE N = OTHER (specify)
P = PRIVATE

P (specify) N/A

D. PHONE (area code & no.)
A 302 428 7477

E. STREET OR P.O. BOX
P O BOX 1512

F. CITY OR TOWN | **G. STATE** | **H. ZIP CODE**
B WILMINGTON | DE | 19899

IX. INDIAN LAND
Is the facility located on Indian lands?
[ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)		**D. PSD** (Air Emissions from Proposed Sources)	
9 N	D E 0 0 0 0 5 2 5	9 P	NA
B. UIC (Underground Injection of Fluids)		**E. OTHER** (specify)	
9 U	N/A	9	N/A (specify) SEE ATTACHMENT I
C. RCRA (Hazardous Wastes)		**E. OTHER** (specify)	
9 R	N/A	9	N/A (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

MOTOR VEHICLE ASSEMBLY

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
RALPH J. HARTING, JR. - PLANT MANAGER	Ralph J Harting Jr	4/5/89

COMMENTS FOR OFFICIAL USE ONLY

C

ATTACHMENT

Water Permits:

1. Wastewater Discharge Permit - WDP 76-018

Air Permits:

1. APC - 80/851, Boiler No. 1
2. APC - 80/852, Boiler No. 2
3. APC - 80/853, Boiler No. 3
4. APC - 80/569, Boiler No. 4
5. APC - 86/242, Boiler No. 5
6. APC - 85/083, Automotive Coating System - Construction
7. APC - 82/1224, Third Color Booth & Oven - Operating
8. APC - 82/034, Blu-Surf Oven - Operating
9. APC - 81/849, Primer Surfacer Booth & Oven - Operating
10. APC - 81/656, Cathodic Electrode position Primer - Operating
11. APC - 80/145, Final Paint Booth & Oven - Operating

Chevrolet-Pontiac-Canada Group
Wilmington Plant
General Motors Corporation
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

October 28, 1988

Mr. Phillip G. Retallick, Director
State of Delaware Department of Natural
Resources & Environmental Control
Division of Air and Waste Management
89 Kings Highway
P. O. Box 1401
Dover, Delaware 19903

Subject: Notice of Violation: State of Delaware
Regulations Governing Hazardous Waste

Dear Mr. Retallick:

In response to the subject notice dated September 20, 1988, the following comments are submitted:

1. Hazardous waste signs have been placed on each of the two 6,000 gallon spent solvent tanks.

2. A number of signs have been placed in the areas of the spent solvent tanks and the hazardous waste pad so that anyone could quickly locate telephones in order to summon help in the case of an emergency.

3. A written procedure has been written for inspecting, documenting and recordkeeping of the contents of the hazardous materials spill containment cabinets. A copy of this procedure is enclosed.

4. The 2 mew 6,000 gallon tanks and the concrete pad for 55 gallon container placement were installed and are used for accumulation purposes only. As such their installation does not require a revision to Part A.

5. When the Wilmington Plant first filed its' Part A application in the early 1980's, wastewater treatment plants were included as a precaution. It is clear, however, that wastewater treatment plants are excluded from the RCRA permitting requirements. This plant does not view it as necessary to revise its' Part A as the plant intends to withdraw its' Part A application as explained below.

This plant disposes of all hazardous waste in less than 90 days. There is no treatment, storage, or disposal of hazardous waste at this plant. Because of this mode of operation, this plant intends to withdraw its Part A and Part B submittals. A Closure Plan will be submitted for this plant in the near future.

If clarification of the aforementioned text is required, please call me at 302-428-7406.

Respectfully,

Ernest R. Bosetti

Ernest R. Bosetti
Senior Engineer

ERB/lsn
enclosure

cc: Mr. A. Simpson, DNREC
File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

EPA I.D. # DED002369205

December 15, 1980

GMC GM Assembly Division
Mr. Ronald Nardi
P.O. Box 1512
Wilmington, De. 19899

Re: Acknowledgment of Application for a Hazardous Waste Permit

This is to acknowledge that the Environmental Protection Agency has received: (1) A notification pursuant to Section 3010 of the Resource Conservation and Recovery Act for the facility located at the address shown above; and (2) Part A of a Hazardous Waste Permit Application for that facility, including a signed statement that the operation of the facility, or its construction, began prior to November 19, 1980. While the information provided by these submissions has not been fully reviewed for completeness or accuracy, EPA will accept this information as an initial qualification for interim status pursuant to Section 3005 of the Act. If after further review of this information, EPA determines that the owner or operator did not fulfill all the requirements for interim status, EPA may treat the owner or operator as not having qualified for interim status pursuant to that section and will advise the owner or operator of that determination. Facility owners and operators with interim status must comply with the standards set forth at 40 CFR Part 265 until a permit is issued. Interim status may be terminated if the owner or operator fails to furnish any additional information requested by EPA in order to process a permit application.

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR & WASTE MANAGEMENT
89 KINGS HIGHWAY
P.O. BOX 1401
DOVER, DELAWARE 19903

WASTE MANAGEMENT
SECTION

ENVIRONMENTAL RESPONSE: (302) 739-3694
HAZARDOUS WASTE: (302) 739-3689
SOLID WASTE: (302) 739-3820
FAX: (302) 739-5060

October 9, 1992

Mr. J. T. Meagher, Director
Government Business and Reporting Section
General Motors Corporation
13-257 GM Building
3044 W. Grand Boulevard
Detroit, Michigan 48202

Certified Mail
Return Receipt Requested
P 408 458 858

RE: Financial Assurance for DED002369205, Boxwood Road Plant, Wilmington, DE
File Code 12-2 & 15

Dear Mr. Meagher:

The State of Delaware Department of Natural Resources and Environmental Control (DNREC), Hazardous Waste Management Branch (HWMB) has reviewed General Motors RCRA status. The HWMB has determined that General Motors' Boxwood Road facility in Wilmington, Delaware is no longer a treatment, disposal or storage (TSD) facility.

The requirements for financial responsibility for closure and/or post closure care of TSD sites, as outlined in the Delaware Regulations Governing Hazardous Waste Subpart H Sections 265.143 (h) & 265.145 (h), state that an owner or operator is released from maintaining financial assurance for closure and/or post closure care when the DNREC is satisfied that the closure and/or post closure care has been completed and approved by DNREC. Based upon the HWMB files and the August 9, 1991 certification letter regarding the old storage pad, no RCRA closure was required.

If you have any questions, please contact Cheryl Hess of the HWMB at (302) 739-3689.

Sincerely,

Nancy C. Marker

Nancy C. Marker
Proram Manager II
Hazardous Waste Management Branch

CAH92077

cc: Ernest Bosetti, Boxwood Road Plant

Delaware's good nature depends on you!

RCRA
Station

Wilmington Assembly General Motors Corporation
801 Boxwood Road
Wilmington, DE 19804

March 17, 2009

Certified Mail
Return Receipt

Fire Chief
Elsmere Fire Company
1701 Kirkwood Highway
Wilmington, DE 19805

Dear Mr. Sir:

The Federal Resource Conservation and Recovery Act (RCRA) and the U.S. Environmental Protection Agency (EPA) regulations impose certain obligations on "existing hazardous waste management facilities". The General Motors plant on Boxwood Road is considered a Generator of hazardous wastes. We would appreciate receiving your cooperation in our efforts to comply with the applicable requirements.

One of the requirements is that a contingency plan be prepared and copies be:

> "Submitted to all local police departments, fire departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services."

Since your department may be called upon to provide services in the event of an emergency regarding our facilities, I have enclosed a recently updated copy of this plant's RCRA contingency plan for your records and reference.

Please contact me at (302) 428-7421 to discuss arrangements to familiarize emergency personnel with the layout of our facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.

Please destroy any and all previous (now obsolete) versions of this plan.

Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: W. Fox

March 26, 2009

Memo to Record

Due to a lack of response from organizations that our RCRA Contingency Plan was sent to earlier in March 2009, this memo acts as the documentation of their refusal/declination of entering into a response arrangement. Obviously, this does not apply to those organizations that have contacted us and made arrangements or to those organizations who contact us in the future.

Name

3/26/09
Date

Wilmington Assembly
General Motors Corporation
801 Boxwood Road
Wilmington, DE 19804

March 17, 2009

Certified Mail
Return Receipt

Fire Chief
Five Points Fire Company
209 S. Maryland Ave.
Wilmington, DE 19899

Dear Sir:

The Federal Resource Conservation and Recovery Act (RCRA) and the U.S. Environmental Protection Agency (EPA) regulations impose certain obligations on "existing hazardous waste management facilities". The General Motors plant on Boxwood Road is considered a Generator of hazardous wastes. We would appreciate receiving your cooperation in our efforts to comply with the applicable requirements.

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Please destroy any and all previous (now obsolete) versions of this plan.

Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: W. Fox

RCRA CONTINGENCY PLAN

General Motors Corporation
Wilmington Assembly Plant
801 Boxwood Road
Wilmington, DE 19804

Revision Date:
March 17, 2009

SECTION 1.0 – INTRODUCTION

1.1 - PURPOSE

This RCRA (Hazardous Waste) Contingency Plan has been developed to comply with the requirements of the Federal Hazardous Waste Management regulations for generators (40 CFR Part 262) and Title 7 of the State of Delaware Hazardous Waste Regulations, (Part 262). Contingency plans are required for generators of hazardous waste at Part 262.34 (a)(4) by referencing Subpart C and D in Part 265. Subpart C addresses Preparedness and Prevention and Subpart D addresses the Contingency Plan and Emergency Procedures.

Sections of this Contingency Plan have been taken from other Safety, Environmental and/or Plant Security plans or procedures previously developed to comply with other regulations or corporate directives. This includes but may not be limited to: Safety's Emergency Response Plan (as required at 29 CFR 1910.120) which includes the Fire and Explosion Protection Plan and the Disaster Control Procedure; Spill Prevention, Control and Countermeasures (SPCC) Plan (as required by 40 CFR 112); Security's Fire Response Pre-Plan; and Security's Environmental and Hazardous Material Emergency Response Plan.

A copy of the Contingency Plan must be kept at the facility and submitted to the local police department(s), local fire department(s), hospital(s), and state and local emergency response teams that may be contacted to provide emergency services. Written documentation of submittals to agencies is kept on file.

The Contingency Plan must be reviewed and immediately amended, if necessary, whenever: applicable regulations change; the plan fails in an emergency; facility changes (such as design, construction, operation and/or maintenance changes which would materially increase the potential for fires, explosions or releases); a change in the emergency coordinator and/or changes in emergency equipment.

The focus of the Contingency Plan is to minimize hazards to human health and the environment from fire, explosion or unplanned release of hazardous materials or hazardous waste. The provisions of the Plan must be carried out immediately when there is a fire, explosion or release of hazardous materials or hazardous waste which could threaten human health or the environment.

1.2 – DEFINITIONS

1. **CHEMTREC** – A service arm of the American Chemistry Council (formerly the CMA). The Chemical Emergency Transportation Center has a number which can be called to provide immediate advice on products and the steps that should be taken in the event of an emergency. The number is **1-800-424-9300**.

2. **Combustible Liquid** – Any liquid having a flash point at or above 100 degrees Fahrenheit and below 200 degrees Fahrenheit.

3. **Emergency Situation** - Any fire, explosion or unplanned release of a hazardous material or hazardous waste which could affect human health or the environment.

4. **Hazardous Material** – Any substance identified by EPA as hazardous as listed in Part II, 40 CFR 355, Appendix A and 40 CFR Part 302.

5. **Emergency Coordinator** - Facility Environmental Coordinator or other facility designated person(s) who will properly respond to an emergency situation. There must be at least one person either on call or on the premises who is responsible for coordination of all emergency response measures. This person should be knowledgeable of the location of emergency equipment as well as the location of the wastes and their characteristics. 40 CFR Part 265.56 further defines the role of an Emergency Coordinator.

6. **INFOTRAC** – The Chemical Emergency Response Center contracted with General Motors to field all calls related to leaks, fires and medical emergencies involving hazardous materials. The number is **1-800-535-5053**.

7. **NRT** – National Response Team, consisting of representatives of 14 government agencies. It is the organization responsible for implementing the National Contingency Plan (NCP).

SECTION 2.0 - PLANT INFORMATION

2.1 – Facility Description

- Location: 801 Boxwood Rd.
  Wilmington, Delaware 19804

- Directions to the facility: The facility is located on Boxwood and Dodson Roads east of Route 141 about 1 ½ miles north of Route 95.

- Facility Topographic Map: See last page for map.

- Facility Phone Numbers (24 hour telephone): 7911 (Inside Plant)
  (302) 428-7911 (Outside Plant)

- Description of Operations:

  The automobile manufacturing operation is divided into three major production departments: Body shop, Paint shop, and General Assembly (GA). Within each department, the main conveyor line may be supported by subassembly lines where components needed for the total assembly processes are assembled. In addition, several major support departments supplement the main assembly operations. The assembled vehicles are then shipped via railway or truck carrier to General Motors, Saturn and/or Opel automobile dealerships.

  Hazardous wastes are generated primarily from the facility's surface preparation and painting operations. Many of these wastes are initially accumulated in satellite areas, held in storage areas, and, within 90 days, are treated, recycled or disposed of off-site. Hazardous wastes may include: waste paint and thinner, solvent soaked rags, waste solvents or solvent mixtures (which may include Acetone, Methyl Ethyl Ketone (MEK), Xylene, Toluene, Mineral Spirits and various Alcohols). Additionally, non-hazardous waste oils, adhesives and other chemicals are also generated. Hazardous wastes that are treated on-site at the facility's wastewater treatment plant include intermittent phosphate area pickling solutions (Corrosives). The plant utilizes Delaware's and EPA's "Permit by Rule" at 40 CFR 270.1 (c) 2.

- Operating Schedule: Production shifts may vary from one to three, Mon. – Fri. (Sat. at times)

  Other Times Include Maintenance Activities & Some Production Processes

- Number of Employees: Total Number Salaried = > 75
  Hourly Number = > 500

  Contracted Employees = >10
- EPA Identification Number: DED002369205

2.2 – Emergency Coordinators

- Primary Emergency Coordinator
  John Peronti, Sr. Environmental Engineer
  Office Phone: 302 428-7422 Cell Phone: (302) 463-7934
  Home Phone: (302) 798-6936
  Home Address: 13 Holly Hill Drive
  Wilmington, DE 19809

- Alternate Emergency Coordinator

  Jeff Holmes, Sr. Environmental Engineer
  Office Phone: 302 428-7421 Cell Phone: (302) 463-7935
  Home Phone: (610) 584-6814
  Home Address: 2274 Warner Rd.
  Lansdale, PA 19446

SECTION 3.0 - EMERGENCY RESPONSE PROCEDURES

3.1 – Emergency Coordinator and Other Facility Personnel Responsibilities

(Reference Federal Regulation 40 CFR Part 265 and State of Delaware Title 7 Part 265 Subpart D)

Whenever there is an imminent or actual emergency situation, the Emergency Coordinator (or his/her designee when the emergency coordinator is on call) must immediately:

- Activate internal facility alarms (activation point at the West Gate Security Office) or communication systems, where applicable, to notify all facility personnel.

- Whenever there is a release, fire, or explosion, the Emergency Coordinator must immediately identify the character, exact source, amount and extent of any release materials. Identification of the released materials may be performed through observations, review of facility records or manifests and, if necessary, by chemical analysis.

- Concurrently, the Emergency Coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion. These include the effects of any toxic, irritating, or asphyxiating gases generated or the effects to surface waters due to runoff from water or chemical agents used to control fire. In addition, the Emergency Coordinator must also assess the possibility of heat-induced explosions.

- If the Emergency Coordinator determines that the facility has had a release, fire, or explosion, which could threaten human health or the environment outside the facility, he/she must report his/her findings as follows:

  1. If the assessment indicates that evacuation of local areas may be advisable, the Emergency Coordinator must immediately notify the appropriate local authorities. The Coordinator must be available to assist the appropriate officials with the decision to evacuate local areas.

  2. The Coordinator must immediately notify all state and local agencies with designated response roles. The Coordinator must also immediately notify either the government official designated as the On-Scene Coordinator for that geographical area (in the applicable regional contingency plan under 40 CFR part 1510) or the **National Response Center (24-hour toll free number 1-800-424-8802) and the Delaware Department of Natural Resources and Environmental Control (302 739-4580 or 800 662-8802)**. The report must include:

- Name and telephone number of reporter;
- Name and address of facility;
- Time and type of incident (i.e. release, fire);
- Name and quantity of material(s) involved, to the extent known;
- The extent of injuries, if any; and
- The possible hazards to human health, or the environment outside the facility's boundaries.

- During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fire, explosion, and releases do not occur, recur or spread to other hazardous waste at the facility. These measures include stopping processes and operations, collection and containment of released waste, and removal or isolation of containers.

- If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure build-up, gas generation, or ruptures in valves, pipes, or other equipment.

- Immediately after an emergency, the Emergency Coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire or explosion at the facility.

- The Emergency Coordinator must ensure that in the affected area(s) of the facility:
  1. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
  2. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
  - The Emergency Security Coordinator (Security/Fire Chief) is responsible for coordinating/performing emergency security functions during an emergency.
  - The Emergency Utilities Coordinator (Site Utilities Manager) is responsible for coordinating site utilities start-up and shut-down and post emergency repair or replacement of utility equipment.
  - The Emergency Maintenance Coordinator (Facilities Area Manager) is responsible for maintenance of the communication systems, facility systems, debris clearance, and damage inspection.
  - The Emergency Medical Coordinator (Medical Director) is responsible for coordinating any emergency medical functions.
  - The Emergency Information Coordinator (Communications Manager) is responsible for performing information related functions such as verification of information, preparation of news statements, escort of media and coordination with local government authorities to establish a joint public information center.

3.2 - Written Notification Requirements

The Emergency Coordinator must notify the Secretary of DNREC (or his/her duly authorized designee) via 1-800-662-8802 and appropriate State and local authorities that the facility is in compliance with DRGHW 265.56 paragraph (h) before operations are resumed in the affected area(s) of the facility.

The Emergency Coordinator must note in the operating record the time, date and details of any incident requiring implementation of the contingency plan. Within 15 days after the incident, he/she must submit a written report on the incident to the Secretary (DNREC). The report must include:

- Name, address and telephone number of the owner or operator;
- Name, address, and telephone number of the facility;
- Date, time and type of incident (fire);
- Name and quantity of materials(s) involved;
- The extent of injuries, if any;
- An assessment of actual or potential hazards to human health or the environment; and
- Estimated quantity and disposition of recovered material that resulted from the incident.

SECTION 4.0 – EMERGENCY EQUIPMENT/EMERGENCY HAZARDOUS WASTE CONTRACTORS

4.1 Emergency Equipment and Location

The following is a list of communication devices, equipment and materials for use in control and clean-up operations:

- **Communication Equipment**

  In-Plant two-way radios, pagers and telephone systems located throughout the facility, many being mobile.

- **Emergency Power**

  Emergency diesel back up generator units are located throughout the facility to supply emergency power to critical operations including, but not limited to: wastewater treatment pumps, emergency lighting, security fire system computer, and powerhouse boiler controls.

- **Spill Response Equipment**

  The spill response cart (also known as the "HazMat Truck") is located near column D-2 which is in the southwest portion of the main building. The ignition key is kept by Safety and Security to assure it is always available. This cart is inspected after each use and replacement material is ordered as needed. The equipment on the cart is capable of being used for the cleanup of spills of any hazardous waste generated at the facility in addition to other materials of approximately 100 gallons or less. This cart contains items including safety equipment (rope, extension cord, crowbar, survive airs, blower, Scott Air Pak, body harnesses, lanyard, drop lights), soda ash, rags, oil dry, oil booms, spill guns for acid, caustic or solvents, drum repair kit, pH paper and tool box. This equipment is capable of assisting responders to spills of 55 gallons or less and supplying air for at least 15 to 30 minutes depending on the situation and responder.

  Spill response cabinets are located in the Powerhouse, Weldwater Building, Grit Separator Building, Wastewater Treatment Plant and the Paint Department. These cabinets contain plastic shovels, rakes, gloves, face shields, oil absorbent socks, tyvek coveralls, absorbent material, rags and squeegees. These cabinets are inspected periodically to ensure they are stocked with sufficient material to respond to a spill.

Fire Fighting Equipment

The manufacturing areas of the plant have 100% sprinkler protection.

Portable fire extinguishers are located on columns throughout the plant. The total number of fire extinguishers are categorized as follows:

452 - 2 1/2 gallon AFFF
750 - Assorted sizes CO2
85 - Assorted sizes of Dry Chemical
52 - Assorted sizes of "Clean Guard" Halon
6 - 125 lbs. Purple K
8 - Class D
6 - Class K

Decals are affixed to each fire extinguisher specifying the type of fire it is designed to extinguish. The location of each fire extinguisher is listed on the Plant Security monthly checklist.

Within the plant are over 250 1 1/2" fire hose reels. The location of this equipment is also listed on the Plant Security monthly checklist and inspected by a third party once a year.

2 1/2" Standpipes (fire hydrant equivalents) are located throughout the plant at the following columns:

K-7	EE-29	RR-10
H-29	S-17 1/2	WW-10
N-9	2-E-19	TTUU-25
L-18	2-DD-25	UU-25 Basement
AA-17	2-FF-24	

Two In-Plant Fire Trucks are located at column D-2.

1. One truck having 200 ft. of 1 ½ inch hose, 200 ft. of 2 ½ inch hose, fire extinguishers and one SCBA Scott Air Pack.

2. One truck having 300 feet of 2 ½ inch hose, 100 feet of 1 ½ inch hose and various types of fire extinguishers.

Additional Fire Protection

1. Paint Stores, Mix and Solvent Recovery areas are protected by a high-density sprinkler system and a 24-ton Cardox unit (Low Pressure CO2).
2. Robotics Spray Booths in Modules 1 through 7 and the Prime Booth are protected by high density sprinklers. Each of the spray booths and the prime booth has a deluge sprinkler system.
3. Smoke release vents are installed throughout the manufacturing areas at the facility and are operated manually.
4. Smoke detectors have been installed in the computer rooms, paint control room, UPS room and in all electrical substations.
5. Infrared detectors have been installed in the 16 robotic spray booth zones in Modular Paint and Prime Booth.
6. Prime booth also has high pressure CO2 system inside spray equipment.
7. Automated foam deluge system (heat detector activated) in gasoline loading and storage area.

Fire Loop System

The Fire Loop System has a total of six pumps in the system, which provide pressure and water when needed and include:

2 Jockey Pumps	50 gpm & 100 gpm pumps
Electric Fire Pump	1,500 gpm pump
#1 Pumphouse Diesel Fire Pump	1,000 gpm pump
#2 Pumphouse North Diesel Fire Pump	2,500 gpm pump
#3 Pumphouse South Diesel Fire Pump	2,500 gpm pump
#4 Electric Fire Pump	1,500 gpm pump
#5Pumphouse	2,500 gpm pump

The plant also maintains 675,000 gallons of water in one gravity and two ground tanks for fire fighting operations.

Cold Foam Generator Locations

Powerhouse (outside west of main building near tank farm)	300 gallon
Hazardous storage area (outside back of plant next to truck repair column B30)	325 gallon

4.2 Suppliers and Distributors of Spill Response Equipment

The following vendors should be contacted to order new spill response equipment:

1. New Pig Corporation
   One Pork Avenue
   Tipton, PA 16684-0304
   (800) 468-4647 Phone
   (800) 621-7447 24-hr. Fax

2. McDonald Safety Company
   5 Copper Drive
   Newark, DE 19804
   (302) 999-0151 Phone
   (302) 999-5647 Fax

3. Bodman Industries
   P.O. Box 2221
   Aston, PA 19014
   (800) 241-8774 Phone
   (215) 459-8036 Fax

4. Lab Safety Supply
   P.O Box 1368
   Janesville, WI 53547-1368
   (800) 356-0783 Phone
   (800) 543-9910 Fax

5. Labelmaster
   5724 N. Pulaski RD.
   Chicago, IL 60646-6797
   (800) 621-5808 Phone
   (800) 723-4327 24 hr. Fax

4.3 Emergency Hazardous Waste Contractors

The following is a list of hazardous waste contractors that may be contacted by the plant:

Vacuum Tank Trucks and/or Roll-off Containers

Auchter Industrial Vac Service, Inc.
Pluto Drive
Sewell, NJ 08080
(856) 256-9622 Phone (24 Hr.)
(856) 256-9623 Fax
EPA ID No. NJD 980772768

Allstate Power Vac, Inc.
#10 Industrial Hwy.
Bldg. J-M/S9
Lester, PA 19113
1-800-876-9690 24-hr. Service
EPA ID No. NJD 003812047

CWM Chemical Services, LLC
1550 Balmer Rd.
ModelCity, NY 14107
(716) 754-0453
EPA ID No. NYD049836679

Construction Equipment

Corrado American
Marsh Lane
New Castle, DE 19720
655-6501
Delaware Solid Waste Transporter No. DE-SW-126D

Talley Brothers
P. O. Box 5548
Wilmington, DE 19804
655-5548

SECTION 5.0 – EVACUATION PLAN

5.1 - TYPES OF EMERGENCY RESPONSE

5.1.a Partial Evacuation
The partial evacuation of an area or areas of the plant shall occur when it is deemed necessary by the Plant Manager or other members of management representing him. The alarm for a partial evacuation shall be by:

PARTIAL EVACUATION:	**Word of mouth, telephone, plant radio**

5.1.b Total Evacuation
In the event that one or more of the named emergencies, fire, explosion, fallen aircraft, civil disturbances, bomb scares, hazardous material releases, etc. (or any other critical condition arises that is considered sufficient cause for a total evacuation by the plant manager or other member of management representing him) an alarm signaling the employees to evacuate will be made by Plant Security. The alarm that signifies total evacuation of the plant is as follows:

TOTAL EVACUATION:	**Four (4) 15 second blasts of plant sirens**

5.1.c Non-Evacuation – Seek Shelter In the event of an imminent hurricane, tornado, air raid or other emergency where shelter is required for protection of employees, the plant manager or other member of management representing him will order an alarm signaling the employees to proceed to Seek Shelter areas. The alarm that signifies "Non-Evacuation but Seek Shelter" is:

SEEK SHELTER:	**One continuous 2 minute blast of plant sirens**

5.1.d All Clear
The All Clear alarm signifies that it is safe for employees to return to their production areas. The All Clear alarm is as follows:

ALL CLEAR:	**One 15 second blast on plant sirens**

5.1.e Method of Notification
Security will notify the plant population by radio through the **All Call** channel option. After designated employees receive the message they should follow the directions of Security and program their radios to the Emergency Channel.

5.1.f Testing of Alarms: In order to familiarize employees with the emergency sirens, the plant siren will be sounded once a month on each shift.

5.2 METHOD OF PLANT EVACUATION

5.2.a EMPLOYEES IN PRODUCTION AREA

- ***Responsibility:*** The responsibility of starting and leading a swift, safe, and efficient evacuation of the production area shall be with the Area Advisor and the Team Coordinator. It shall be the responsibility of the Area Advisor to train their Team Coordinators and inform their team members of the evacuation procedures. The Department Manager is responsible for maintaining control of the evacuated employees. The Department Manager will also direct the activities of his/her subordinates.

- ***Service department employees*** (inspectors, material operators, engineers...) who are assigned duties in production or plant areas will evacuate at the nearest exit. Once safely outside, the servicing department team member will make his/her way to his/her department's designated gathering location.

- ***Routes of Evacuation:*** The routes to be followed in evacuating the plant are designated by the Plant Manager or appointed representative and are based upon sectioning the plant floor into areas with two or more separate evacuation routes for each area. (*See layout on your department's designated Emergency Information Board.*) The route designation shall be dependent upon the nature of the disaster situation. Also shown on the layouts are other exits in the area.

- ***After leaving the plant:*** Employees should make their way to their designated area. These areas are identified with signs posted on either the colored lampposts or the perimeter fencing in the employee parking lots. Employees evacuating the facility should remain in the main aisles and avoid congested areas. Area Advisors should keep employees calm and orderly. All Department Managers will be notified immediately if employees are to be sent home.

5.2.b OFFICE EMPLOYEES AND VISITORS

- ***Responsibility:*** The responsibility of starting and leading a swift and efficient evacuation of the office area shall lie with the office supervision. Department Managers are responsible for maintaining order within their group and directing the activities of their subordinates. All employees will report to the designated evacuation areas.

- ***Personnel Department:*** The Personnel and Engineering Departments will provide evacuation and shelter route layouts and all other pertinent information/instructions necessary to inaugurate the Disaster Control Procedure. The Personnel and Training Departments shall also be responsible for the training and informing of supervision in the Disaster Control Procedure. Refresher training programs shall be conducted on an annual basis.

- ***Evacuation Routes:*** First and second floor office areas must use emergency stairway to exit at ground level. After leaving the plant, office employees should make their way to the location designated for their department. All Department Managers will be notified immediately if employees are to be sent home.

5.2.c MAINTENANCE EMPLOYEES

- ***Routes of Evacuation:*** The routes to be followed in evacuating the plant are designated by the Plant Manager or appointed representative and are based upon sectioning the plant floor into areas with two or more separate evacuation routes for each area. (*See layout on your department's designated Emergency Information Board.*) The route designation shall be dependent upon the nature of the disaster situation. Also shown on the layouts are other exits in the area. Powerhouse and wastewater employees will be given direction by messenger or telephone if, and where they are to evacuate. Normally, these employees will remain at there station.

- ***After leaving the plant:*** Employees should make their way to their designated area. These areas are identified with signs posted on either the colored lampposts or the perimeter fencing in the employee parking lots. Employees evacuating the facility should remain in the main aisles and avoid congested areas. Area Advisors should keep employees calm and orderly. All Department Managers will be notified immediately if employees are to be sent home.

5.3 DESIGNATED EVACUATION AREAS

5.3.a West Gate/Parking Areas – Body Assembly Manager/Shift Superintendent occupies and maintains communication at this area.

- Personnel in the following areas will follow evacuation routes and reassemble in designated locations in the West parking lot:
  - Body Assembly Production and Maintenance
  - Simulated Work Environment (SWE)
  - Cafeteria Employees & patrons – West Overflow Lot
  - Vehicle Assembly Engineering
  - Quality (Office, Body, AGC) – West Overflow Lot
  - Material
  - Engineering – West Overflow Lot
  - Supplier Quality – West Overflow Lot

5.3.b East Gate Areas – General Assembly Area Manager/Shift Superintendent occupies and maintains communication at this area.

- Personnel in the following areas will follow evacuation routes and reassemble in designated locations in the East parking lot:
  - General Assembly
  - Tire Building/General Stores
  - Final Process (New Car Repair, Drivers, Final Paint
  - Financial, Planning, Plant Mgrs. Office
  - Personnel/Medical
  - Wastewater (if evacuation required)
  - UAW Leadership
  - Wilmington Systems Group
  - Tool Room
  - Material (Admin & East Dock)
  - Education & Training
  - Quality Int/Ext Electrical Careline
  - Audit Building

5.3.b Paint Gate Areas - Paint Area Manager/Shift Superintendent occupies and maintains communication at this area.

- Personnel in the following areas will follow evacuation routes and reassemble in designated locations in the Paint parking lot:
  - Elpo & Phosphate
  - Mod Paint
  - Basic Paint
  - Paint Body Repair
  - Material (Paint & Main Receiving Dock)
  - Paint Environmental
  - Paint Maintenance
  - Truck Repair
  - Paint Mix/Paint Stores
  - Quality Paint

5.3.c WFG Maintenance Lamppost Near West Vehicle Gate Area - WFG Maintenance Manager/Shift Superintendent designates a representative to occupy and maintains communication at this area.

- Personnel in the following areas will follow evacuation routes and reassemble at the maintenance lamppost (inside fence) near the West Vehicle Gate:
  - GA Environmental Team
  - Powerhouse (if evacuated)
  - WFG/GA Maintenance
  - ERT Team – Badge Office at column A1

SECTION 6.0 – ARRANGEMENTS AGREED TO BY AUTHORITIES

6.1 - Fire Companies

The following is the outside fire company pre-plan emergency response established by Five Points Fire Co. The current Chief is Charles Hayes. The assembly plant lies within the fire district of Five Points Fire Co. The pre-plan was established to aid in mutual response between plant security, plant fire brigade and Five Points Fire Co. during a MAJOR FIRE.

The following fire companies will respond to the plant when a call is made to the New Castle County Fireboard by plant security when a major fire occurs: Box 1700 - Five Points Fire Co., Station 17; Belvedere Fire Co., Station 30; Elsmere Fire Co., Station 16; Cranston Heights Fire Co., Station 14; and Minquas Fire Co., of Newport, Station 23.

Five Points Fire Co.: Engine Co., Ladder, Rescue, and Ambulance will respond directly to the fire scene.

Belvedere Fire Co.: Engine Co. - The first engine holds at the hydrant at the West Gate and supplies water to the loop hydrant #1 next to the West Gatehouse. The second engine stands-by at a hydrant on Boxwood Rd. west of gate #4.

Elsmere Fire Co.: Ladder Co. - The ladder and engine responds to the opposite side of the building or fire scene and assists Five Points Fire Co.

Cranston Heights Fire Co.: Engine Co. - The first engine responds to the gravity tank and holds at the city hydrant by pumphouse #1. The second engine is assigned to standby at a hydrant on Centerville Road south of gate #1.

Minquas Fire Co., of Newport: Engine Co. & Rescue - The first engine is assigned to connect to a hydrant on Boxwood Road west of gate #5, and supply loop hydrant #29 next to the East Gatehouse. The second engine stands by the hydrant on Boxwood Road east of gate #5. The Rescue stands by in the East parking lot for further instructions.

All fire system piping is color-coded red including hydrants and standpipes. All loop hydrants have two 2 1/2" butt connections. The loop hydrants are designed either as intakes or discharges, which eliminates the need for long hose runs. When pumping into any hydrant or standpipes the pump pressure is NOT TO EXCEED 150 PSI.

Self-Contained Breathing Apparatus will be worn when responding into the Modular Paint Building.

Once the outside fire companies have been called, Plant Security has relinquished its authority to the Officer in Charge (O.I.C.) of the fire companies responding. The O.I.C. can change the pre-plan as the situation warrants. All responding fire companies are using an Incident Command System.

6.2 - Environmental and Hazardous Material Situation

Plant Security is notified when a spill occurs. Initially, Plant Security will respond and take charge of the situation. Environmental Engineering, Safety and/or Maintenance will then be notified by Security. The plant spill cart (also known as the "HazMat Truck") may be brought to the site. Depending on the spill situation, any combination of the above groups may direct the clean-up effort. Environmental Engineering will ensure the appropriate treatment or collection for disposal of the material(s). Environmental Engineering will also notify the appropriate agencies as required. Emergency response contractors including on site representative(s) are utilized as the need arises. Equipment suppliers are utilized for restocking items as needed through various means.

6.3 - Police Departments

Requests for assistance in handling an emergency situation at this facility shall come from the outside Officer in Charge. The Police department's role in assisting in emergency situations may include directing traffic and assisting in the evacuation of personnel outside the facility if needed. Police participate in table top exercises at the plant and attend monthly meetings with our plant Fire Chief, the local fire chiefs and emergency response teams monthly.

6.4 - Hospitals

Although the plant has an on site medical staff, there are no formal arrangements with local hospitals. Ambulance service personnel provided by local fire departments determine where an individual would be taken.

SECTION 7.0 – SPILL RESPONSE PROCEDURES

7.1 – Internal Releases

7.1.a - Notification

1. Determine location and description of spill. In the event that GM personnel receive notification of a spill or containment problem from any source external to the plant, the following information is to be requested: location of spill, nature of material, time of first observance and whether still occurring and name of caller if he or she wishes to be identified and contacted later with results of investigation.

2. Employees will call Plant Security on the telephone (3911) or radio and give as much critical information as possible such as plant column number, people involved, approximate gallons spilled, etc.

3. Plant Security will determine and contact the appropriate response personnel. This may include: Security, Safety, Maintenance and Environmental Departments within the plant and/or the New Castle County Fireboard outside the plant by dialing "911". The Environmental Department will contact contracted response companies, the DNREC at 1-800-662-8802 or the National Response Center at 1-800-424-8802 if necessary.

7.1.b - General Spill Guidelines for Appropriately Trained Personnel

1. Utilize the nearest stock of appropriate spill control materials.

2. When working with a spill, always work from the outside in to prevent materials from spreading. Exercise caution and do not step into the spill.

3. All spills must be completely and efficiently cleaned-up. After initial cleanup, the area should be checked for residual material and recleaned if necessary.

4. All equipment used should be decontaminated and inspected for damage. Replace any damaged or non-reusable items.

5. Determine the compatibility of spilled material and personal protective equipment (PPE).

TABLE ONE - Compatibility Table for PPE (Including Gloves)

Material	Condition	PPE
Acid or Caustic	Static	Rubber gloves, Goggles
	Spraying	Rubber gloves, Chem suit, Goggles, Acid hood
	Pumping	Rubber gloves, Chem suit, Chem face shield
Oil	Static	Rubber gloves, Goggles
Solvents	Spraying	Rubber gloves, Chem face shield, Goggles, Lab coat
	Pumping	Rubber gloves, Goggles

TABLE TWO - Rubber Glove Compatibility Chart

Chemical	PVC	Neoprene	NBR	PVA
Chrome Acid	G	(NR)	F	NR
Phosphoric Acid	G	E	E	NR
Sodium Nitrite	-	-	-	-
Nitric Acid	G	E	E	NR
Citric Acid	E	E	E	F
Lime	-	-	-	-
Trichloroethylene	-	NR	NR	E
R11,12,22,500,113,123,134	-	NR	F	G

NOTES: E=Excellent, G=Good, F=Fair, P=Poor, NR=Not Recommended, (NR)=No Test Data

If material is not specified in the above rubber glove compatibility chart, use the following:

Acid Materials	Neoprene
Alkaline Materials	Neoprene/NBR
Organic Solvents	NBR
Oils	Neoprene/NBR

7.1.c - Spill Containment

A. Flammable and Combustible Wastes and Solvent Based Adhesives

1. An organic vapor respirator, face shield with chemical goggles, neoprene gloves and chemical resistant coveralls (or rubber apron and rubber boots) must be worn.

2. Remove all ignition sources - NO SMOKING.

3. If the area is confined, follow confined space entry procedures including but not limited to testing the air and ventilating if needed.

4. Contain the spill with oil dry, rags, or oil booms. Place around the perimeter of the spill.

5. Squeegee the material into a small area. Absorb the liquid with oil dry or rags. Continually squeegee and absorb the material until the area is cleaned.

6. NO chlorinated cleaners shall be used for clean-up.

7. Use a plastic shovel to pick up rags and/or oil dry. Place all materials in an approved hazardous waste drum. Seal the drum and label as Hazardous Waste. Remove the drum to the Hazardous Waste Pad.

8. Vacuums and transfer containers must be grounded during the cleanup activity.

9. Clean and/or replace all spill response equipment used. Discard disposable respirators.

B. Electrodeposition (water-based primer paint) also known as "ELPO" Wastes

1. Contain the material to as small an area as possible with rags, booms or "pigs".

2. Wear safety glasses with side shields and neoprene gloves.

3. Use a drum vacuum unit or shovel to place the material into a drum. Seal the drum and label appropriately. Remove drum to Drum Pad.

4. Clean and/or replace all spill equipment used.

5. Under certain circumstances and with the approval of the Environmental Engineer and/or Site Utility Manager, there may be times when ELPO water may be washed to the process waste system for on-site treatment at the on-site waste water treatment facility.

C. Corrosives

1. An organic vapor/acid mist respirator, face shield with chemical goggles, neoprene gloves and chemical resistant coveralls must be worn.

2. Contain the spill with oil dry around the perimeter of the material. Ventilate the area if needed.

3. If the spill is an acid, spread soda ash throughout the material for neutralization. If the spill is a caustic (base), add a neutralizing agent such as Spill-X-C for neutralization.

4. Use a plastic shovel to place the neutralized material into a drum. Label this drum appropriately and move it to the Hazardous Waste Consolidation Pad.

5. Clean and/or replace all spill equipment as necessary.

6. Under certain circumstances and with the approval of the Environmental Engineer and/or Site Utility Manager, there may be times when corrosives may be washed to the process waste system for on-site treatment at the on-site waste water treatment facility.

7.1.d Procedure for Redundant (Stormwater) System

1. Under normal conditions the gates at the redundant (stormwater) system are left in the open position to allow for the flow of stormwater and groundwater (pumped out near Mod Paint). Upon notification of a spill with the possibility of reaching the storm drain, the Environmental Engineer or Powerhouse personnel will close these gates and start collecting the spilled material in any combination of the facility's three 100,000 gallon holding tanks.

2. The groundwater pumps near Mod Paint may be shut down to reduce the flow through the collection system. Paint Maintenance personnel should be consulted prior to shut down of these pumps to confirm no present groundwater problems dictate the need for constant pumping and also to confirm reactivation of these pumps after the spill incident.

3. The collected material will be tested to determine whether the material requires treatment or may be discharged.

7.2 – External Releases

A. Waterway

In the event of an accidental discharge or spill to a waterway, the Environmental Engineer will notify the appropriate local, state and/or federal authorities. If not in the plant, the Environmental Engineer will be notified by other means such as telephone, pager or radio. Timely notification is important. If a Reportable Quantity (RQ) is potentially exceeded, notification of the National Response Center must be done **immediately.** The following agencies and GM staff will be notified as required:

Duty Officer, National Response Center (NRC)
U. S. Coast Guard
Commandant G-TGC-2
Second St., S.W.
Washington, D. C. 20593

Phone: 800-424-8802 (Toll Free, 24-hours)

State of Delaware Department of Natural Resources & Env. Control (DNREC)
Phone: 800-662-8802 (Toll Free, 24-hours)

GM Legal Staff Env. & Energy Practice Area
300 Renaissance Center
Detroit, MI 48265-3000
(313) 665-4767

Mr. John Takle
General Motors Corp.
(248) 255-7881

B. Sanitary Sewer

In the event of spillage of contaminants to the sanitary sewer in sufficient quantity to potentially cause an upset in the municipal treatment plant, the Environmental Engineer will notify the following:

New Castle County Department of Special Services
Daytime: (302) 395-5728
Nights: (302) 395-5700

Mr. John Takle
General Motors Corporation
(248) 255-7881

7.3 - Disposal of Materials Procedures

Collected material will be placed in containers, tanks or tankers and properly characterized as hazardous or non-hazardous waste. This waste characterization is coordinated by the environmental engineer.

A solid waste may be considered as a hazardous waste if it meets one of the following conditions:

- Waste is specifically listed as a hazardous waste in Federal regulations.
- Waste meets one of the four hazardous waste characteristics - ignitable, corrosive, reactive or toxic.
- Waste is specified as a hazardous waste by the generator based on generator knowledge.

Any question as to whether the collected spill material is a hazardous waste should initiate waste sampling and testing for hazardous vs. non-hazardous waste determination.

Any waste that is characterized as a hazardous waste must be manifested and sent to a GM corporate approved Treatment Storage and/or Disposal (TSD) facility. Since GM is classified as a generator, the facility must follow manifest requirements for the disposal of hazardous waste including maintaining records for a period of at least three years and exception reporting. Exception reporting requirements include contacting the hazardous waste transporter (or TSD facility) for the status of the hazardous waste shipment if a signed manifest is not received by the generator within 35 days of the date that the waste was accepted by the transporter. Delaware hazardous waste regulations at 262.42 describe reports that must be made concerning manifests and waste shipments.

SECTION 8.0 – TRAINING REQUIREMENTS

8.1 Training

Training must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste procedures relevant to their positions in which they are employed.

8.2 Employee Training

Training will be based on the duties and functions to be performed by each employee. Generally, employees dealing with hazardous wastes will have been trained in at least the plant's drum handling procedure and/or a satellite accumulation procedure or job instruction along with training required by OSHA such as, but not limited to, the Hazard Communication Standard. New employees handling hazardous waste must successfully complete the previously mentioned training within six months of employment. Existing employees who are assigned to a different position which involves handling of hazardous waste must be trained within six months of the assignment. Both new and existing employees must not work in unsupervised positions prior to completing the required hazardous waste training for that position.

8.3 Refresher Training

Employees who come in contact with hazardous waste will receive annual refresher training of sufficient content and duration to maintain competency in their functions. This may include the same training as their initial training and/or more in-depth training (such as specific job instructions) depending on their position and how it relates to hazardous wastes.

8.4 Documentation of Training

Training will be documented through various means including, but not limited to, electronic, hard copy, and in various departments including the Personnel (Training) Department, Engineering (Environmental) Department and each other individual department and include a description of the subject matter. Copies of all training documentation will be maintained at the facility.

SECTION 9.0 – DOCUMENTATION OF PLAN SENT TO AUTHORITIES

Copies of cover letters accompanying this plan to local authorities are kept in the Environmental Engineer's files.

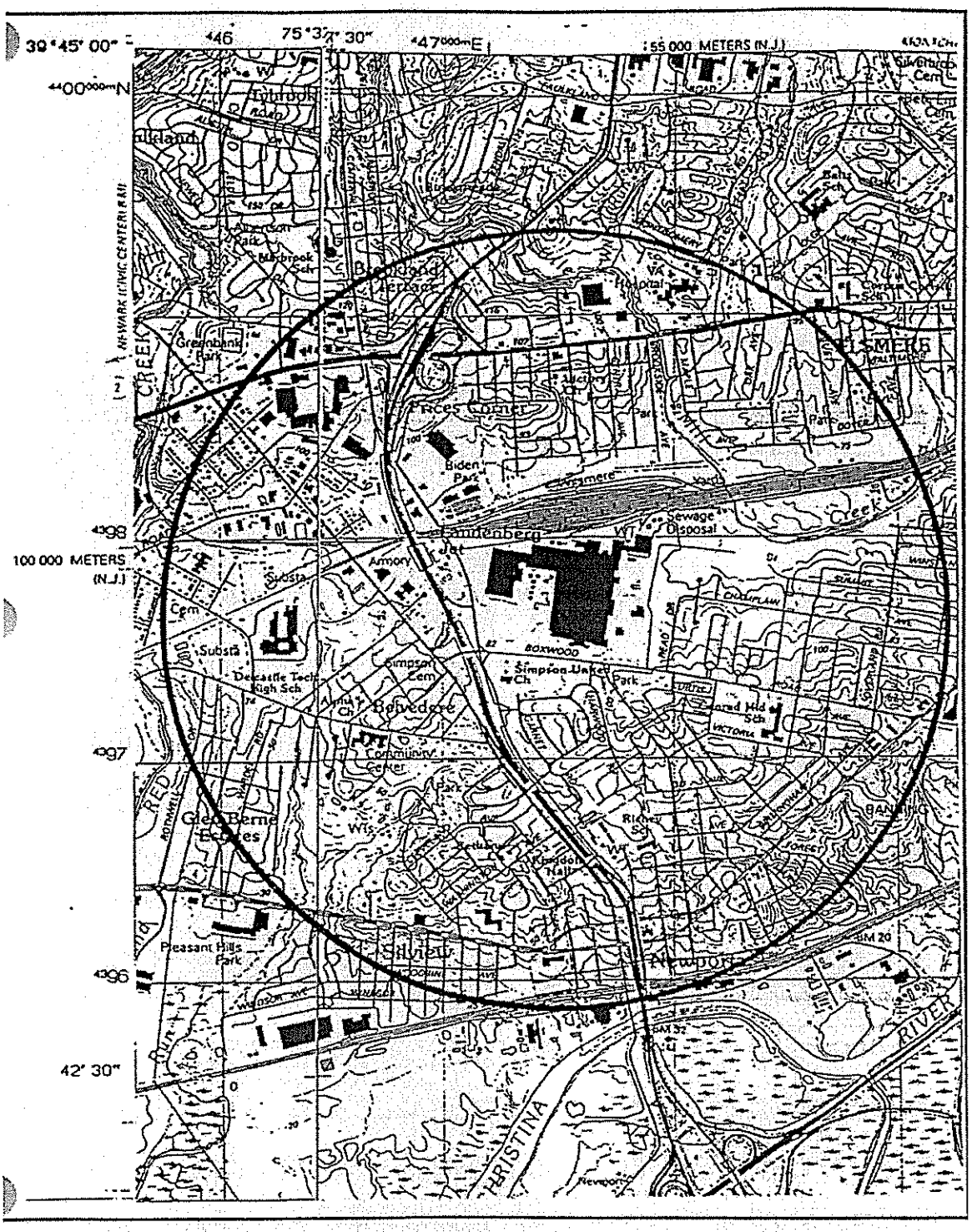
SECTION 10.0 – DATES OF PLAN REVISIONS

The following are origination and revision dates for this plant's RCRA Contingency Plan as required by the hazardous waste regulations. Please note, this is not and has not been the only plan developed to respond to emergencies or spills. At least one other plan was developed as early as 1972, prior to the enactment of the Resource Conservation and Recovery Act (RCRA) which initiated the hazardous waste regulations. Additionally, at times, reviews and revisions may take a few weeks to complete depending on number of changes, timing of these changes in the plant and confirmation of information by other departments.

Origination date: November 20, 1981
First Revision: November 9, 1983
Second Revision: March 30, 1987
Third Revision: October 19, 1988
Fourth through eleventh Revisions: 1989 through 1999
Twelfth Revision: July 15, 2000
Thirteenth Revision: October 16, 2000
Fourteenth Revision: July 30, 2001
Fifteenth Revision: April 30, 2002
Sixteenth Revision: August 6, 2002
Seventeenth Revision: May 5, 2003
Eighteenth Revision: April 6, 2004
Nineteenth Revision: September 29, 2005
Twentieth Revision: January 27, 2006
Twenty-First Revision: August 18, 2006
Twenty-Second Revision: January 30, 2007
Twenty-Third Revision: February 5, 2008
Twenty-Fourth Revision: March 17, 2009

Approved by:

Jeffrey A. Holmes	
Print Name	Signature
Sr. Env. Eng.	3/17/09
Title	Date



Facility Topographical Map

Inter-Organization

Environmental Activities Staff
General Motors Corporation
General Motors Technical Center
Warren, Michigan 48090

Date: August 2, 1976

Subject: U.S. EPA Survey of Polychlorinated Biphenyls (PCB's)

To: All GM Plant Managers

Attached is a copy of a request for information from the U.S. Environmental Protection Agency (EPA) regarding the present and past use of PCB's at General Motors facilities. It should be noted that the EPA is carrying out this survey under Section 308 of the Federal Water Pollution Control Act and Section 114 of the Clean Air Act. It is imperative that your response to applicable questions be as accurate as possible. GM Legal Staff has advised us that Section 113 of the Clean Air Act and Section 309 of the Federal Water Pollution Control Act make it a criminal offense to knowingly submit a false statement to the EPA regarding information required under these acts. Your responses will be consolidated by our office into a single response to the EPA. Your best sources of information to respond to the questionnaire are Plant Engineering, Purchasing, Material Control, Property Accounting and your Hazardous Materials Committee.

We have talked to the EPA for further clarification of some of their survey questions. The following are comments on each individual survey question, to further clarify the intent of the question. Rather than define PCB's, we have provided manufacturers' and trade names for guidance in determining where PCB's could be present in plants. In addition, Attachment I is a listing of PCB usages that could be applicable to GM plants.

1. Note that this question deals with the manufacturing, production, or importation of PCB's from foreign countries and does not relate to the use of PCB's. Some known foreign sources and trade names for PCB's are as follows:

COUNTRY	COMPANY	TRADE NAME
Germany	Bayer	Clophen
France	Prodelac	Phenoclor Pyralene
Italy	Caffaro	Fenclor Decachlorodiphenyl (DK)
Japan	Mitsubishi Mitsubishi	Kennechlor Santotherm

2. This question relates to the incorporation of PCB's in GM products. If any part of your answer constitutes confidential, commercial or proprietary information (e.g. customer lists), please answer the question and indicate your objections along with the reasons therefore.

   In addition to the foreign suppliers listed above, the following trademark materials containing PCB's could have been obtained from U.S.A. manufacturers who in turn purchase from Monsanto, the only producer of the actual PCB chemical in the U.S.A.

MANUFACTURER	TRADEMARK
Aerovox	Hyvol
Allis Chalmers	Chlorextol
American Corporation	Asbestol
Cornell Dubilier	Dykanol
General Electric	Pyranol
Kuhlman Electric	Saf-T-Kuhl
McGraw Edison	Elemex
Monsanto	Aroclor
Sangamo Electric	Diaclor
Wagner Electric	No-Flamol
Westinghouse Electric	Inerteen
General name for capacitor and transformer insulating fluid	Askarel

3. Examples of PCB compounds or mixtures would include those used in hydraulic systems, heat transfer systems, diffusion pump oil, plasticizers, surface coatings (i.e. paints and varnishes), investment casting wax, etc. An expanded list of possible uses is contained in Attachment I.

   EPA legal personnel have indicated that this question is not intended to include those materials which may contain PCB's as a trace contaminant (e.g. carbonless paper, hand soaps, etc.). If you should have any questions regarding the types of materials to be included, do not hesitate to request clarification from our office.

4. Include any transformers and equipment which are located on GM property but actually owned and/or maintained by an electric company or outside contractor.

   a. Self explanatory
   b. Self explanatory
   c. Indicate any particular precautions taken for this kind of equipment beyond the normal procedures under GM's Spill Prevention and Countermeasure Control Program.

d. If applicable, indicate that an electric company or outside contractor maintains the equipment.

5. Note that this question refers to the disposal of equipment (including hydraulic equipment, heat transfer equipment, etc.) whereas question No. 6 refers to the disposal of PCB containing liquids from such equipment.

   a. Self explanatory

   b. Small capacitors should be treated in a general manner by indicating the routine method of disposal. Quantitative information on these kinds of units should only be supplied if the information is readily available.

7. Note that this question refers to reclamation of equipment (including hydraulic equipment, heat transfer equipment, etc.) whereas question No. 8 refers to reclamation of liquids from such equipment.

9. This question requires further quantitative elaboration of the information requested in questions 1 through 8. For example, if it is indicated in the answer to question No. 1 that a total of 300 lbs. of PCB's were imported in 1975, then the answer to question No. 9 would include information such as the following:

Imported from		Year	Trade Name	Quantity	# PCB
Country	Company				
Germany	Bayer	1975	Clophen	150 lbs.	50%
France	Prodelac	1975	Phenoclor	150 lbs.	90%

10. The answers to this question should be limited to the period 1971-1975.

    a. Self explanatory

    b. Use the description of discharges indicated in your application for an NPDES permit.

    c. If applicable, indicate that an application for an NPDES permit has been filed but the permit has not yet been received.

11. Report only data where PCB's were actually identified. Each plant is responsible for reporting data on its own discharges. This means that if Chevrolet analyzed samples for a plant in another Division, the specific plant is responsible for reporting that data and not Chevrolet.

    a. and c. Self explanatory

    b. Give the flow per day and a general description of the discharge e.g. 8 mgd of direct contact cooling water through outfall 01.

13. The answers to this question should be limited to the period 1971-1975.

14. Unless you have additional information, the consolidated corporate response will indicate that we have no knowledge regarding the health and/or environmental effects of PCB's other than that which appears in journal literature and generally publicized information.

15. a. and b. Self explanatory

Please disregard the 30 day response time indicated in the EPA questionnaire. Instead, return your responses to the questionnaire to this office by August 30, 1976.

If there are any questions concerning the survey or if further clarification is required, contact Henry Johnson on 8-535-8602.

W. R. Johnson, Director
Plant Environment

jl
Attachment
cc: General Managers
Plant Engineers

ATTACHMENT I

Possible PCB Usage

Product	PCB Component
Synthetic Rubber Products	Additives
Transformers	Oils
Vinyl	Additives
Waxes and Polishes	Additives
Asbestos	Fireproofing
Canvas Products	Fireproofing
Cloth Products	Fireproofing
Gaskets	Additives and adhesives
Heating Equipment	Fluids
Hydraulic Equipment & Tools	Fluids
Laminated Wood & Wood Products Particleboard	Adhesives
Lubricators, Lubrication Systems and Components	Additives
Petroleum Products	Additives
Plastic Products (Plasticizers)	Additives
Printed Circuit Boards	Coatings
Solvents	Additives
Tapes	Adhesives

Product	PCB Componen
Adhesives, Glues, Pastes	Additive
Capacitors and condensors	Fluids
Compressors	Fluids
Electrical Wire and Cable	Coatings
Lighting Fixtures and Equipment	Balasts
"O" Rings	Additives
Oils (Cutting, die-casting, hydraulic, industrial, etc.)	Additives
Paints and allied products	Additives
Plastic Molding Compounds	Additives
Resins	Additive
Rust inhibitors and removers	
Seals	Adhesives

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED
U.S. POTTER

JUL 15 4 07 PM '76

ENVIRONMENTAL
ACTIVITIES STAFF
OFFICE OF ENFORCEMENT

Mr. Ernest S. Storkman
Vice-President, Environmental
General Motors Corporation
3044 W. Grand Blvd.
Detroit, Michigan 48202

Dear Mr. Storkman:

Recent governmental sampling data indicate the presence of Polychlorinated Biphenyls (PCBs) and comparable chemical substances in the air, in water bodies, and in fish in several areas of the country. In order to determine the nature and extent of the possible adverse effects resulting from the presence of PCB compounds in the environment, the Environmental Protection Agency (EPA), in cooperation with other federal and State agencies, is attempting to determine the sources and amounts of PCBs entering the environment. It is important that this effort be carried out without delay.

It is our understanding that your company may handle PCB compounds or mixtures or comparable chemical substances in its operations. I am therefore requesting, pursuant to the authority provided by Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1318, and Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857c-9, that your company furnish EPA with information pertaining to your use and handling of PCBs and comparable chemical substances. In addition to a general description, which should include information as to sources, quantities, uses, and ultimate disposition, you should respond in detail to the enclosed questions. If any question is not applicable to your company or operations, please so indicate by responding "not applicable."

The information requested herein must be provided notwithstanding its possible characterization as confidential information or trade secrets. Should you so request, however, any information (other than effluent or emission data) which the Administrator of this Agency determines to constitute methods or processes entitled to protection as trade secrets will be maintained as confidential, pursuant to procedures specified in 40 CFR Part 2.

Within 30 days following receipt of this letter, your company must provide all information for all of the years indicated.

The information required herein should be sent directly to the address indicated below. If you have any questions, you may call the person indicated below or Mr. Blake A. Biles of our office at (202) 755-0630.

We appreciate your prompt cooperation in this matter.

Sincerely yours,

Jeffrey G. Miller
Deputy Assistant Administrator
for Water Enforcement

Enclosure

Regional Contact:
Mr. James O. McDonald
Enforcement Division
Environmental Protection Agency
230 South Dearborn Street
Chicago, IL 60604
Telephone: 312-353-5251

POLYCHLORINATED BIPHENYL (PCB) COMPOUNDS OR MIXTURES

Within 30 days following receipt of this letter, your company must provide all information for all of the years indicated.

FOR PURPOSES OF THIS LETTER, THE PHRASE " PCB COMPOUND OR MIXTURE" INCLUDES ALL CHEMICAL SUBSTANCES KNOWN OR BELIEVED BY YOU TO BE PCB COMPOUNDS OR MIXTURES OR OF A SIMLIAR CHEMICAL NATURE, IRRESPECTIVE OF TRADE NAME, AND SPECIFICALLY INCLUDING TERPHENYLS AND DECACHLOROBIPHENYLS.

1. For each PCB compound or mixture manufactured, produced, or imported by your company, for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975: (NOTE: For purposes of this question, the phrase "PCB compound or mixture manufactured, produced, or imported by your company" does not apply to PCB compounds or mixtures contained in sealed systems, such as transformers and capacitors, which are purchased in a finished form from another source.)

    a. The total amount of each PCB compound or mixture manufactured, produced, or imported.

    b. The name and address of each of your company's facilities which handle PCB compounds or mixtures (including production facilities and wholesale and retail outlets), and the amount of each PCB compound or mixture distributed through each facility.

    c. The name and address of each customer of each PCB compound or mixture, the amount of each PCB compound or mixture obtained by each customer from each facility, and each customer's delivery point(s) for the receipt of each PCB compound or mixture.

2. For each PCB compound or mixture incorporated by your company into its products, for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975: (NOTE: For purposes of this question, the phrase "PCB compound or mixture incorporated by your company into its products" does not apply to PCB compounds or mixtures contained in sealed systems, such as transformers or capacitors, which are purchased in a finished form from another source and installed as components of your products without breaking the seal.)

a. A description of each product.

b. For each product the total amount of each PCB compound or mixture incorporated into the product.

c. For each product the name and address of each source from which your company obtained each PCB compound or mixture, and the amount of each PCB compound or mixture obtained from each source.

d. The name and address of each of your company's facilities which handle such products (including production facilities and wholesale and retail outlets), and the amount of each product distributed through each facility.

e. The name and address of each customer of each product, and the amount of each product obtained by each customer from each facility. For consumer products list only the total production of each product at each facility and the total number of customers. Do not provide the name and address of each customer of consumer products.

3. For each PCB compound or mixture used by your company other than for incorporation into its products, for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975: (NOTE: For purposes of this question, the phrase "PCB compound or mixture used by your company other than for incorporation into its products" does not apply to PCB compounds or mixtures contained in sealed systems, such as transformers and capacitors, which are purchased in a finished form from another source.)

a. A description of each use.

b. For each use the total amount of each PCB compound or mixture.

c. For each use the name and address of each source from which your company obtained each PCB compound or mixture, and the amount of each PCB compound or mixture obtained from each source.

4. For transformers, capacitors, or other equipment containing PCB compounds or mixtures which are or have been located at company facilities at any time since January 1, 1971, for each company facility:

   a. A general description of the equipment by type, and a description of your company's use of each type.

   b. The name and address of each company or person from which you obtained the equipment.

   c. A general description of provisions made to respond to spills, leaks, ruptures, or other discharges of PCB compounds or mixtures from the equipment.

   d. A general description of procedures used in maintenance and repair of such equipment; the name and address of each party involved in such maintenance and repair; and the name and address of each company facility involved in such maintenance and repair.

5. For each transformer, capacitor, or other equipment which contains or has contained any PCB compounds or mixtures, disposed of by your company (with or without the involvement of other parties), for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975:

   a. A description of each method of disposal.

   b. For each method of disposal, the location of every disposal site, the name and address of each party involved in the disposal, and the number of units of each type and size of equipment disposed of by each party.

6. For each PCB compound or mixture disposed of in its liquid state or as a part of other liquid or solid waste by your company (with or without the involvement of other parties), for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975:

   a. A description of each method of disposal.

   b. For each method of disposal, the total amount of each PCB compound or mixture disposed.

c. For each method of disposal, the location of every disposal site, the name and address of each party involved in the disposal of each PCB compound or mixture, and the amount of each PCB compound or mixture disposed of by each party.

7. For each transformer, capacitor, or other equipment which contains or has contained any PCB compounds or mixtures, reclaimed by your company (with or without the involvement of other parties), for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975:

   a. A description of each method of reclamation.

   b. For each method of reclamation, the location of every reclamation site, the name and address of each party involved in the reclamation, and the number of units of each type and size of equipment reclaimed by each party.

8. For each PCB compound or mixture reclaimed by your company, for each company facility, during each year of 1971, 1972, 1973, 1974, and 1975:

   a. A description of each method of reclamation.

   b. For each method of reclamation, the total amount of each PCB compound or mixture reclaimed.

   c. For each method of reclamation, the location of every reclamation site, the name and address of each party involved in the reclamation of each PCB compound or mixture, and the amount of each PCB compound or mixture reclaimed by each party.

9. The composition by chemical name and percent by weight of each PCB compound or mixture produced, imported, sold, reclaimed, used, and/or disposed of by your company since January 1, 1971. (NOTE: This question does not apply to PCB compounds or mixtures contained in sealed systems, such as transformers and capacitors, which are purchased in a finished form from another source.)

10. For each discharge by your company (into waters of the United States or Publicly Owned Treatment Works) from all company facilities which have ever used or handled PCB compounds or mixtures:

    We have never used or handled PCB

    a. The location of each such discharge.

b. A general description of each such discharge, including identification of the receiving waters or sewage system into which each such discharge is made.

c. The NPDES permit number of each such discharge.

11. The results of any and all sampling and analysis performed by your company, its agents or contractors or any other person or entity, since January 1, 1971, concerning the following:

a. Concentrations of PCB compounds or mixtures in the effluent of any discharges by the company (into waters of the United States or Publicly Owned Treatment Works) or in the emissions of the company into the air.

b. The flow and/or composition of any discharges or emissions by the company (into the waters of the United States or Publicly Owned Treatment Works, or into the air) which contain PCB compounds or mixtures.

c. Concentrations of PCB compounds or mixtures in receiving waters (both upstream and downstream) of any discharges by the company which contain PCB compounds or mixtures, and concentrations of PCB compounds or mixtures in the air in the area of the company.

12. The methods by which PCB compounds or mixtures, or equipment containing PCB compounds or mixtures are transported to, by, and/or from your company, including:

a. A description of each method of transportation. Where different methods of transportation are used at different facilities, specify which transportation method is used at each facility.

b. The names and addresses of all transporters of PCB compounds or mixtures in their liquid state.

13. All occasions (including spills, leaks, ruptures, discharges) of which you are aware on which PCB compounds or mixtures have or may have been introduced into the environment. In particular, describe such occasions insofar as they involved PCB compounds or mixtures in their liquid state, as incorporated into closed

systems, or as incorporated into open systems. For each occasion, indicate name and address of parties involved; dates, time, and location of the discharge or spill; the amounts involved; and actions taken to clean up the PCBs and to otherwise minimize adverse health and environmental effects of the PCBs.

14. A description of any adverse health and environmental effects which you know or believe to have resulted from the introduction of PCB compounds or mixtures into the environment. Indicate any specific occasions (including dates, times, locations, amounts, and parties involved) for which such effects are known.

15. Any and all other information which you possess concerning:

    a. The production, importation, reclamation, use, distribution, and disposal of PCB compounds or mixtures.

    b. The introduction of PCB compounds or mixtures into the environment.

In addition to the above, EPA would appreciate receiving any other information which you possess concerning the distribution, discharge, and emission of PCB compounds or mixtures by sources other than your company, including your company's customers and sources.

WESTON
ENVIRONMENTAL CONSULTANTS-DESIGNERS

WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

26 November 1979

Mr. Ernest Bosetti
General Motors Corporation
Wilmington Plant
P. O. Box 152
Boxwood Road
Wilmington, DE 19899

Dear Ernie:

On 27 October 1979, samples were collected from the General Motors Assembly Plant in Wilmington, Delaware for PCB analyses. The results are summarized on the attached Table 1.

If you have any questions regarding this data, please do not hesitate to give me a call.

Very truly yours,

ROY F. WESTON, INC.

Richard Habrukowich

Richard Habrukowich, Ph.D.
Supervisor
Process Development

/n

Attachment

WESTON

GENERAL MOTORS CORPORATION

Wilmington, Delaware

RFW No.	Sample Description	PCB's ppm
8298	#8 Rear	13.25
8299	#5 Front	25.65
8300	#1 Front	14.55
8301	#1 Rear	19.50
8302	#2 Front	13.65
8303	#7 Rear	15.90
8304	Heat Exchanger Drippings North	8.48
8305	Heat Exchanger Drippings South	9.20
8306	#10 Front	7.60
8307	#11 Front	19.40
8308	#8 Rear	19.50
8309	#9 Rear	8.20
8310	Drum Sample	<0.05

WESTON
ENVIRONMENTAL CONSULTANTS-DESIGNERS
WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

November 13, 1979

General Motors Corp.
Wilmington Plant
P. O. BOX 1512
Wilmington, Delaware 19899

Attention: C. E. Johnson

Gentlemen: RFW Lab No. 1-19-B

Enclosed is a summary of the analyses performed on the samples submitted to our Laboratory.

If you have any questions regarding this data, please call me.

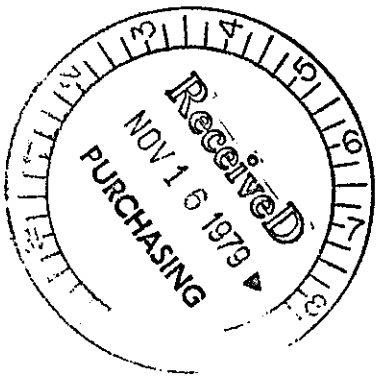
Very truly yours,

ROY F. WESTON, INC.

Peter J. Marks
Vice President
Laboratory Services

/m

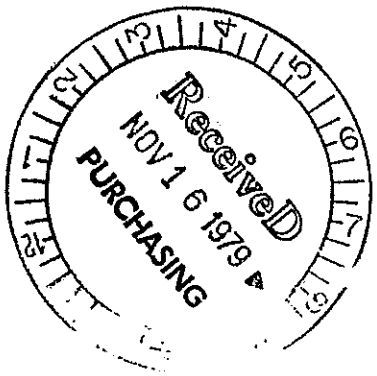
Enc.



WESTON

GENERAL MOTORS CORPORATION

DATE:	RFW NO.	SAMPLE DESCRIPTION	ANALYSIS	
10/25/79	8298	#8 Front	PCB, mg/l	13.25
	8299	#5 Front	PCB, mg/l	25.65
	8300	#1 Front	PCB, mg l	14.55
	8301	#1 Rear	PCB, mg/l	19.50
	8302	#2 Front	PCB, mg/l	13.65
	8303	#7 Rear	PCB, mg/l	15.90
	8304	Heat Exchanger Dripping North	PCB, mg/l	8.48
	8305	Heat Exchanger Dripping South	PCB, mg/l	9.20
	8306	#10 Front Cyl.	PCB, mg/l	7.60
	8307	#11 Front	PCB, mg/l	19.40
	8308	#8 Rear Cyl.	PCB, mg/l	19.50
	8309	#9 Rear Cyl.	PCB, mg/l	8.20
	8310	Drum Sample	PCB, mg/l	0.05



GM Assembly Division **Case Mail Routing Slip**

Location: GMAD WILMINGTON

Department: PLANT ENGINEERING

Attention: PLANT ENGINEER

0665

ERNIE
PLS HANDLE

Inter-Organization

GM Assembly Division
General Motors Corporation
Central Office
30009 Van Dyke Avenue
Warren, Michigan 48090

FAC 80-244

Date: August 1, 1980

To: GMAD Plant Engineers

Subject: U.S. EPA REGULATIONS FOR RECORDS AND MONITORING OF POLYCHLORINATED BIPHENYLS (PCB's)

As referenced in the Federal Regulations (Annex VI, 40 CFR 761.45, page 31557) issued May 31, 1979, an annual report must be prepared covering the use, storage, and disposition of PCB's during the previous calendar year. This annual reporting document must be prepared by July 1 of each year, and it must be kept on file for at least five years after a facility ceases to use or store quantities of PCB's as prescribed in Annex VI.

You are being reminded of this regulation because the EPA has undertaken an intensive PCB Compliance Inspection Program, from which significant fines have been assessed for violations concerning labeling, storage and record keeping.

Guidelines and federal regulations pertaining to control of PCB's have been previously issued under the following Solid Waste Management Bulletins:

SWM-79-3	July 20, 1979
SWM 80-2	January 7, 1980
SWM-80-5	April 28, 1980

It is imperative that all plants follow the above regulations and guidelines.

In order to verify division compliance with these regulations, you are requested to submit by letter, your plant status concerning labeling, storage, and record keeping for PCB's. Please submit this information to this office no later than August 25, 1980.

If you have any questions concerning this information, please contact the writer at 8-562-7138.

L. R. Hostetter, Director
Facilities Engineering

By G. P. Boszak
G. P. Boszak

GPB/nb
cc: W. T. McKeel
J. P. Chu
J. M. Martin

Inter-Organization

GM Assembly Division

General Motors Corporation

Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

Date: AUGUST 7, 1980

To: MR. G. P. BOSZAK
FACILITIES ENGINEERING

Subject: U.S. E.P.A. REGULATIONS FOR RECORDS & MONITORING OF POLYCHLORINATED BIPHENYLS (PCB's)

IN RESPONSE TO YOUR LETTER FAC-80-244, DATED AUGUST 1, 1980, THE FOLLOWING INFORMATION IS SUBMITTED HEREWITH:

1. THIS PLANT'S INFLUENTS AND EFFLUENTS WILL BE CHECKED FOR PCB'S IN THE NEXT SEMI-ANNUAL ANALYSIS TAKEN.

2. ALL HYDRAULIC SYSTEMS AND SOME EFFLUENTS (HEATER EXCHANGE CONDENSATES) HAVE BEEN CHECKED FOR PCB'S IN NOVEMBER, 1979 BY TWO (2) SEPARATE LABORATORIES.

3. THREE (3) TRANSFORMERS HAD CONTAINED A DIAELECTRIC AND/OR COOLING OIL CONTAINING PCB'S BUT THIS HAS BEEN REPLACED IN 1971 AND LABELED ACCORDINGLY. FIVE (5) OTHER TRANSFORMERS (3 IN THE WELD SUB-STATION AND (2) IN THE #3 SUB-STATION) WILL BE CHECKED IN THE NEXT COUPLE OF MONTHS.

4. THIS PLANT IS NOT STORING, DISPOSING, PURCHASING OR USING ANY ITEMS CONTAINING PCB'S.

5. THIS PLANTS' SPCC PLAN WILL BE REVISED REFERENCING PCB'S.

6. ALL EQUIPMENT IN THIS PLANT THAT MAY CONTAIN PCB'S HAS BEEN LABELED.

SUBJECT: U.S. E.P.A. REGULATIONS FOR RECORDS & MONITORING OF POLYCHLORINATED BIPHENYLS (PCB's)

7. ALL RECORDS WITH REFERENCE TO PCB's ARE BEING RETAINED BY THE WRITER.

Ernest R. Bosetti

ERNEST R. BOSETTI
SENIOR ENGINEER

CENTREX: 8-438-1213

CC: R.G.NARDI
W.R.JOHNSON-E.A.S.
W. COLLINSON-E.A.S.

ocation — GMAD WILMINGTON

epartment PLANT ENGINEERING

ttention PLANT ENGINEER

665

ERNIE
PLS HANDLE

Inter-Organization

GM Assembly Division
General Motors Corporation
Central Office
30009 Van Dyke Avenue
Warren, Michigan 48090

FAC 80-244

Date: August 1, 1980

To: GMAD Plant Engineers

Subject: U.S. EPA REGULATIONS FOR RECORDS AND MONITORING OF POLYCHLORINATED BIPHENYLS (PCB's)

As referenced in the Federal Regulations (Annex VI, 40 CFR 761.45, page 31557) issued May 31, 1979, an annual report must be prepared covering the use, storage, and disposition of PCB's during the previous calendar year. This annual reporting document must be prepared by July 1 of each year, and it must be kept on file for at least five years after a facility ceases to use or store quantities of PCB's as prescribed in Annex VI.

You are being reminded of this regulation because the EPA has undertaken an intensive PCB Compliance Inspection Program, from which significant fines have been assessed for violations concerning labeling, storage and record keeping.

Guidelines and federal regulations pertaining to control of PCB's have been previously issued under the following Solid Waste Management Bulletins:

SWM-79-3	July 20, 1979
SWM 80-2	January 7, 1980
SWM-80-5	April 28, 1980

It is imperative that all plants follow the above regulations and guidelines.

In order to verify division compliance with these regulations, you are requested to submit by letter, your plant status concerning labeling, storage, and record keeping for PCB's. Please submit this information to this office no later than August 25, 1980.

If you have any questions concerning this information, please contact the writer at 8-562-7138.

L. R. Hostetter, Director
Facilities Engineering

By G. P. Boszak
G. P. Boszak

GPB/nb
cc: W. T. McKeel
J. P. Chu
J. M. Martin

SAMPLE IDENTIFICATION TABLE

SAMPLE NO.	TOWVEYOR NO.	CYLINDER NO.	PCB mg/kg
1	NO. 1	FRONT	* 3.5
2	NO. 5	FRONT	* 2.2
3	NO. 8	FRONT	* 1.7
4	NO. 1	REAR	* 1.8
5	NO. 2	FRONT	* 1.8
6	NO. 7	REAR	* 1.8
7	HEAT EXCHANGER	NORTH(HARRISON UNITS)	ND @ 0.5
8	HEAT EXCHANGER	SOUTH(HARRISON UNITS)	ND @ 0.2
9	NO.10	FRONT-FRONT CYL.	0.75
10	NO. 8	REAR -REAR CYL.	* 0.6
11	NO.11	FRONT-FRONT CYL.	* 0.6
12	NO. 9	REAR - REAR CYL.	* 0.5
13	-	SUPPLY DRUM	* 0.7

* PCB is definitely present in these samples Due to interferences in the samples I was unable to determine the exact amounts. The numbers recorded reflect the highest possible levels of 1242 PCB.

NOVEMBER 1, 1979
GMAD-WILMINGTON

WESTON
DESIGNERS CONSULTANTS

WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

26 March 1980

Mr. Ernie Bosetti
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, DE 19899

Dear Ernie:

Enclosed herewith are the results of the GC and GC/MS analyses of the 36 oil samples for PCB analyses.

If you have any questions regarding this data, please do not hesitate to call me.

Very truly yours,

ROY F. WESTON, INC.

Richard Habrukowich

R. G. Habrukowich, Ph.D.
Supervisor
Process Development

/n

Enclosures

GC Analysis RFW#	Sample Description	PCB mg/kg (ppm)
8906	Towveyor #7	366.
8907	Towveyor #5 Front	415.
8908	Towveyor #9, Rear, Rear Cycle	298.
8909	Towveyor #1, Front Rear Cylinder	44.2
8910	Towveyor #10 Rear, Rear Cylinder	240.
8911	Towveyor #7 Rear, Rear Cylinder	473.
8912	Towveyor #8 Rear, Rear Cyclinder	436.
8913	Towveyor #4 Rear, Rear Cylinder	257.
8914	Towveyor #14 Rear, Rear Cylinder	429.
8915	Towveyor #20 Rear, Rear Cylinder	493.
8916	Towveyor #8 Front, Rear Cylinder	433.
8917	Towveyor #23 Front, Rear Cylinder	373.
8918	Towveyor #10 Front, Front Cylinder	20.
8919	Towveyor #17 Front, Front Cylinder	405.
8920	Towveyor #1 Front, Front Cylinder	196.
8921	Towveyor #2 Front, Front Cylinder	183.
8922	Towveyor #21 Front, Front Cylinder	354.
8923	Towveyor #8 Front, Front Cylinder	480.
8924	Towveyor #6 Front, Front Cylinder	126.
8925	Towveyor #13 Front, Front Cylinder	372.
8926	Towveyor #3 Front, Front Cylinder	354.
8927	Towveyor #11 Rear, Front Cylinder	165.
8928	Towveyor #9 Front, Front Cylinder	423.
8929	Towveyor #11 Front, Front Cylinder	486.
8930	Towveyor #5 Front, Front Cylinder	365.
8931	Towveyor #19 Front, Front Cylinder	170.
8932	Towveyor #12 Front, Rear Cylinder	260.
8933	Towveyor #1 Rear, Rear Cylinder	462.
8934	Towveyor #18 Rear, Rear Cylinder	142.
8935	Towveyor #22 Rear, Rear Cylinder	436.

GC Analysis	Sample Description	PCB mg/kg (ppm)
8936	Drum Sample	.56
8937	Heat Exchanger Drippings North 10-23-79	2,286.
8938	Towveyor #2 Rear, Front Cylinder	415.
8939	Towveyor #16 Rear, Front Cylinder	354.
8940	Heat Exchange Drippings - South	420.
8941	Towveyor #15 Rear, Rear Cylinder	221.

GC/MS ANALYSIS

Selected samples were run on GC/MS screening to verify the levels observed on the gas chromatograph (GC). The verified samples were as follows:

8914	Towveyor #14 Rear, Rear Cylinder
8923	Towveyor #8 Front, Front Cylinder
8937	Towveyor Heat Exchanger Dripping - North

The GC/MS showed that these samples contained less than 5 mg/kg. The erroneous values reported for the GC chromatograms resulted from interferences from alkyl aromatic and naphthalene compounds that produce a similar gas chromatogram to that of PCB's. These interference compounds exhibit a complex gas chromatogram that interfere with PCB determinations at concentrations less than 30 ppm. Therefore, the 36 samples collected at the Wilmington, Delaware General Motors Assembly Plant have a PCB content of less than 5 mg/kg (ppm).

14 Nov. 79

TO: ERB
REF: PCB ANALYSIS OF OIL SAMPLES

PCB CONTENT IN PPM (mg/kg)

SAMPLE	PCB CONTENT
1	3.5
2	2.2
3	1.7
4	1.8
5	1.8
6	1.8
7	0.5 ≡ (NOT DETECTED)
8	0.5 ≡ (NOT DETECTED)
9	0.75
10	0.6
11	0.6
12	0.5
13	0.7

RATING SHOWN IS MAXIMUM THAT SAMPLES CONTAIN. SOME INTERFERENCE WAS ENCOUNTERED ON ANALYZER DURING READINGS WHICH WOULD INCREASE READING ABOVE ACTUAL CONTENT. (ALSO, IT WAS NOTED THAT FISH CAUGHT IN LAKE MICHIGAN CONTAIN HIGHER LEVELS OF P.C.B.)

Rio

GM Assembly Division — General Motors Corporation — Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

PURCHASE ORDER
W-17931

7 DEPARTMENT COPY

DATE 11/8/79

IMPORTANT
This number must appear on all invoices, correspondence packages, packing slips, etc

To

Roy F. Weston, Inc.
Weston Way
West Chester, PA 19380

SHIP TO AND BILL TO
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

TERMS	F.O.B.	SHIP VIA	DELIVERY REQUIRED
Net 30	O/P		As inst. by our GM plant eng.

ITEM	QUANTITY	DESCRIPTION	CODE NO.	PRICE
1	13	Samples to be run by G.C. test methods as per		
2		EPA requirements to determine PCB content.		
3		If this method shows results in the vicinity of 50 PPM, samples should be verified on GC/MS test protocols.		
4				
		1. Towveyor No. 1 Front		
5		2. Towveyor No. 5 Front		
		3. Towveyor No. 8 Front		
6		4. Towveyor No. 1 Rear		
		5. Towveyor No. 2 Front		
7		6. Towveyor No. 10 Front - Front Cyl.		
		7. Towveyor No. 8 Rear - Rear Cyl.		
8		8. Towveyor No. 11 Front - Front Cyl.		
		9. Towveyor No. 8 Rear - Rear Cyl.		
9		10. Heat Exchange Tank - North		
		11. Heat Exchange Tank - South		
10		12. Supply Drum - Sample		
11		-		
12		Per your quote 11/1/79		
13				
14				
15				
16				

REQ. NO. 1914 Bozetti

ACCOUNT NO. 7070-02500-40-1

DELIVER TO

	DATE	R. S. NO.	AMOUNT	NO. OF PCS.		DATE	R. S. NO.	AMOUNT	NO. OF PCS.
A					G				
B					H				
C					I				
D					J				
E					K				
F					L				

WI-3 REV. 9/79

GM Assembly Division · General Motors Corporation · Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

PURCHASE ORDER W-17812

7 DEPARTMENT COPY

DATE 11/6/79

IMPORTANT
This number must appear on all invoices, correspondence, packages, packing slips, etc.

To

Chevrolet Quality Assurance Lab.
30007 Van Dyke Ave.
Warren, MI 48090
Attn: Mr. Bill Shubert

SHIP TO AND BILL TO: Wilmington Plant, P.O. Box 1512, Boxwood Road, Wilmington, Delaware 19899

TERMS	F.O.B.	SHIP VIA	DELIVERY REQUIRED
Allied	Warren, MI	UPS	1 week

ITEM	QUANTITY	DESCRIPTION	CODE NO.	PRICE
1		Analyze 13 samples as shown; for PCB content		
2		Sample Identification Table		
3		Sample No. — Towveyor No. — Cylinder No.		
4		1 — No. 1 — Front		
5		2 — No. 5 — Front		
6		3 — No. 8 — Front		
7		4 — No. 1 — Rear		
8		5 — No. 2 — Front		
9		6 — No. 7 — Rear		
10		7 — Heat Exchanger — North (Harrison Unit		
11		8 — Heat Exchanger — South (Harrison Unit		
12		9 — No. 10 — Front-Front Cyl.		
13		10 — No. 8 — Rear-Rear Cyl.		
14		11 — No. 11 — Front-Front Cyl.		
15		12 — No. 9 — Rear-Rear Cyl.		
16		13 — Supply Drum		

REQ. NO. 5012 Bosetti | ACCOUNT NO. 7070-02500-40-1 | DELIVER TO

	DATE	R. S. NO.	AMOUNT	NO. OF PCS.		DATE	R. S. NO.	AMOUNT	NO. OF PCS.
A					G				
B					H				
C					I				
D					J				
E					K				
F					L				

GM Assembly Division

General Motors Corporation

Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

NOVEMBER 5, 1979

MR. BILL SHUBERT
CHEVROLET QUALITY ASSURANCE LABORATORY
GENERAL MOTORS TECHNICAL CENTER
30007 VAN DYKE AVENUE
WARREN, MICHIGAN (48090)

DEAR BILL:

ENCLOSED HEREWITH IS A SAMPLE IDENTIFICATION TABLE FOR THE SAMPLES BEING FORWARDED TO YOU UNDER SEPARATE COVER.

Ernest R. Bosetti

ERNEST R. BOSETTI
SENIOR ENGINEER

ENCL.

CC; JOHN ROELANDT
MISC. LABORATORIES

SAMPLE IDENTIFICATION TABLE

SAMPLE NO.	TOWVEYOR NO.	CYLINDER NO.
1	NO. 1	FRONT
2	NO. 5	FRONT
3	NO. 8	FRONT
4	NO. 1	REAR
5	NO. 2	FRONT
6	NO. 7	REAR
7	HEAT EXCHANGER	NORTH(HARRISON UNITS)
8	HEAT EXCHANGER	SOUTH(HARRISON UNITS)
9	NO.10	FRONT-FRONT CYL.
10	NO. 8	REAR -REAR CYL.
11	NO.11	FRONT-FRONT CYL.
12	NO. 9	REAR - REAR CYL.
13	-	SUPPLY DRUM

NOVEMBER 1, 1979
GMAD-WILMINGTON

Inter-Organization

GM Assembly Division

General Motors Corporation

Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

Date: NOVEMBER 19, 1979

To: MR. G. A. MARZONIE, FACILITIES ENGINEERING, CENTRAL OFFICE

Subject: PCB ANALYSIS

ENCLOSED HEREWITH, IS THE PCB ANALYSIS OF THE TOWVEYORS SO NUMBERED. A DRUM SAMPLE AND COUPLE OF HARRISON HEAT EXCHANGER SAMPLES WERE ALSO ANALYZED.

THE REMAINING TOWVEYORS HAVE BEEN SAMPLED. WHEN THE ANALYSIS IS COMPLETED, THE RESULTS WILL BE FORWARDED TO YOU.

Ernest R. Bosetti

ERNEST R. BOSETTI, SENIOR ENGINEER

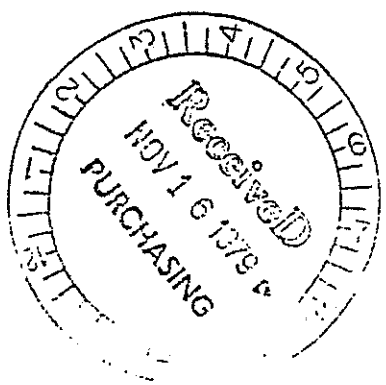
ERB:JC

CC: FILE

WESTON

GENERAL MOTORS CORPORATION

DATE:	RFW NO.	SAMPLE DESCRIPTION	ANALYSIS	
10/25/79	8298	#8 Front	PCB, mg/l	13.25
	8299	#5 Front	PCB, mg/l	25.65
	8300	#1 Front	PCB, mg l	14.55
	8301	#1 Rear	PCB, mg/l	19.50
	8302	#2 Front	PCB, mg/l	13.65
	8303	#7 Rear	PCB, mg/l	15.90
	8304	Heat Exchanger Dripping North	PCB, mg/l	8.48
	8305	Heat Exchanger Dripping South	PCB, mg/l	9.20
	8306	#10 Front Cyl.	PCB, mg/l	7.60
	8307	#11 Front	PCB, mg/l	19.40
	8308	#8 Rear Cyl.	PCB, mg/l	19.50
	8309	#9 Rear Cyl.	PCB, mg/l	8.20
	8310	Drum Sample	PCB, mg/l	0.05



WI-85

MESSAGE BLANK

WILMINGTON PLANT
GM ASSEMBLY DIVISION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE 19899

ORIGINAL COPY TO TELETYPE ROOM
CARBON COPY - FILE COPY

SENDER	APPROVED BY	DEPARTMENT	TIME	DATE
BOSETTI				11-2-79

MR. G. MARZONIE, GMAD-WARREN

(10) OF (22) TOWVEYORS HAVE BEEN SAMPLED. HIGHER-READING 25.65 PPM. LOWEST-READING 7.6 PPM. AVERAGE-READING 15.72 PPM. COPY OF ANALYSIS WILL BE FORWARDED TO YOU.

ERNEST R. BOSETTI

TABLE 1

PCB ANALYSIS RESULTS

GENERAL MOTORS CORPORATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample #	RFW #	Sample Date	Time Sampled	Sample Type	Sample Location	PBC Concentration	PCB Type Aroclor	Comments
1	2910	4/19/79	1220	Water	Storm Ditch Inlet	<5. µg/l	1254	
2	2911	4/19/79	1240	Water	Storm Ditch Outlet	<5. µg/l	1254	
3	2912	4/19/79	1250	Water	Sanitary Outlet	<5. µg/l	1254	
4	2916	4/20/79	0340	Oil	CSM Hydraulic Systems	2.1 mg/kg	1254	All systems combined.
5	2917	4/20/79	0215	Oil	Harrison Heat Exch. Recovery Tanks	70.9 mg/kg	1254	Two tanks combined
6	2918	4/20/79	0240	Oil	Plastisol Operation	13.7 mg/kg	1254	Two systems combined
7	2919	4/20/79	0145	Oil	Tool Room Quenching Oil	0.1 mg/kg	1254	
8	2920	4/20/79	0200	Oil	CIM-Cool Cutting Lubricant	4.8 mg/kg	1254	
9	2909	4/19/79	1200	Water	City Water	<5 µg/l	1254	
10	2921	4/20/79	0415	Oil	Transfer-Hydraulic	2.6 mg/kg	1254	D-12 balcony and F-26 combined
11	2922	4/20/79	0355	Oil	Fast Transfers	4.7 mg/kg	1254	F-13, F-28, and C-2 combined
12	2923	4/20/79	0520	Oil	Gate Load and Unload	6.8 mg/kg	1254	Sampled from spill pans.
13	2924	4/20/79	0740	Oil	Baler and Trash Packer	9.0 mg/kg	1254	Two samples combined.
14	2925	4/20/79	0530	Oil	Merry-Go-Round Conveyor	1.0 mg/kg	1254	Sampled at D-23
16	2926	4/20/79	0830	Oil	Oil Booth	4.0 mg/kg	1254	
17	2927	4/20/79	0600	Oil	Unimate Drives	0.10 mg/kg	1254	All systems combined.
18	2928	4/20/79	0615	Oil	Unimate Shuttle Conveyor	17.3 mg/kg	1254	
19	2929	4/20/79	0855	Oil	Office Elevator	170.0 mg/kg	1254	
21	2930	4/20/79	0630	Oil	Towveyors	310.0 mg/kg	1254	One Off-line unit sampled
22	2931	4/20/79	0625	Oil	Wilson Brake Fluid Units	0.1 mg/kg	1254	Four units combined
23	2932	4/20/79	0700	Oil	Brake Fluid Vacuum System	10.0 mg/kg	1254	One of three pumps sampled

WESTON
DESIGNERS CONSULTANTS

WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

26 March 1980

Mr. Ernie Bosetti
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, DE 19899

Dear Ernie:

Enclosed herewith are the results of the GC and GC/MS analyses of the 36 oil samples for PCB analyses.

If you have any questions regarding this data, please do not hesitate to call me.

Very truly yours,

ROY F. WESTON, INC.

Richard Habrukowich

R. G. Habrukowich, Ph.D.
Supervisor
Process Development

/n

Enclosures

GC Analysis RFW#	Sample Description	PCB mg/kg (ppm)
8906	Towveyor #7	366.
8907	Towveyor #5 Front	415.
8908	Towveyor #9, Rear, Rear Cycle	298.
8909	Towveyor #1, Front Rear Cylinder	44.2
8910	Towveyor #10 Rear, Rear Cylinder	240.
8911	Towveyor #7 Rear, Rear Cylinder	473.
8912	Towveyor #8 Rear, Rear Cyclinder	436.
8913	Towveyor #4 Rear, Rear Cylinder	257.
8914	Towveyor #14 Rear, Rear Cylinder	429.
8915	Towveyor #20 Rear, Rear Cylinder	493.
8916	Towveyor #8 Front, Rear Cylinder	433.
8917	Towveyor #23 Front, Rear Cylinder	373.
8918	Towveyor #10 Front, Front Cylinder	20.
8919	Towveyor #17 Front, Front Cylinder	405.
8920	Towveyor #1 Front, Front Cylinder	196.
8921	Towveyor #2 Front, Front Cylinder	183.
8922	Towveyor #21 Front, Front Cylinder	354.
8923	Towveyor #8 Front, Front Cylinder	480.
8924	Towveyor #6 Front, Front Cylinder	126.
8925	Towveyor #13 Front, Front Cylinder	372.
8926	Towveyor #3 Front, Front Cylinder	354.
8927	Towveyor #11 Rear, Front Cylinder	165.
8928	Towveyor #9 Front, Front Cylinder	423.
8929	Towveyor #11 Front, Front Cylinder	486.
8930	Towveyor #5 Front, Front Cylinder	365.

GC Analysis	Sample Description	PCB mg/kg (ppm)
8936	Drum Sample	.56
8937	Heat Exchanger Drippings North 10-23-79	2,286.
8938	Towveyor #2 Rear, Front Cylinder	415.
8939	Towveyor #16 Rear, Front Cylinder	354.
8940	Heat Exchange Drippings - South	420.
8941	Towveyor #15 Rear, Rear Cylinder	221.

GC/MS ANALYSIS

Selected samples were run on GC/MS screening to verify the levels observed on the gas chromatograph (GC). The verified samples were as follows:

8914	Towveyor #14 Rear, Rear Cylinder
8923	Towveyor #8 Front, Front Cylinder
8937	Towveyor Heat Exchanger Dripping - North

The GC/MS showed that these samples contained less than 5 mg/kg. The erroneous values reported for the GC chromatograms resulted from interferences from alkyl aromatic and naphthalene compounds that produce a similar gas chromatogram to that of PCB's. These interference compounds exhibit a complex gas chromatogram that interfere with PCB determinations at concentrations less than 30 ppm. Therefore, the 36 samples collected at the Wilmington, Delaware General Motors Assembly Plant have a PCB content of less than 5 mg/kg (ppm).

Inter-Organization

GM Assembly Division

General Motors Corporation

Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

Date: NOVEMBER 2, 1979

To: MR. RAY SLEZAK

Subject: TOWVEYOR SAMPLES

HYDRAULIC OIL SAMPLES HAVE TO BE TAKEN FROM THOSE UNITS NOT ALREADY SAMPLED. A LISTING OF THOSE TOWVEYORS REQUIRING SAMPLING IS ATTACHED.

SAMPLE BOTTLES HAVE BEEN REQUESTED FROM ROY F. WESTON, INCORPORATED. DELIVERY OF THESE BOTTLES IS ANTICIPATED ON TUESDAY, NOVEMBER 6, 1979.

Ernest R. Bosetti

ERNEST R. BOSETTI
SENIOR ENGINEER

CC: D.KRYAK/A.SPADACCINI
R.G.NARDI
FILE

TOWVEYOR SAMPLES

TOWVEYOR NUMBER	UNIT	CYLINDER LOCATION
2	REAR	REAR
3	RONT	FRONT
3	REAR	REAR
4	FRONT	FRONT
4	REAR	REAR
5	REAR	REAR
6	FRONT	FRONT
6	REAR	REAR
7	FRONT	FRONT
9	FRONT	FRONT
10	REAR	REAR
11	REAR	REAR
12	FRONT	FRONT
12	REAR	REAR
13	FRONT	FRONT
13	REAR	REAR
14	FRONT	FRONT
14	REAR	REAR
15	FRONT	FRONT
15	REAR	REAR
16	FRONT	FRONT
16	REAR	REAR
17	FRONT	FRONT
17	REAR	REAR
18	FRONT	FRONT
18	REAR	REAR
19	FRONT	FRONT
19	REAR	REAR
20	FRONT	FRONT
20	REAR	REAR
21	FRONT	FRONT
21	REAR	REAR
22	FRONT	FRONT
22	REAR	REAR
23	FRONT	FRONT
23	REAR	REAR

CHEVROLET CENTRAL LABORATORIES

30007 VAN DYKE, WARREN, MICHIGAN 48090

TO E. Bosetti

OBSERVER W. D. Shubert

SUBJECT Towveyor Samples - PCB
GMAD-Wilmington

NO. AS 16

DATE RECEIVED 11/1/79

DATE REPORTED 1/16/80

INVESTIGATION REQUIRED

Foreword

Thirteen samples of oil taken November 1, 1979, at GMAD-Wilmington were submitted for PCB analysis. Ten samples were taken from various Towveyors; one from a supply drum and two from Heat Exchangers.

Summary

PCB is definitely present in eleven of these samples. The range of reported values was 0.5 - 3.5 mg/Kg. The two Heat Exchanger samples were found to have no detectable (ND) PCB present at 0.5 mg/Kg and 0.2 mg/Kg, respectively. This means that while the possibility of PCB being present at levels less than those values reported exists, its presence is not indicated.

Procedure

The samples were first mixed well and an aliquot weighed ($\simeq$ 75 mg) onto a mini clean up column. The mini columns consist of a disposable pipet (146 mm x 7.5 mm O.D plugged with silanized chromatograph grade glass wool and filled to 1/2" of the top with Florisil PR 60/100 mesh. The Florisil was activated before packing at 1250°F overnight. The PCB's were eluted off the clean up column into a marked (at 1 ml) screw cap test tube with 7 ml of solvent (15% Methylene Chloride in Hexane). The sample was then concentrated to 1 ml using a hot water bath and a filtered air stream. The sample was then ready for Gas Chromatograph analysis. The conditions used are listed below:

Column Temp:	200°C
Injector Temp:	250°C
Detector Temp:	280°C
Flow Rates:	Column, Helium at 5 ml/Min.
	Detector, PR Gas at 10 ml/Min.
Detector:	Ni 63
Column:	3% Se 30 on Chrom P 60-80 Mesh

SAMPLE IDENTIFICATION TABLE

SAMPLE NO.	TOWVEYOR NO.	CYLINDER NO.	PCB mg/kg
1	NO. 1	FRONT	* 3.5
2	NO. 5	FRONT	* 2.2
3	NO. 8	FRONT	* 1.7
4	NO. 1	REAR	* 1.8
5	NO. 2	FRONT	* 1.8
6	NO. 7	REAR	* 1.8
7	HEAT EXCHANGER	NORTH(HARRISON UNITS)	ND @ 0.5
8	HEAT EXCHANGER	SOUTH(HARRISON UNITS)	ND @ 0.2
9	NO.10	FRONT-FRONT CYL.	0.75
10	NO. 8	REAR -REAR CYL.	* 0.6
11	NO.11	FRONT-FRONT CYL.	* 0.6
12	NO. 9	REAR - REAR CYL.	* 0.5
13	-	SUPPLY DRUM	* 0.7

CHEVROLET CENTRAL LABORATORIES

30007 VAN DYKE, WARREN, MICHIGAN 48090

TO E. Bosetti

OBSERVER W. D. Shubert

SUBJECT Towveyor Samples - PCB
GMAD-Wilmington

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Injector Temp:	250°C
Detector Temp:	280°C
Flow Rates:	Column, Helium at 5 ml/Min.
	Detector, PR Gas at 10 ml/Min.
Detector:	Ni 63

SAMPLE IDENTIFICATION TABLE

SAMPLE NO.	TOWVEYOR NO.	CYLINDER NO.	PCB mg/kg
1	NO. 1	FRONT	* 3.5
2	NO. 5	FRONT	* 2.2
3	NO. 8	FRONT	* 1.7
4	NO. 1	REAR	* 1.8
5	NO. 2	FRONT	* 1.8
6	NO. 7	REAR	* 1.8
7	HEAT EXCHANGER	NORTH(HARRISON UNITS)	ND @ 0.5
8	HEAT EXCHANGER	SOUTH(HARRISON UNITS)	ND @ 0.2
9	NO.10	FRONT-FRONT CYL.	0.75
10	NO. 8	REAR -REAR CYL.	* 0.6
11	NO.11	FRONT-FRONT CYL.	* 0.6
12	NO. 9	REAR - REAR CYL.	* 0.5
13	-	SUPPLY DRUM	* 0.7

Rich Habrukowich / ERB 11 Jan 8[illegible]

#	Front Unit	Rear Cy	
			44.2
1	Front	Front	196.0
2	Front	Front	183.0
3	Front	Front	354.0
6	Front	F	126.0
7	Rear	Rear	473.0
8	Front	Front	480.0
8	Rear	Rear	436.0
10	Rear	R.	246.0
11.	R.	R.	486.0, 155.[illegible]
14.	R.	R	493.0
19.	F.	F	170.0
20	R.	R	493, 186
21	F	F	354
Drum sample			< 50 ppm
Heat Exchanger North			196

/

Rich/Emma
QC

7 Jan 80

High PCB count on:
11 Rear Unit Rear Cyl 486ppm

20 Rear Unit Rear Cyl. 493ppm

Tony Flamenio - Westin Rep.

New samples Taken to verify about hi-count

Rich / ERB 11 Jan 84

Chevrolet used 1242 PCB std

Westom – used 1248 PCB std

Characteristic Peaks look like #1248 PCB.

#2	RR	415 ppm
#4	RR	257 ppm
#5	FR	415
#5	FF	365
#6	FF	— have
7	FF	366
8	FR	433
8	FF	423
9	RR	298
10	FF	<50
11	RR	165
12	FR	260
13	FF	372
15	FF	221
16	RR	354
17	FF	405
18	RR	142
20	RR	493
22	RR	436
23	FR	373
1	RR	462

Chev. Lab 1 Nov 73

John Roland

~~Towveyor F-F~~ * = Presence of PCB definitely in sample due to interferences in sample unable to determine exact amount. Numbers recorded reflect highest possible level of #1242 PCB.

Towveyor No. 1	F	* 3.54	mg/kg or ppm
No 5	F	* 2.2	
No 8	F	* 1.7	
No 1	R	* 1.8	
No 2	F	* 1.8	
No 7	Rear	* 1.8	
Heat Ex	North	0.5	not detected at 0.5
"	South	0.2	not detected 0.2
Tow 10	F-F	0.75	
No 8	RR	* 0.6	
11	FF	* .6	
No 9	RR	* .5	
Supply Drum		* .7	

Inter-Organization

Chevrolet-Pontiac-Canada Group

Date: January 2, 1987

Subject: 1986 PCB SURVEY

To: Miss Denise M. Travers

Enclosed herewith are the completed 1986 PCB Survey and a copy of the 1985 PCB Survey.

Please note that since the 1985 PCB Survey, the flooring in the welder and No. 3 sub-stations has been coated and dammed with a special material. This material will prevent any seepage of a PCB contaminated material.

Additionally, all PCB capacitors have been removed from this plant's power distribution system. Disposal of these capacitors was performed and manifested by GE Apparatus and Engineering Services, Philadelphia, PA.

The two (2) PCB Contaminated transformers in the No. 3 Sub-Station (99 PPM and 160 PPM) have been retrofilled. Testing of the oil will take place 3-months after the retrofilling. Results will be forwarded upon receipt.

Ernest R. Bosetti

ERNEST R. BOSETTI
Senior Engineer

ERB/lhw

cc: Mr. R. Youngs
Mr. J. Martin, C-P-C Fac. Planning
ERB/99/7

GENERAL MOTORS CORPORATION
U.S. FACILITIES

1986 PCB SURVEY

DUE: SEPTEMBER 29,1986

RETURN TO: DENISE M. TRAVERS
GM TECHNICAL CENTER
ENVIRONMENTAL ACTIVITIES STAFF
30400 MOUND ROAD
WARREN, MI 48090-9015

DIVISION: C-P-C

PLANT: Wilmington

CISCO LOCATION CODE: 18007

NAME OF PERSON COMPLETING FORM: Ernest R. Bosetti

TELEPHONE NUMBER: 8- 438-7406

DATE: December 30, 1986

SECTION II: PCB TRANSFORMER INVENTORY

CISCO CODE 18007

TRANS-FORMER ID NO.	SERIAL NUMBER	DATE INSTALLED	RATED KVA	PCB CONC. (PPM)	GALLONS FLUID	LOCATION	CON-TAINED	ADDITIONAL INFORMATION
NONE								

SECTION III: PCB-CONTAMINATED TRANSFORMER INVENTORY

CISCO CODE 18007

TRANS-FORMER ID NO.	SERIAL NUMBER	DATE INSTALLED	RATED KVA	PCB CONC. (PPM)	GALLONS FLUID	LOCATION	CON-TAINED	ADDITIONAL INFORMATION
NONE	3204012	July 1959	1500	12 PPM	484	Weld Sub (Indoors)	Yes	
None	3204011	July 1959	1500	4 PPM	484	Weld Sub (Indoors)	Yes	
None	3323221	July 1959	1500	8 PPM	460	Weld Sub (Indoors)	Yes	
TC#4	E687616A	July 1962	1500	160 PPM	375	No. 3 Sub (Indoors)	Yes	
TC#5	E687616B	July 1962	1500	99 PPM	375	No. 3 Sub (Indoors)	Yes	

*Test Date: August, 1980

SECTION IV: PCB CAPACITORS

CISCO CODE 18007

TYPE	LOCATION	TOTAL NUMBER	TOTAL NUMBER REQUIRING REMOVAL OR CONTAINMENT BY OCTOBER 1,1988
LARGE HIGH VOLTAGE	INDOOR	None	
LARGE HIGH VOLTAGE	OUTDOOR	None	
LARGE LOW VOLTAGE	INDOOR	None	
LARGE LOW VOLTAGE	OUTDOOR	None	

SECTION V: ADDITIONAL INFORMATION

Does your facility have an ongoing PCB Tranformer replacement program? No
If yes, projected date of project completion: N/A
Is replacement on an "as failure basis" only? N/A

Does your facility have an ongoing PCB capacitor replacement program? No
If yes, projected date of project completion: N/A
Is replacement on an "as failure basis" only? N/A

Second copy sent 1/22/88

GENERAL ELECTRIC

APPARATUS AND ENGINEERING SERVICES • PHILADELPHIA SERVICE SHOP
GENERAL ELECTRIC COMPANY • 1040 EAST ERIE AVENUE • PHILADELPHIA, PENNSYLVANIA 19124 • (215) 289-0400

August 31, 1987

General Motors Assembly Co.
P. O. Box 1512 (Boxwood Road)
Wilmington, DE 19899

ATTN: Mr. Ernie Bossetti

SUBJECT: OUR JOB #067-24210

Dear Sir:

Attached for your records are the test results from the sample(s) sent to our laboratory.

We thank you for the opportunity to serve your needs and if there are any questions, please don't hesitate to contact us.

Very truly yours,

P. Ward

P. Ward
Production Control

PW/bb

Attach.

cc: A.F. Plefka

GENERAL ELECTRIC

DOMESTIC APPARATUS
AND
ENGINEERING SERVICES
OPERATIONS
TEL.(215)-289-0400

PCB IN OIL

ANALYTICAL REPORT

REPORT NO: 85-DF- 871183 DATE: 08-17-1987

CUSTOMER: GM ASSEMBLY PO:

JOB:24210

SAMPLE ID (DATE TAKEN)	PCB CONTENT
1)S/N-3323221	12 PPM
2)E687616-B 7/2/87	8 PPM
3)E687616-A	8 PPM

COMMENTS:
The above samples were recieved 7/10/87.
S-6581

PCB ANALYSES ARE PERFORMED BY ELECTRON CAPTURE GAS CHROMOTOGRAPHY IN ACCORDANCE WITH THE ACCEPTED EPA METHOD.

THE LOWER LIMIT OF ANALYSIS FOR WATER SAMPLES IS 1 PPB(UG/L)

THE LOWER LIMIT OF ANALYSIS FOR SOLID OR OIL SAMPLES IS 1 PPM(UG/G)

ANALYSIS BY: J.J. SINGLETON APPROVED BY:

JEROME J. SINGLETON
ANALYTICAL CHEMIST

GM ASSEMBLY
C/O GENERAL ELECTRIC CO.
PHILADELPHIA SERVICE SHOP
ATTN:NINO PEDONE/ JOE HARTNER

Inter-Organization

Chevrolet-Pontiac-Canada Group

Date: June 23, 1988

Subject: 1987 PCB SURVEY

To: Denise M. Leduc

Enclosed herewith is the 1987 PCB Annual Document for your files.

Ernest R. Bosetti

ERNEST R. BOSETTI
8-438-7406

ERB/lhw

cc: file/7/10

GENERAL MOTORS CORPORATION
U.S. FACILITIES

PCB ANNUAL DOCUMENT

DUE: EACH JULY 1 FOR THE PREVIOUS CALENDAR YEAR

RETURN TO: DENISE M. TRAVERS
GM TECHNICAL CENTER
ENVIRONMENTAL ACTIVITIES STAFF
30400 MOUND ROAD
WARREN, MI 48090-9015

DIVISION: C-P-C

PLANT: Wilmington

CISCO LOCATION CODE: 18007

NAME OF PERSON COMPLETING FORM: Ernest R. Bosetti

TELEPHONE NUMBER: 8- 438-7406

DATE: June 17, 1988

SECTION I: SUMMARY
CALENDAR YEAR 1987

CISCO CODE 18007

	REMAINING IN-SERVICE	REMOVED FROM SERVICE	STORED FOR DISPOSAL	TRANSPORTED FOR DISPOSAL
PCB TRANSFORMERS: TOTAL NUMBER	None			
TOTAL WEIGHT OF PCBS (KG)	-			
LARGE PCB CAPACITORS: TOTAL NUMBER	None			
TOTAL WEIGHT OF PCBS (KG)	-			
PCBS AND PCB ITEMS: TOTAL WEIGHT OF PCBS (KG)	-			

RANSFORMER REMOVAL, STORAGE & DISPOSAL
1987

CISCO CODE 18007

	EPA Required Information				For Plant's Record		
	DATE REMOVED FROM SERVICE	DATE STORED FOR DISPOSAL	STORAGE LOCATION	DATE TRANSP. FOR DISPOSAL	SHIP. DOC. OR MANIFEST NUMBER	DISPOSAL SITE	CERT. OF DESTRUCT. RECV'D.
NONE							

CAPACITOR REMOVAL, STORAGE & TRANSPORT DATES 1987

CISCO CODE 18007

EPA Required Information							For Plant's Record		
KG PCB	DATE REMOVED FROM SERVICE	CONT. ID NO.	DATE STORED FOR DISPOSAL	STORAGE LOCATION	DATE TRANSP. FOR DISPOSAL	SHIP. DOC. OR MANIFEST NUMBER	DISPOSAL SITE	CERT. OF DESTR. RECV'D.
None								

AND PCB ITEMS REMOVAL, STORAGE & TRANSPORT DATES
1987

CISCO CODE 18007

EPA Required Information						For Plant's Record		
T. TENTS TEM CRIP.	KG PCB	DATE REMOVED FROM SERVICE	DATE STORED FOR DISPOSAL	STORAGE LOCATION	DATE TRANSP. FOR DISPOSAL	SHIP. DOC OR MANIFEST NUMBER	DISPOSAL SITE	CERT. OF DESTRUCT. RECV'D.
B-Liquid	1518	N/A	N/A	GE, Phila	12-16-86	PAB2447896	PPM, Inc. Phila, Pa	YES
B-Solid	Unknown	N/A	N/A	GE, Phila	3-31-87	PAB2447896	Cecos, Inc. Williamsburg, Ohio	YES

FC 987
CALENDAR YEAR

CONTAMINATED TRANSFORMER INVENTORY

CISCO CODE 18007

AL IBER	DATE INSTALLED	RATED KVA	PCB CONC. (PPM)	GALLONS FLUID	LOCATION	CON-TAINED	ADDITIONAL INFORMATION
04012	July 1959	1500	12 PPM	484	Weld Sub (Indoors)	Yes	
04011	July 1959	1500	4 PPM	484	Weld Sub (Indoors)	Yes	
23221	July 1959	1500	12 PPM	460	Weld Sub (Indoors)	Yes	
87616A	July 1962	1500	8 PPM	375	No. 3 Sub (Indoors)	Yes	
87616B	July 1962	1500	8 PPM	375	No. 3 Sub (Indoors)	Yes	

August 1980

AUG 1987 (RESULTS OF 2ND RETROFILL)

North American Operations
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

September 8, 1997

Mr.Christopher Berlin
Environmental Scientist
DNREC/ERB
715 Grantham Lane
New Castle, Delaware 19720

Dear Mr. Berlin:

Enclosed, please find the limited site investigation report for the petroleum impacted soils adjacent to the basic paint department area at this plant that you investigated earlier in the year.

I apologize for the delay in submitting this report. A few changes needed to be made to the original for accuracy after receiving verification paperwork back from the landfill (ECDC Environmental) in East Carbon, Utah prior to submittal.

Should additional information be required please contact this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: E. Bosetti

LIMITED SITE INVESTIGATION OF THE PETROLEUM IMPACTED SOILS ADJACENT TO THE BASIC PAINT DEPARTMENT

PREPARED FOR GENERAL MOTORS - NAO WILMINGTON ASSEMBLY PLANT WILMINGTON, DE

Prepared by
Clean Tech
2700 Capitol Trail
Newark DE 19711
(302) 999-0924

April 1997

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Figure One - Location of Soil Samples

Attachment 1 - Analytical Results

Section 1.0 - Introduction

1.1 - Purpose

The purpose of this limited site investigation was to investigate through sampling and analysis, environmental conditions identified during the excavation of soils for the placement of a new sump in the addition that is being built adjacent to the Basic Paint Department (Column "FFG") of the General Motors Assembly Plant in Wilmington, Delaware.

During the excavation of the sump pit on March 11, 1997, it was discovered that soils in the southwest corner of the pit were visually stained and contained a petroleum hydrocarbon odor.

1.2 - Scope of Work

Based on the area of environmental concern identified during the sump pit excavation, Clean Tech completed a Limited Site Investigation of the subject area which included the following tasks:

- Discussions and site inspection with Mr. Chris Berlin of DNREC's Emergency Response Unit;
- The excavation of impacted soils from the pit and the surrounding soils; and
- The collection of soil samples from the bottom of the excavation and from the side walls of the excavation for TPH analysis. (See Figure 1.)

Section 2.0 - Sampling and Analysis

2.1 - Background

During the excavation of soils for the placement of a new sump in the addition that is being built adjacent to the Basic Paint Department (Column "FFG") the excavation contractor noted visible staining and a strong petroleum odor in the soils of the excavation. Further investigation with General Motors personnel revealed contamination was only present in the southwest corner of the pit and was also found along a concrete footer that supported a railroad spur bridge that entered the plant in the 1960's. In addition, it was determined that the area of contamination extended from the southwest corner of the sump pit, along the concrete railroad bridge footer to the footer of the Basic Paint Department. However, further excavating to the east and west indicated that the area of contamination was limited to the area of the footers and had not migrated elsewhere. Based on these observations, it was determined that the release was only a localized "hotspot". CT collected two composite soil samples in order to identify the petroleum product, since according to GM personnel, there were never any petroleum containing USTs or ASTs in that area of the plant. DNREC was notified of the release and Mr. Berlin of DNREC conducted a site inspection. During his site inspection, Mr. Berlin agreed with our observations and recommended that the impacted soils be excavated and disposed of properly. Mr. Berlin also requested that soil samples be collected from the floor and sidewalls of the excavation.

2.2 - Excavation and Sampling

2.2.1 - Excavation

On March 18, 1997, a total of 170 cubic yards of impacted soils were removed from the impacted area. The excavation of the soils began along the footer of the Basic Paint Department (Column FFG) and extended approximately 20 feet to the northeast along the former railroad footer. The soils in this area consisted of clean fill for the first 5 feet of the excavation. From approximately 5 feet to 10 feet, the soils consisted of mainly a moist, light gray clay with some gravel. The soils were mainly impacted from 6 feet to approximately 10 feet below grade. The floor of the excavation was approximately 11 feet below the grade of the existing soils. No groundwater was encountered in the excavation until soil samples were collected in the floor of the excavation. Groundwater is believed to be approximately 12 feet below grade.

2.2.2 - Sampling

Once the removal of the impacted soils was completed, composite soil samples were collected from the 11 feet to 12 feet interval. The samples were collected from the side walls and floor of the excavation. As mentioned previously, the soils encountered during the sampling consisted of mainly a moist, light gray clay with some gravel. The following soil samples were collected:

- The first sample (SB-1) was composited from the west wall of the excavation. There was no discernible petroleum hydrocarbon odor present.

- The second sample (SB-2) was composited from the east wall of the excavation. There was no discernible petroleum hydrocarbon odor present.
- The third sample (SB-3) was composited from the northeast wall of the excavation. There was no discernible petroleum hydrocarbon odor present.
- The fourth sample (SB-4) was composited from the southwest wall of the excavation, directly beneath the footer of the Basic Paint Department wall. There was a slight petroleum hydrocarbon odor present in the sample.
- The fifth sample (SB-5) consisted of soils composited from the floor of the excavation. There was no discernible petroleum hydrocarbon odor present.

Figure 1 indicates the approximate locations of where the soil samples were collected.

2.3 - Analytical Results

A total of seven soil samples were collected for TPH analysis. The soil samples were analyzed for TPH - DRO utilizing EPA Method 8015 (modified) and also analyzed for High Range Petroleum Hydrocarbons (HRPH) utilizing EPA Method 8015B (modified). In addition, the two initial samples were also analyzed for VOCs (EPA Method 624 with library search) to identify the contaminant present in the soils. The results of the initial analyses are presented in the following table:

General Motors Corporation

Wilmington Assembly Plant

Initial Analytical Results

Soil Boring	TPH - DRO (mg/Kg)	TPH - HRPH (mg/Kg)	Volatile Organics (mg/Kg)
SB-A- Initial	U37	13,000*	Chloromethane - 5.5 Bromomethane - 2.2 2, 6-Dimethyl octane - 76 1-Cyclohexyl ethanone - 6.3 4-Methyl nonane - 11 1,2,3-Trimethyl cyclohexane - 15 1-4-Dimethyl cyclohexane - 9 4-Methyl decane - 26
SB-B - Initial	U37	13,000*	Chloromethane - 1.7

			Bromomethane - 0.6 1-Ethyl-3-methylcyclohexane - 40 2,6-Dimethyl-4-octene - 23 1,4-Dimethyl cyclohexane - 9 4-Methyl decane - 33
DNREC Action Level	1,000	****	****

NOTES: * = Result exceeds DNREC Action Level of 1,000 mg/Kg
** = DNREC Action Level for UST closure.
U2.0 = Compound not detected/Detection Limit

The initial results indicated that there was no TPH-DRO present in the soils. However, the VOC analyses and the apparent odor and staining indicated that a heavy organic matrix was present in the soils. Based on these findings, the samples were analyzed for HRPH. The analysis revealed that that the soils contained 13,000 mg/Kg of HRPH which was believed to be motor oil.

The analytical results of the five samples collected after the removal of the impacted soils are presented in the following table:

General Motors Corporation

Wilmington Assembly Plant

Analytical Results After Excavation

Soil Boring	TPH - DRO (mg/Kg)	TPH - HRPH (mg/Kg)
SB-1	U6.2	U120
SB- 2	U5.9	U120
SB-3	U5.7	U110
SB-4	U5.8	160
SB-5	U5.7	U120
DNREC Action Level**	1,000	****

NOTES: * = Result exceeds DNREC Action Level of 1,000 mg/Kg
** = DNREC Action Level for UST closure.
U2.0 = Compound not detected/Detection Limit

The final analytical results indicated, just as the initial samples did, that there was no TPH-DRO present in the soils. TPH-HRPH was not detected in the remaining soils in all of the samples except SB-4. However, the concentration of TPH-HRPH (160 mg/Kg) found in SB-4 was less than DNREC's Action Level for UST closure (1,000 mg/Kg).

The area in which SB-4 was collected was located directly beneath the wall footer of the Basic Paint shop, and due to structural and safety considerations, it was decided to leave that area of soil in place, since the TPH-HRPH concentration was below 1,000 mg/Kg.

A copy of the analytical results can be found in Attachment 1.

Section 3.0 - Conclusions and Recommendations

The Limited Site Investigation completed by Clean Tech on March 18, 1997, confirmed petroleum hydrocarbon contamination was present in a portion of the sump pit that was being excavated in the addition that is being built adjacent to the Basic Paint Department (Column "FFG"). The analytical results from the soil samples collected after the removal of the impacted soils, indicate that all of the TPH-HRPH has been removed from the area with the exception of a small amount left beneath the building footer. The small amount of impacted soil was left in place due to structural and safety considerations and since the concentration is below DNREC's Action Level of 1,000 mg/Kg it does not pose a threat to the environment.

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

D5

B·O·C LANSING AUTOMOTIVE

July 5, 1996

Mr. Joseph Mulrooney
Enforcement Supervisor
Pollution Control Branch
State of Delaware, DNREC
89 Kings Highway, P. O. Box 1401
Dover, Delaware 19903

Dear Mr. Mulrooney:

This letter documents the incident that occurred at the General Motors Boxwood Road Assembly Plant in Wilmington, Delaware on Sunday, June 30, 1996 and the subsequent notification of the spill incident to the State's spill hotline.

The incident that occurred was a spill of approximately 2000 gallons of diesel fuel - Chemical Abstract System (CAS) number: 68334-30-5. This material is not on the SARA Section 302 Extremely Hazardous Substance (EHS) list and is not in Table 1 of the Delaware Regulation for the Management of Extremely Hazardous Substances.

The time of the spill was between 5:30 and 7:30 P. M. on June 30, 1996. All of the material was contained within the plant site and collected in tankers and containers.

No health risks have been identified in association with this incident and no evacuations were necessary.

The cause of this spill was attributed to two (2) mispositioned valves on the diesel fire pump system. This system employs two diesel fire pumps, each with its own 300 gallon fuel tank. These fuel tanks are filled from an on site bulk diesel fuel oil tank. On the night of the spill incident, the level of the south 300 gallon fuel tank dropped as the diesel ran. This started the fuel supply pump. However, a valve was closed so that no fuel could physically enter the south tank. Instead the fuel flowed to the north tank. The normal fill valves on this tank were closed, but the bypass valve was open. This allowed fuel to continue to flow to the north tank and eventually overflow that tank through the vent.

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The spill was discovered by two (2) maintenance employees at 7:30 P. M., who immediately notified Plant Security. Security and plant personnel responded immediately and shut off the fuel pumps. Oil dry was spread and a dike made to prevent additional material from entering the storm drain. The stormwater sluice gates were closed. Our stormwater outfall (NPDES permit #DE 0000523) was checked and found to look normal, with no indication of pink floating diesel fuel. The state's spill hotline (1-800-662-8802) was notified (about 9:30 P. M.) after all containment procedures were carried out. After a determination that the actual quantity was much greater than that originally reported and subsequently verified, a return call was made to the State's spill hotline at about 3 P. M. on July 3, 1996 to update the report. Mr. Joseph Mulrooney, Enforcement Supervisor was also then notified at 3:20 P. M. on July 3, 1996 and informed of what transpired and that a 5-day letter will be forthcoming.

On the night of the spill four 55 gallon drums of water and diesel fuel were vacuumed out of the stormwater catch basin. The oil dry and affected soil in the area were also removed.

At 6:00 A. M. , on Monday July 2, 1996, although the water looked normal, we decided to pump from the stormwater ditch (prior to our outfall) to our on-site holding tanks. At 11:40 A. M., the first sign of diesel fuel started flowing into the area of the oil skimmer. At this time, since it was not known how much would eventually flow out to the skimmer, a contractor was called to supply a vacuum tanker to assist with the skimming of the diesel fuel.

Since this spill incident, the whole system has been thoroughly checked. Bypass valves have been replaced with new valves that make the valve open and closed position more discernible. A remote high level alarm system will be installed in order to indicate a high level condition.

A copy of this letter is also being sent to Mr. Dennis Wallace, Environmental Protection Officer at the New Castle County Office of DNREC. Should additional information be required, please contact this office at (302) 428-7421.

Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: D. Wallace, DNREC

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING AUTOMOTIVE

DS

July 5, 1996

Mr. Joseph Mulrooney
Enforcement Supervisor
Pollution Control Branch
State of Delaware, DNREC
89 Kings Highway, P. O. Box 1401
Dover, Delaware 19903

Dear Mr. Mulrooney:

If you have previously received a copy of the enclosed letter with a July 7, 1996 date, please replace it with the enclosed correct date copy. I erroneously looked at my calendar that I hadn't gotten a chance to change to July, and saw the seventh as the first Friday in the month. Since I just got back from the post office and it has since closed, this letter may be post marked after the fifth, but the first one, should be post marked the fifth.

I appologize for this error.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: D. Wallace, DNREC

Tony,
At approximately 8:00 p.m. on June 30, 1996, Jeff Holmes telephoned regarding a problem at the plant. He was informed by Bruce Helbing of a spill of fuel oil. Upon arriving at the plant an investigation was conducted. Below are the findings of that investigation.

1. The spill was caused by the overflow of the diesel fuel oil tank on #2 fire pump. Pinkerton estimated that approximately 50 gallons were spilled.

2. Inspection of the area surrounding #2 pump house revealed free liquid in the north quadrant. The liquid was within the ground depressions. Absorbent socks and earthen dams placed around the storm drain in the north west quadrant. It was evident that diesel fuel had leaked into the storm drain system.

3. The NPDES outfall was inspected. There did not appear to be any oil sheen on the water between the gates and the outfall. Both booms were in place and the oil skimmers were operational.

4. Oil dry was generously and liberally spread on the ground around the north quadrant of the #2 pump house. At that time the storm sewer manholes on the northeast corner, southeast corner and the south embankment were inspected. Diesel fuel oil was evident; both color and odor were present. A boom was placed in the south embankment manhole.

5. At approximately 9:30 p.m. on June 30 ,1996, the paint basement sump was turned off and the storm water gates out at the redundant area were closed. They remain closed at this time. Additionally, the DNREC hot line was notified of the incident. There were informed, " Approximately 25 gallons were spilled and that it did not get off site. We have closed the storm gates to prevent any contamination of the Little Mill Creek."

6. At approximately 2:00 a.m. on July 1, 1996, plant personnel pumped out the storm water manholes on the northeast and southeast side of #2 pump house. Approximately 150 gallons of liquid, mostly water, was retrieved.

7. Pinkerton personnel contend that the automatic fuel fill malfunctioned causing the spill. The fire system was tested at approximately 5:00 p.m. on June 30, 1996. The spill was discovered by plant personnel at approximately 7:30 p.m. The duration of the overfill of the #2 fire pump fuel tank is unknown at this time.

8. The roof of the pump house was inspected and no fuel oil was found.

9. The site was secured at approximately 2:30 a.m. on July 1, 1996.

John Peronti

D5

InterOffice Memo

To: JIM NACHTMAN, ENV. BUSINESS INFO. DEVELOPMENT

From: JEFFREY A. HOLMES, NAO WILMINGTON

Date: August 18, 1996

Subject: ENVIRONMENTAL SPILL/RELEASE REPORT

Enclosed, please find the corporate generated "Environmental Spill/Release Report" form you had previously requested of this plant when we had a spill on June 30, 1996.

I apologize for not forwarding thi u sooner. Our main concern the days and weeks following this incident was the cl revention from entering the creek) and the process changes to prevent a simil from occurring.

Please call me at 8-438-7421 with any stions you may have on this incident. Thanks.

J y A. Holmes

J onmental Engineer

cc: T. Spadaccini
E. Bosetti
J. Peronti

ENVIRONMENTAL SPILL / RELEASE REPORT

Division ACG: _____ NAO: X Others: _____ EPA ID #: DED002369205 GM B.A.#: 19007

Plant Name: Wilmington Assembly **Plant Address:** P. O. Box 1512 Boxwood Rd. Wilmington,DE 19899

Reported To Agencies By: John Peronti/Jeff Holmes **Report Date / Time:** 6/30/96 @9:30pm,7/3/96 3pm

Phone Number: 8-438-7422 Names Of Plant Response Personnel Contacted: John Peronti/ Jeff Holmes

==========

Date Of Incident: 6/30/96 **Time** (a.m. / (p.m)): 7:30 **Released During Production Hours** (yes / (no)): _____

Duration Of Release (minutes. hours. days & etc.): 2 HRS. **Material:** Diesel Fuel

How Discovered: By maintenance personnel in the area.

Location Of Loss Material (be specific): Bldg #: Fire Pumphouse Floor: 1st Bay #: N/A

Outside Of Plant (be specific): _____

Total Amount Spilled / Released: 2000 gallons Concentration: _____

Reportable Quantity (in pounds): N/A **Exceeded RQ** (yes / no): NO **RQ Substance:** N/A

Receiving Stream: Storm drain - did NOT reach stream

Describe The Event (include type of equipment and other details): See attached letter to state

Spill / Release Reached (check applicable):

1) Storm Sewer GM: X Non GM: ____ 2) Surface Water GM: ____ Non GM: ____

3) Sanitary Sewer GM: ____ Non GM: ____ 4) Combined Sewer GM: ____ Non GM: ____

5) Publicly Owned Treatment Works: ____ 6) Groundwater: ____ 7) Soil: X

8) Industrial Wastewater Treatment Plant: ____ 9) Ambient Air: ____ 10) Other: ____ (describe below)

Other: _____

Bolded Items - Information To Be Included In Written Report To Agency

Action Taken:

Material Was Contained (yes / no): YES Estimate Amount Of Material Contained (e.g.. gallons. pounds or percent): 100%

Describe Containment / Effort Made: See attached letter to state

Material Lost (yes / no): NO Estimate Amount Of Material lost (e.g.. gallons. pounds or percent): 0

Describe Cleanup Action Taken: Vacuumed into tankers, dirt excavated and placed in container for shipment to Laidlaw

Total Injuries (i.e.. #) N/A **Known Health Affects** (describe): None

IMMEDIATE Notification: Report For Information Only (no RQ exceeded): ____

Agency	Contact Person	Phone Number	Date	Time	Report Number
NRC:					
State:	Operator	(800)662-8802	6/30/96	9:30 P.M.	N/A
(Update)	Mr. Joe Mulrooney	(302) 739-5731	7/3/96	3:20 P. M.	N/A
Local:					

GM Notification:

Department	Contact Person	Phone Number	Date	Time	Other
Plant Manager:	Mr. Harvey Thomas	8-438-7014	7/1/96		
GM Legal:	Ms. Hillie Roberts	8-346-2181	7/1/96		
GM EES.:					
ACG / NAO Div.					
Plant PR:					
Division PR:					

For Corporate Use Only -- Notification Requirement (check after contact): Spill #: ____-____

____ E. J. Piasecki ____ R. Tessier ____ D. Skiven ____ Keller ____ R. J. Phillips

Date Received Written Report: ____ Form Completed By (if other than facility person): ____

Revised. June 1994

FOR INTERNAL USE ONLY

Saturn Corporation
Small Car Group
Boxwood & Dodson Road
P.O. Box 1512
Wilmington, DE 19899

April 3, 2001

State of Delaware Department of Natural Resources and Environmental Control
Division of Water Resources
Surface Water Discharges Section
Richardson & Robbins Building
89 Kings Highway
Dover, Delaware 19901

SATURN

Attn: Mr. Joe Mulrooney, Enforcement Supervisor

RE: Report of Spill of Fire Fighting Foam/Water Mixture

Dear Mr. Mulrooney:

As discussed in a telephone conversation at 8:57 am on Friday, March 30, 2001, between Mr. John Peronti of this plant and you, this plant experienced a spill of fire fighting foam and water at 2 p.m. on Thursday, March 29, 2001.

At 9:10 am on Friday, March 30, 2001 this spill was also reported to the state's spill hotline as recommended. Originally the spill was estimated at 300 gallons. However, after further investigation, it has been determined that the total quantity of material spilled was closer to 150 gallons, of which, less than about 10 gallons was the actual foam with the remaining being water.

This spill happened as the tank, which was taken out of service years ago, was being moved and fell apart. Security and environmental personnel were notified and responded. The liquid flowed directly to a storm drain. Since there was no material present on the blacktopped surface, the area looked like soapy water had been spilled, the material had a pH of 6.5, the water in the storm drain did not look foamy (the foam is over 90% water and 100% soluble in water – see attached MSDS sheet), no further action was taken. Additionally, the constituents of the foam do not have a "Reportable Quantity".

The next morning, the stormwater system outfall was checked and no indication of foam was found. However, it was determined that it would be best to report this to the state DNREC within the 24 hrs. requirement listed in this plant's NPDES permit. A message was left for Mr. Chris Cleaver (Water Resources) at DNREC on 3/29/01 at 0805 am. The incident was further discussed a short time later between you and Mr. John Peronti.

The material department has been reminded of the importance of being ready for the unexpected when moving material at the plant. Additionally, the plant Stormwater Pollution Prevention Plan is being reviewed to assure its effectiveness.

Please direct any questions to this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: K. Natoli
W. Kochem

ANSUL® ANSUL, INCORPORATED MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

ANSUL 3% REGULAR PROTEIN FOAM CONCENTRATE
QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	ANSUL INCORPORATED	Emergency Telephone No.:	CHEMTREC (800) 424-9300 or (703) 527-3887
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Ansul 3% Regular Protein Foam Concentrate	CAS No.:	N/A
Chemical Name:	N/A This is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

SECTION 2 – INGREDIENTS

PART A – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Hexylene Glycol	7	107-41-5	25 ppm	Oral LD_{50} (rat) 3696 mg/kg ip LD_{50} (mouse) 1299 mg/kg

PART B – OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Dichlorophene	0.02	97-23-4		Oral LD_{50} (rat) 2690 mg/kg iv LD_{50} 17 mg/kg
Proprietary mixture of protein hydrolysate, inorganic salts and water; not otherwise specified.	93	N/A		NDA

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	101 °C			Specific Gravity (H_2O = 1):	1.15	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 70	Vapor Density (Air = 1):	Less than 1	Evaporation Rate (Butyl Acetate = 1):	Approximately 0.005		
Solubility in Water:	100%			Reactivity in Water:	Unreactive		
Appearance and Odor:	Red/Brown opaque liquid, mildly pungent odor.						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE – THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive metals, electrically energized equipment, any materials reactive with water, strong oxidizers.		
Hazardous Decomposition Products:	None known; however oxides of nitrogen and ammonia may be formed.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value:	Hexylene glycol – 25 ppm (ACGIH)
Routes of Entry: Eye Contact:	May cause mild transient irritation.
Skin Contact:	Mildly irritating to the skin and toxic if absorbed through the skin.
Inhalation:	Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.
Ingestion:	Moderately toxic if ingested. Causes nausea, vomiting, and narcosis.
Signs and Symptoms: Acute Overexposure:	Irritation of the eyes, skin and respiratory tract. Upon ingestion – nausea, vomiting and narcosis.
Chronic Overexposure:	Damage to liver, kidneys, and central nervous system, metabolic acidosis.
Medical Conditions Generally Aggravated by Exposure:	Diseases of the kidney, liver, and central nervous system could be affected with prolonged exposure.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C. Monographs: Yes ☐ No ☒ OSHA: Yes ☐ No ☒

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. Get Medical attention.
Skin Contact:	Wash with water; if irritation persists, get Medical attention.
Inhalation:	Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get Medical attention.
Ingestion:	If patient is conscious, give no more than two (2) glasses of water and induce vomiting. Get Medical attention.
NOTE TO PHYSICIAN:	If victim is a child, give no more than one (1) glass of water and 15 cc syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary. Approved organic vapor respirator in absence of environmental controls.		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	Recommended
Protective Gloves:	Rubber or Latex gloves recommended.	Eye Protection:	Chemical goggles recommended.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice. Clean body-covering clothing.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Store in original container. Note incompatibility information in Section 4.
Other Precautions:	Do not mix agents. Avoid skin and eye contact. Avoid ingestion. Avoid breathing vapors if generated.
Steps to be Taken in Case Material is Released or Spilled:	Rinse floor thoroughly with water as material is slippery. Prevent material from reaching sewers or waterways to avoid nuisance foaming.
Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:
4 Severe Hazard
3 Serious Hazard
2 Moderate Hazard
1 Slight Hazard
0 Minimal Hazard

1	HEALTH
0	FLAMMABILITY
0	REACTIVITY

N/A = Not Applicable NDA = No Data Available

ANSUL is a registered trademark.

Saturn Corporation
Small Car Group
Boxwood & Dodson Road
P.O. Box 1512
Wilmington, DE 19899

April 3, 2001

State of Delaware Department of Natural Resources and Environmental Control
Division of Water Resources
Surface Water Discharges Section
Richardson & Robbins Building
89 Kings Highway
Dover, Delaware 19901

SATURN

Attn: Mr. Joe Mulrooney, Enforcement Supervisor

RE: Report of Spill of Fire Fighting Foam/Water Mixture

Dear Mr. Mulrooney:

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At 9:10 am on Friday, March 30, 2001 this spill was also reported to the state's spill hotline as recommended. Originally the spill was estimated at 300 gallons. However, after further investigation, it has been determined that the total quantity of material spilled was closer to 150 gallons, of which, less than about 10 gallons was the actual foam with the remaining being water.

This spill happened as the tank, which was taken out of service years ago, was being moved and fell apart. Security and environmental personnel were notified and responded. The liquid flowed directly to a storm drain. Since there was no material present on the blacktopped surface, the area looked like soapy water had been spilled, the material had a pH of 6.5, the water in the storm drain did not look foamy (the foam is over 90% water and 100% soluble in water – see attached MSDS sheet), no further action was taken. Additionally, the constituents of the foam do not have a "Reportable Quantity".

The next morning, the stormwater system outfall was checked and no indication of foam was found. However, it was determined that it would be best to report this to the state DNREC within the 24 hrs. requirement listed in this plant's NPDES permit. A message was left for Mr. Chris Cleaver (Water Resources) at DNREC on 3/29/01 at 0805 am. The incident was further discussed a short time later between you and Mr. John Peronti.

The material department has been reminded of the importance of being ready for the unexpected when moving material at the plant. Additionally, the plant Stormwater Pollution Prevention Plan is being reviewed to assure its effectiveness.

Please direct any questions to this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: K. Natoli
W. Kochem

ANSUL® ANSUL INCORPORATED MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

ANSUL 3% REGULAR PROTEIN FOAM CONCENTRATE
QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	ANSUL INCORPORATED	Emergency Telephone No.:	CHEMTREC (800) 424-9300 or (703) 527-3887
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Ansul 3% Regular Protein Foam Concentrate	CAS No.:	N/A
Chemical Name:	N/A This Is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

SECTION 2 – INGREDIENTS

PART A – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Hexylene Glycol	7	107-41-5	25 ppm	Oral LD_{50} (rat) 3696 mg/kg ip LD_{50} (mouse) 1299 mg/kg

PART B – OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Dichlorophene	0.02	97-23-4		Oral LD_{50} (rat) 2690 mg/kg iv LD_{50} 17 mg/kg
Proprietary mixture of protein hydrolysate, inorganic salts and water; not otherwise specified.	93	N/A		NDA

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	101 °C			Specific Gravity (H_2O = 1):	1.15	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 70	Vapor Density (Air = 1):	Less than 1	Evaporation Rate (Butyl Acetate = 1):	Approximately 0.005		
Solubility in Water:	100%			Reactivity in Water:	Unreactive		
Appearance and Odor:	Red/Brown opaque liquid, mildly pungent odor.						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE – THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive metals, electrically energized equipment, any materials reactive with water, strong oxidizers.		
Hazardous Decomposition Products:	None known; however oxides of nitrogen and ammonia may be formed.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value:	Hexylene glycol – 25 ppm (ACGIH)
Routes of Entry: Eye Contact:	May cause mild transient irritation.
Skin Contact:	Mildly irritating to the skin and toxic if absorbed through the skin.
Inhalation:	Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.
Ingestion:	Moderately toxic if ingested. Causes nausea, vomiting, and narcosis.
Signs and Symptoms: Acute Overexposure:	Irritation of the eyes, skin and respiratory tract. Upon ingestion – nausea, vomiting and narcosis.
Chronic Overexposure:	Damage to liver, kidneys, and central nervous system, metabolic acidosis.
Medical Conditions Generally Aggravated by Exposure:	Diseases of the kidney, liver, and central nervous system could be affected with prolonged exposure.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C. Monographs: Yes ☐ No ☒ OSHA: Yes ☐ No ☒

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. Get Medical attention.
Skin Contact:	Wash with water; if irritation persists, get Medical attention.
Inhalation:	Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get Medical attention.
Ingestion:	If patient is conscious, give no more than two (2) glasses of water and induce vomiting. Get Medical attention.
NOTE TO PHYSICIAN:	If victim is a child, give no more than one (1) glass of water and 15 cc syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary. Approved organic vapor respirator in absence of environmental controls.		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	Recommended
Protective Gloves:	Rubber or Latex gloves recommended.	Eye Protection:	Chemical goggles recommended.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice. Clean body-covering clothing.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Store in original container. Note incompatibility information in Section 4.
Other Precautions:	Do not mix agents. Avoid skin and eye contact. Avoid ingestion. Avoid breathing vapors if generated.
Steps to be Taken in Case Material is Released or Spilled:	Rinse floor thoroughly with water as material is slippery. Prevent material from reaching sewers or waterways to avoid nuisance foaming.
Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:	
4 Severe Hazard	1 HEALTH
3 Serious Hazard	0 FLAMMABILITY
2 Moderate Hazard	
1 Slight Hazard	0 REACTIVITY
0 Minimal Hazard	

N/A = Not Applicable NDA = No Data Available

ANSUL is a registered trademark.

Saturn Corporation
Small Car Group
Boxwood & Dodson Road
P.O. Box 1512
Wilmington, DE 19899

April 3, 2001

State of Delaware Department of Natural Resources and Environmental Control
Division of Water Resources
Surface Water Discharges Section
Richardson & Robbins Building
89 Kings Highway
Dover, Delaware 19901

SATURN

Attn: Mr. Joe Mulrooney, Enforcement Supervisor

RE: Report of Spill of Fire Fighting Foam/Water Mixture

Dear Mr. Mulrooney:

As discussed in a telephone conversation at 8:57 am on Friday, March 30, 2001, between Mr. John Peronti of this plant and you, this plant experienced a spill of fire fighting foam and water at 2 p.m. on Thursday, March 29, 2001.

At 9:10 am on Friday, March 30, 2001 this spill was also reported to the state's spill hotline as recommended. Originally the spill was estimated at 300 gallons. However, after further investigation, it has been determined that the total quantity of material spilled was closer to 150 gallons, of which, less than about 10 gallons was the actual foam with the remaining being water.

This spill happened as the tank, which was taken out of service years ago, was being moved and fell apart. Security and environmental personnel were notified and responded. The liquid flowed directly to a storm drain. Since there was no material present on the blacktopped surface, the area looked like soapy water had been spilled, the material had a pH of 6.5, the water in the storm drain did not look foamy (the foam is over 90% water and 100% soluble in water – see attached MSDS sheet), no further action was taken. Additionally, the constituents of the foam do not have a "Reportable Quantity".

The next morning, the stormwater system outfall was checked and no indication of foam was found. However, it was determined that it would be best to report this to the state DNREC within the 24 hrs. requirement listed in this plant's NPDES permit. A message was left for Mr. Chris Cleaver (Water Resources) at DNREC on 3/29/01 at 0805 am. The incident was further discussed a short time later between you and Mr. John Peronti.

The material department has been reminded of the importance of being ready for the unexpected when moving material at the plant. Additionally, the plant Stormwater Pollution Prevention Plan is being reviewed to assure its effectiveness.

Please direct any questions to this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: K. Natoli
W. Kochem

ANSUL® ANSUL INCORPORATED
MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

ANSUL 3% REGULAR PROTEIN FOAM CONCENTRATE
QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	ANSUL INCORPORATED	Emergency Telephone No.:	CHEMTREC (800) 424-9300 or (703) 527-3887
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Ansul 3% Regular Protein Foam Concentrate	CAS No.:	N/A
Chemical Name:	N/A This is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

SECTION 2 – INGREDIENTS

PART A – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Hexylene Glycol	7	107-41-5	25 ppm	Oral LD_{50} (rat) 3696 mg/kg ip LD_{50} (mouse) 1299 mg/kg

PART B – OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Dichlorophene	0.02	97-23-4		Oral LD_{50} (rat) 2690 mg/kg iv LD_{50} 17 mg/kg
Proprietary mixture of protein hydrolysate, inorganic salts and water; not otherwise specified.	93	N/A		NDA

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	101 °C			Specific Gravity (H_2O = 1):	1.15	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 70	Vapor Density (Air = 1):	Less than 1	Evaporation Rate (Butyl Acetate = 1):	Approximately 0.005		
Solubility in Water:	100%			Reactivity in Water:	Unreactive		
Appearance and Odor:	Red/Brown opaque liquid, mildly pungent odor.						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE – THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive metals, electrically energized equipment, any materials reactive with water, strong oxidizers.		
Hazardous Decomposition Products:	None known; however oxides of nitrogen and ammonia may be formed.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value:	Hexylene glycol – 25 ppm (ACGIH)
Routes of Entry: Eye Contact:	May cause mild transient irritation.
Skin Contact:	Mildly irritating to the skin and toxic if absorbed through the skin.
Inhalation:	Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.
Ingestion:	Moderately toxic if ingested. Causes nausea, vomiting, and narcosis.
Signs and Symptoms: Acute Overexposure:	Irritation of the eyes, skin and respiratory tract. Upon ingestion – nausea, vomiting and narcosis.
Chronic Overexposure:	Damage to liver, kidneys, and central nervous system, metabolic acidosis.
Medical Conditions Generally Aggravated by Exposure:	Diseases of the kidney, liver, and central nervous system could be affected with prolonged exposure.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C. Monographs: Yes ☐ No ☒ OSHA: Yes ☐ No ☒

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. Get Medical attention.
Skin Contact:	Wash with water; if irritation persists, get Medical attention.
Inhalation:	Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get Medical attention.
Ingestion:	If patient is conscious, give no more than two (2) glasses of water and induce vomiting. Get Medical attention.
NOTE TO PHYSICIAN:	If victim is a child, give no more than one (1) glass of water and 15 cc syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary. Approved organic vapor respirator in absence of environmental controls.		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	Recommended
Protective Gloves:	Rubber or Latex gloves recommended.	Eye Protection:	Chemical goggles recommended.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice. Clean body-covering clothing.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Store in original container. Note incompatibility information in Section 4.
Other Precautions:	Do not mix agents. Avoid skin and eye contact. Avoid ingestion. Avoid breathing vapors if generated.
Steps to be Taken in Case Material is Released or Spilled:	Rinse floor thoroughly with water as material is slippery. Prevent material from reaching sewers or waterways to avoid nuisance foaming.
Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:	
4 Severe Hazard	
3 Serious Hazard	
2 Moderate Hazard	
1 Slight Hazard	
0 Minimal Hazard	
	1 HEALTH
	0 FLAMMABILITY
	0 REACTIVITY

N/A = Not Applicable NDA = No Data Available

ANSUL is a registered trademark.

ANSUL®

John Paronti
302 428 7246

EXTINGUISHING AGENT DATA SHEET

3% REGULAR PROTEIN FOAM CONCENTRATE

DESCRIPTION

Ansul 3% Protein Foam Concentrate is formulated from hydrolyzed protein, fluorochemical surfactants, foam stabilizers (metal salts), bactericide, corrosion inhibitors, freezing point depressants and solvents. It is transported and stored as a concentrate to provide ease of use and considerable savings in weight and space.

It is intended for use as a 3% proportioned solution either in fresh, salt or hard water. The correct proportioning ratio is 3 parts of concentrate to 97 parts of water.

Two fire extinguishing mechanisms are in effect when using Ansul 3% Protein Foam. First, a foam blanket is formed which works to prevent the release of fuel vapor. Second, the water content of the foam provides a cooling effect.

APPLICATION

Ansul 3% Protein Foam Concentrate is intended for use on Class B hydrocarbon fuels having low water solubility such as various crude oils, gasolines, diesel fuels, aviation fuels, etc. It is not suitable for use on fuels having appreciable water solubility (polar solvents), i.e., methyl and ethyl alcohol, acetone and methyl ethyl ketone. This concentrate can be used only with air aspirating type discharge devices.

Its wetting characteristics make it useful in combating Class A fires as well. It can also be used with foam compatible dry chemical extinguishing agents without regard to the order of application, to provide even greater fire protection capability.

PERFORMANCE

Fire Performance – The fire performance of Ansul 3% Protein Foam Concentrate is measured against specifications and standards such as Underwriters Laboratories Standard UL 162, latest edition.

Foaming Properties – When used with fresh or salt water or water of any hardness at the correct dilution and with most conventional foam making equipment, the expansion ratio will vary depending on the performance characteristics of the equipment. Air aspirating discharge devices produce expansion ratios from 8 to 1 to 12 to 1 depending primarily on type and flow rate. In general, the higher the flow rate the higher the expansion ratio. Thus, monitors and foam chambers normally produce higher expansion ratios than foam water sprinkler heads and hand held type nozzles.

Typical expansion ratios for foam chambers are in the range of 5 to 1 to 7 to 1, and for foam water sprinkler heads in the range of 3 to 1 to 6 to 1.

Typical Physiochemical Properties at 68 °F (20 °C)

Type	3%
Specific Gravity	1.15
pH	7.0
Viscosity	12
Freezing Point	5 °F (–15 °C)

Proportioning – 3% Protein Foam Concentrate can be easily proportioned (at the correct dilution) using most conventional proportioning equipment such as:

1. Balanced pressure and in-line balanced pressure pump proportioning equipment
2. Balanced pressure bladder tank type proportioners
3. Around the pump type proportioners
4. Fixed or portable in-line venturi type proportioners
5. Hand line nozzles with fixed induction/pick up tubes

The minimum and maximum usable temperatures for Ansul 3% Protein Foam Concentrate with this equipment is: 20 °F (–6.7 °C) to 120 °F (49 °C) respectively.

Storage/Shelf Life – When stored in the packaging supplied (polyethylene drums or pails) within the temperature limits specified, or in equipment recommended by the manufacturer as part of the foam system, the shelf life of Ansul 3% Protein Foam Concentrate is generally in excess of 10 years. If the product is frozen during storage or transportation, thawing will render the product completely usable.

Compatibility – There are no specifications or standards which address the subject of compatibility of different manufacturer brands of protein foam concentrates. In an emergency or if the manufacturer has supporting test data to substantiate that the mixture meets the same requirements as the individual component concentrates, they may be mixed together in the same storage vessel.

Different types of foam concentrates, i.e., AFFF and protein base should not be mixed under any circumstances.

Inspection – As with any fire extinguishing agent, Ansul 3% Protein Foam Concentrate should be inspected periodically.

Please refer to the Field Inspection Manual for detailed procedures how to perform this inspection. An annual inspection is recommended unless unusual conditions of exposure occur. In the latter case, Ansul recommendation should be sought.

APPROVALS AND LISTINGS

Ansul 3% Protein Foam Concentrate is approved, qualified under, listed or meets the requirements of the following specifications and standards:

Federal Republic of Germany Approval No. PL-6/58 (KE 3)

Underwriters Laboratories, Inc. – U.L. Standard 162 EX 3245, EX 3125 (latest edition)

1. Foam Quality Test
2. Class B Hydrocarbon Fuel Fire Tests
3. Foam Identification Tests
4. Test of shipping containers
5. Class B Hydrocarbon fuel fire tests using foam water sprinkler (both upright and pendent approvals)

It is impractical for Ansul to list its 3% Protein Foam Concentrate with every piece of U.L. listed hardware. Moreover there are numerous foam hardware components without U.L. listings that cannot be listed for use with any protein foam agent.

Many unlisted pieces of foam hardware should be similar to those listed. However, on installations where Ansul 3% foam concentrate may be used with hardware components of significantly different types than those tested, contact Ansul for recommendations.

ORDERING INFORMATION

Part No.	Description
73971	3% Protein Foam – 5 gallon
73970	3% Protein Foam – 55 gallon (208 L)

Shipping Weight:
5 gal. (19 L) pail – 51 lbs. (23.1 kg)
55 gal. (208 L) drum – 579 lbs. (262.6 kg)

Cube:
5 gal. (19 L) pail – 1.08 cu. ft. (.0305 m^3)
55 gal. (208 L) drum – 11.33 cu. ft. (.3208 m^3)

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ANSUL FIRE PROTECTION
MARINETTE, WI 54143-2642
715-735-7411

Form No. F-25205

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Technical Bulletin

ANSUL.

Number 60

ANSUL INCORPORATED
MARINETTE, WI 54143-2542

Foam and The Environment

In the last few years, we have witnessed an increase in concern about firefighting agents being released into the environment. The production of gaseous agents like Halon 1301 and 1211 has been phased out, dry chemicals require proper disposal, and foam agents require new and sometimes expensive treatment.

The release of a foam solution (versus foam concentrate) into the environment is a concern of the fire authority having jurisdiction, the insurance company, and the end-user or owner of the system.

The release of foam solution can come from three conditions:

1. A fire situation
2. False activation/discharge
3. System commissioning or testing

In the fire situation, there is little concern over the foam solution (water to foam concentrate ratio is typically 99:1, 97:3 or 94:6). Of greater concern are the flammable chemicals or fuels themselves as well as the thermal breakdown/decomposition of the flammables (Class A, B & D) consumed in the fire. The cleanup required from a major fire (structure or contents) is a major task and under the control of the local authority having jurisdiction and environmental office.

Conditions two and three, while similar, are different in that a false activation/discharge is unpredictable and uncontrolled, whereas the performance test is both controlled and predictable.

The following information should help in handling conditions two and three.

A few years back, there was a claim made by a European foam manufacturer that the "Natural" foams (protein) are inherently more ecologically friendly than the synthetic foams (AFFF & AR AFFF). This was hotly debated and may be true in some discharge scenarios and totally false in others. There is probably no one type of product, from a compositional standpoint, that is superior to all others when all of the possible discharge scenarios are taken into consideration.

A number of factors need to be taken into account when looking at the environment friendliness of foams: aquatic toxicity, biodegradability, (both aquatic and terrestrial ecosystems), sewage plant treatability, and nutrient loading.

Aquatic toxicity is a concern because much of the foam solution in the non-fire case may find its way into some type of aquatic ecosystem. Here we are concerned with the level of toxicity with which foams may affect both fish populations as well as the lower members of the food chain such as micro-invertabrates and algae. Manufacturers look at the types of chemicals they use in their formulations to ensure that they do not choose those which will cause fish kills due to the toxicity of the chemicals. Chemicals are considered to be "practically non-toxic" if they do not cause more than 50% of a particular fish test population to die in 96 hours of exposure to concentrations of 100 mg/L or higher. (For more information consult ANSUL Technical Bulletin No. 52.)

Biodegradability is a measure of how quickly, and to what extent, a chemical breaks down in the environment due to the natural biological action of bacteria and fungi. Also of importance is whether or not a chemical can "bio-accumulate" as was demonstrated in PCB's and pesticides.

Ideally, foam concentrates should be capable of being 100% biodegraded in both aquatic and terrestrial ecosystems. In reality, however, few chemicals biodegrade 100%. Generally speaking, the raw materials used in firefighting foams are readily biodegradable whether they be protein, surfactants or solvents. The fluorosurfactants used in Aqueous Film Forming Foam (AFFF) are, however, only partially biodegradable. While the surfactant backbone of the chemical is readily biodegradable, the fluorine functional group of the chemical is resistant to biodegradation. Fortunately, this fluorine functional group is relatively unreactive and is unlikely to cause much harm in the environment.

Sewage treatment plant treatability is very important because in many applications the foam discharge is sent to municipal or private treatment plants as a means of disposal. In fact, this is usually the most economical means of disposing of discharged foam. If recovery and transportation is required, it can cost $.20 to $.30 per gallon and $500 per day for the truck.

All types of firefighting foams can cause potential problems at waste treatment plants, especially those which use the activated sludge process. That problem is in the foaming itself. The generation of foam at treatment plants tends to transport solids and raise the pollutant level of the facility's discharge stream. Unfortunately, there is little that can be done to solve the foaming problem at this point. Firefighting foams, by their very nature, are easily foamed with little energy input and, once foamed, are relatively stable. Ansul and other manufacturers are also aware that their foams must not be toxic to the micro-organisms of the treatment plant and must not have too high a biological oxygen demand (BOD is a measure of how much oxygen, which is dissolved in the water, will be consumed as the micro-organisms "biodegrade" the chemicals). Care must be taken so that not too much BOD is present to deplete the oxygen levels to a point where the micro-organisms will die. Waste treatment plants have established limits on the allowable BOD for incoming materials so as to avoid this oxygen depletion. Those which are high in BOD will have to be metered into the plant at slow rates or pre-diluted to get to the desired BOD level.

The solution in a performance foam test, which is in control, is for the contractor to use an anti-foamer/defoaming material after the test and prior to the foam solution entering the waste treatment facility. An example being Dow Chemical's H10 defoamer.

Nutrient loading is also of concern because the potential exists for releases of firefighting foam into natural waterways either directly or through treatment plants. If they contain large amounts of nitrogen or phosphorous, there is a potential for the foam to cause water quality problems in the form of algal blooms. The synthetic foams tend to be low in these nutrients simply from the choice of surfactants used in their formulations.

Recent focus has centered on the type of solvent system which is used in the foam concentrates. Solvents are used in the formulations in order to modify viscosity, to keep active ingredients in solution and provide additional foam stability. Many of the synthetic agents use diethylene glycol monobutyl ether (commonly called DB or butyl carbitol). Most of the protein-based agents use hexylene glycol.

Diethylene glycol monobutyl ether is part of a family of chemicals known as "glycol ethers." The major use of products in this family is in the paints, coatings and ink industries where it is used to control the drying rate. As such, in these applications, these chemicals are designed to evaporate into the air. (This is not the case with their use in foam concentrates where they most often end up in an aquatic ecosystem.) Because of this, the United States Environmental Protection Agency included glycol ethers as hazardous air pollutants in its Clean Air Act Amendments of 1990. Additionally, the glycol ethers category became subject to reporting under Section 313 of Emergency Planning and Community Right-to-Know (EPCRA) and the Superfund Amendments and Reauthorization Act Title III (SARA Title III). This meant that any releases of one pound or more of glycol ethers into the environment required reporting to the EPA. The one pound reportable quantity came about as a default value because nobody within the EPA had come up with data to support a reasonable quantity. In June of 1995, after reviewing data presented to them, the EPA decided that there was no need for a reportable quantity for glycol ethers. **Consequently, foams containing any of the glycol ethers as solvents are not subject to EPA reporting.**

The initial reportability requirement caused at least two manufacturers of synthetic foam concentrates to formulate DB out of their formulations. Diethylene glycol monobutyl ether is an ethylene oxide based glycol ether. The manufacturers who switched away from DB went to another glycol ether or combinations of glycol ethers which are based on propylene oxide. These propylene oxide based glycol ethers were exempted from reporting by the EPA at the start of the reporting program. The reasons for this are somewhat vague. Having formulated the DB out of their formulations, these manufacturers have started marketing their formulations as "environment-friendly" or "green." As can be seen from the previous discussions, simply changing solvents does not necessarily mean the foam is "friendly" or "green."

In conclusion, consider this statement:

> **A true environment-friendly foam is one which extinguishes the fire the fastest resulting in the least amount of pollution to the air and water from the fire itself – and is formulated to provide the least amount of environmental upsets as a result of any type of release.**

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Technical Bulletin

ANSUL

Number 52

Environmental Impact of ANSULITE AFFF Products

ANSUL FIRE PROTECTION
MARINETTE, WI 54143-2542

Background

With the advent of ever increasing environmental concerns, regulations and the increased use of ANSULITE AFFF products we have been receiving more and more requests on the environmental impact characteristics of the ANSULITE product line. There are four areas of interest with regard to the environmental fate of AFFF products. They are fish toxicity, biodegradability, sewage treatment plant treatability and nutrient loading. All of these are of concern when the end-use foam solutions reach natural or domestic water systems. Since the end-use foam solutions (i.e., after they have been proportioned with water), are all essentially equivalent with regard to levels of active ingredients, we may discuss the product lines as a whole rather than as individual concentrates.

Fish toxicity tests are normally run on both estuarine and fresh water species. The two most common test species are the Killifish, (Fundulus heteroclitus), and the Rainbow Trout (Salmo gairdneri). The Killifish is a tolerant, (eurytopic), fish while the Rainbow Trout is a sensitive, (stenotopic), fish. This combination gives an indication of the broad range over which various fish populations may be affected. The values are given as the 96 hour LC_{50} which is a measurement of the concentration which is lethal to 50 percent of the test population after 96 hours of exposure to that concentration. The units of measure are milligrams/liter or parts per million (ppm) which, in the case of water based solutions, are considered to be equivalent. Obviously, the higher the value, the greater the tolerance of the fish to the AFFF. Testing indicates that Rainbow Trout have a 96 LC_{50} for end-use ANSULITE AFFF solutions of from 4,000 – 6,500 ppm while Killifish have a 96 LC_{50} of from 26,000 – 36,000 ppm. It is evident from this broad range that fish toxicity is extremely dependent upon fish species. Other factors will also include water quality, water temperature, dissolved oxygen levels and general health of the fish population.

The biodegradability of AFFF solutions is a measure of how readily the chemicals in the AFFF are broken down by bacteria in the environment. As the bacteria use up the chemicals as food, (oxidizable carbon source), they also use up dissolved oxygen in the water as part of their metabolic process. To determine the theoretical biodegradibility of ANSULITE AFFF, we use two different tests and compare the results. The first test is called a chemical oxygen demand test, (COD), and measures how much oxygen would be required to completely break down the chemicals contained in a given amount of AFFF to their most oxidized state. The second test is called a biological oxygen demand test, (BOD), and measures how much oxygen will be used up by bacteria, over a given time period, as they use up the chemicals contained in a given amount of AFFF as a food source. Normally, BOD tests are conducted over a five day period, however, for AFFF solutions, this period is extended to twenty days. The reason for this extension is that there is a lag phase in the bacterial population growth curve as the bacteria become acclimated to the chemicals in AFFF. After they become acclimated, they exhibit a logarithmic growth cycle as they use up the chemicals in AFFF. This long lag phase is actually an advantage in that it allows the AFFF time to reach "infinite" dilution before there is any substantial demand for dissolved oxygen. To determine the theoretical biodegradability, we look at the ratio of biological oxygen demand, BOD, to the total possible oxygen demand, COD, i.e., BOD_{20}/COD. Masseli et. al. from the Industrial Waste Laboratory of Wesleyan University conclude that a BOD/COD ratio above 50% for a chemical mixture is readily biodegradable while ratios below 15% show that the mixture is nonbiodegradable. ANSULITE AFFF products are well above the 50% level.

As far as sewage treatment plant treatability is concerned, ANSULITE AFFF products are not particularly toxic to the microbial populations normally found in treatment plants. However, a problem does exist with AFFF, (or any type of foam concentrate), entering a sewage treatment plant. That problem, especially if the plant uses the activated sludge process for secondary treatment, is in foaming, which tends to carry over suspended solids, and consequently, a rather large amount of BOD. Present data show that concentrations of AFFF up to 250 ppm can be handled without adverse effects. Often times, the normal volumetric dilution which takes place on the way to the sewage treatment plant will bring the concentration down below the 250 ppm level. If it doesn't, the use of a defoaming agent which is compatible with the treatment plant's flora may allow handling of concentrations above the 250 ppm level.

With regard to the nutrient levels of AFFF, the concern is that, if additional nutrients are added to a body of water which is already high in nutrients, an algal bloom may occur. Nutrients in water act to promote growth the same way that fertilizers do on land. Generally, only two nutrients are of concern in aquatic ecosystems, they are phosphates and nitrates. On very rare occasions, organic carbon may also act as a limiting nutrient. There is no need to worry about any nutrient loading when using ANSULITE AFFF products as they contain no sources of nitrates or phosphates and they are extremely low in total organic carbon when compared to other types of foam concentrates.

ANSULITE AFFF concentrates are formulated to provide maximum fire performance with minimal environmental impact. If additional information is required, contact Ansul at 715-735-7411. Fire protection is our only business.

Form No. F-82269-2 ©1997 Wormald U.S., Inc. Litho in U.S.A.

ANSUL®
ANSUL INCORPORATED
MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

ANSUL 3% REGULAR PROTEIN FOAM CONCENTRATE
QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	ANSUL INCORPORATED	Emergency Telephone No.:	CHEMTREC (800) 424-9300 or (703) 527-3887
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Ansul 3% Regular Protein Foam Concentrate	CAS No.:	N/A
Chemical Name:	N/A This is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

SECTION 2 – INGREDIENTS

PART A – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Hexylene Glycol	7	107-41-5	25 ppm	Oral LD_{50} (rat) 3696 mg/kg ip LD_{50} (mouse) 1299 mg/kg

PART B – OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Dichlorophene	0.02	97-23-4		Oral LD_{50} (rat) 2690 mg/kg iv LD_{50} 17 mg/kg
Proprietary mixture of protein hydrolysate, inorganic salts and water; not otherwise specified.	93	N/A		NDA

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	101 °C			Specific Gravity (H_2O = 1):	1.15	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 70	Vapor Density (Air = 1):	Less than 1	Evaporation Rate (Butyl Acetate = 1):	Approximately 0.005		
Solubility in Water:	100%			Reactivity in Water:	Unreactive		
Appearance and Odor:	Red/Brown opaque liquid, mildly pungent odor.						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE – THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive metals, electrically energized equipment, any materials reactive with water, strong oxidizers.		
Hazardous Decomposition Products:	None known; however oxides of nitrogen and ammonia may be formed.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value:	Hexylene glycol – 25 ppm (ACGIH)
Routes of Entry: Eye Contact:	May cause mild transient irritation.
Skin Contact:	Mildly irritating to the skin and toxic if absorbed through the skin.
Inhalation:	Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.
Ingestion:	Moderately toxic if ingested. Causes nausea, vomiting, and narcosis.
Signs and Symptoms: Acute Overexposure:	Irritation of the eyes, skin and respiratory tract. Upon ingestion – nausea, vomiting and narcosis.
Chronic Overexposure:	Damage to liver, kidneys, and central nervous system, metabolic acidosis.
Medical Conditions Generally Aggravated by Exposure:	Diseases of the kidney, liver, and central nervous system could be affected with prolonged exposure.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C. Monographs: Yes ☐ No ☒ OSHA: Yes ☐ No ☒

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. Get Medical attention.
Skin Contact:	Wash with water; if irritation persists, get Medical attention.
Inhalation:	Remove victim to fresh air and provide oxygen if breathing is difficult. Give anificial respiration if not breathing. Get Medical attention.
Ingestion:	If patient is conscious, give no more than two (2) glasses of water and induce vomiting. Get Medical attention.
NOTE TO PHYSICIAN:	If victim is a child, give no more than one (1) glass of water and 15 cc syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary. Approved organic vapor respirator in absence of environmental controls.		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	Recommended
Protective Gloves:	Rubber or Latex gloves recommended.	Eye Protection:	Chemical goggles recommended.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice. Clean body-covering clothing.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage:	Store in original container. Note incompatibility information in Section 4.
Other Precautions:	Do not mix agents. Avoid skin and eye contact. Avoid Ingestion. Avoid breathing vapors if generated.
Steps to be Taken in Case Material is Released or Spilled:	Rinse floor thoroughly with water as material is slippery. Prevent material from reaching sewers or waterways to avoid nuisance foaming.
Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:	
4 Severe Hazard 3 Serious Hazard 2 Moderate Hazard 1 Slight Hazard 0 Minimal Hazard	1 HEALTH 0 FLAMMABILITY 0 REACTIVITY

N/A = Not Applicable NDA = No Data Available

ANSUL is a registered trademark.

PINKERTON
SECURITY & INVESTIGATION SERVICES

GM Location SATURN (GM)
Account number 120802

Hazardous Material Spill Report

Spill location BETWEEN THE BASE OF THE WATER AND RAILROAD TRACKS

Time of spill 2:17 PM Date 3·29·01

Time spill reported 2:37 PM Date 3·29·01

Trade name of spilled chemical ANSUL (FIRE FOAM) Concentration % 3%

Local plant chemical identification number

Approximate size of spill (gallons) 10 GALS

Cause of spill CONTAINER BROKE DURING TRANSPORT WITH FORKTRUCK.

Spill reported by STEPHEN JORDAN

Did chemical get into the sewer? (✓) YES ( ) NO Any injuries? ( ) YES (✓) NO
Sanitary ( ) Storm (✓) Other ( ) Specify

If YES, who was notified JON PERONTI By RON SMITH

Date and time notification made 2:37PM 3·29·01

What personal protective clothing/equipment was used? NONE NEEDED

Names of all personnel on the scene: JON PERONTI, STEVE JORDAN, JONATHAN SWIFT, AND JOE MICHAELS

Were plant authorities notified? (✓) YES ( ) NO If YES, who? JON PERONTI

By RON SMITH Date and time 3·29·01 2:37PM

Was decontamination done? ( ) YES ( ) NO If YES, what?

Incident commander JON PERONTI

Person in charge of spill clean-up: CALEB WATSON

Jeff,

At approximately 1400 hours on March 29, 2001 the plant lost approximately 300 gallons of Ansul 3% Foam Solution, a fire suppressant, to the Storm Water System. While attempting to clean up for the Briggs visit, they were moving the yellow fiberglass storage container. In attempting to lift the container from its cradle, the container shattered and the contents were spilled into the storm sewer in the salvage area, north of the water tower. We were unable to find a MSD sheet in the plant. I went on the Internet and found the one attached. My best judgement is that this is the material that was in the container. This container was taken out of service approximately 5 years ago. No on knows how long the material was in the container.

After reviewing the MSD sheet and determining that the material was 100% soluble in water, closing the sluice gates was not an option. I checked the pH and it was approximately 6.5.

John

TANK IN SERVICE ? 1984

TANK OUT OF SERVICE ?, 1996

CALLED ANSUL → PRODUCT [illegible] DATA SHEETS

ANSUL® ANSUL INCORPORATED
MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

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Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	May, 2000

SECTION 1 – IDENTITY

Common Name: (used on label) (Trade Name and Synonyms)	Ansul 3% Regular Protein Foam Concentrate	CAS No.:	N/A
Chemical Name:	N/A This is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

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PART A – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Hexylene Glycol	7	107-41-5	25 ppm	Oral LD_{50} (rat) 3696 mg/kg ip LD_{50} (mouse) 1299 mg/kg

PART B – OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt. %	CAS No.	ACGIH TLV	Acute Toxicity Data
Dichlorophene	0.02	97-23-4		Oral LD_{50} (rat) 2690 mg/kg iv LD_{50} 17 mg/kg
Proprietary mixture of protein hydrolysate, inorganic salts and water; not otherwise specified.	93	N/A		NDA

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	101 °C			Specific Gravity (H_2O = 1):	1.15	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 70	Vapor Density (Air = 1):	Less than 1	Evaporation Rate (Butyl Acetate = 1):	Approximately 0.005		
Solubility in Water:	100%			Reactivity in Water:	Unreactive		
Appearance and Odor:	Red/Brown opaque liquid, mildly pungent odor.						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE – THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 – PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive metals, electrically energized equipment, any materials reactive with water, strong oxidizers.		
Hazardous Decomposition Products:	None known; however oxides of nitrogen and ammonia may be formed.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value:	Hexylene glycol – 25 ppm (ACGIH)
Routes of Entry: Eye Contact:	May cause mild transient irritation.
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Signs and Symptoms: Acute Overexposure:	Irritation of the eyes, skin and respiratory tract. Upon ingestion – nausea, vomiting and narcosis.
Chronic Overexposure:	Damage to liver, kidneys, and central nervous system, metabolic acidosis.
Medical Conditions Generally Aggravated by Exposure:	Diseases of the kidney, liver, and central nervous system could be affected with prolonged exposure.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C. Monographs: Yes ☐ No ☒ OSHA: Yes ☐ No ☒

SECTION 6 – EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. Get Medical attention.
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Ingestion:	If patient is conscious, give no more than two (2) glasses of water and induce vomiting. Get Medical attention.
NOTE TO PHYSICIAN:	If victim is a child, give no more than one (1) glass of water and 15 cc syrup of ipecac. If symptoms such as loss of gag reflex, convulsions, or unconsiousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	Not normally necessary. Approved organic vapor respirator in absence of environmental controls.		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	Recommended
Protective Gloves:	Rubber or Latex gloves recommended.	Eye Protection:	Chemical goggles recommended.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice. Clean body-covering clothing.		

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

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Waste Disposal Methods:	Dispose of in compliance with local, state, and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

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4 Severe Hazard 3 Serious Hazard 2 Moderate Hazard 1 Slight Hazard 0 Minimal Hazard	1 HEALTH 0 FLAMMABILITY 0 REACTIVITY

N/A = Not Applicable NDA = No Data Available

ANSUL is a registered trademark.

Saturn Corporation
Small Car Group
Boxwood & Dodson Road
P.O. Box 1512
Wilmington, DE 19899

Certified Letter
Return Receipt

April 5, 2001

P 861 414 051

State of Delaware Department of Natural Resources and Environmental Control
Division of Water Resources
Surface Water Discharges Section
Richardson & Robbins Building
89 Kings Highway
Dover, Delaware 19901

Attn: Mr. Chris Cleaver, Environmental Specialist

RE: Report of Stormwater/Sanitary Mix Spill

Dear Mr. Cleaver:

As discussed in a telephone conversation at 10:00am on Monday, April 2, 2001, with you, this plant experienced a spill of approximately 100 gallons of stormwater mixed with some sanitary effluent water which was collected last week during a sanitary line clog/overflow incident reported to you at that time.

This incident occurred at 9:45 am on Monday, April 2, 2001 as pipefitters were moving the drain hose from one holding tank to another. Due to a malfunctioning valve, when the camlock cap was removed to the discharge pipe of the tank, the collected water started flowing out. Within seconds the hose was connected to the pipe and the flow stopped. However, about 100 gallons had already flowed to a nearby stormwater catch basin. The sluice gates to the stormwater collection system were closed and the material (along with about 50,000 gallons of stormwater) was pumped back into the holding tank.

All the material was contained on site and will be discharged to the sanitary sewer.

The tank has since drained and the valve will be repaired or replaced. The valve is tagged as inoperable until a replacement is installed. All additional drain valves have been checked and are in proper working order.

After my discussion with you on this incident, the state's spill hotline was called at 10:05 am on Monday, April 2, 2001 and notified of the situation.

Please direct any questions to this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

cc: K. Natoli
W. Kochem

recycled paper

Wilmington Assembly General Motors Corporation
801 Boxwood Road
Wilmington, DE 19804

DNREC/DAWM Central Repository
Attn: Written Release Reports
89 Kings Highway
Dover, DE 19901

April 10, 2008

Dear Sir,

This letter is to follow-up on an incident that occurred on March 20, 2008 when a truck was found to have leaked diesel fuel onto the parking lot of the General Motors Corporation's Wilmington Assembly Plant.

On March 20, 2008, a Challenger Motor Freight truck (truck number 61025) driven by truck driver, Bryon Lindo of 74 Montcalm Blvd., Woodbridge, Ontario, Canada L4H2X9, leaked approximately 200 to 225 gallons of diesel fuel (CAS # 68476-34-6) onto the parking lot of the General Motors Wilmington Assembly Plant located at 801 Boxwood Road, Wilmington, Delaware. According to SARA Section 302 and Table 1 of the Delaware Regulation for the Management of Extremely Hazardous Substances, Diesel Fuel is not an Extremely Hazardous Substance.

As soon as General Motors Security personnel were notified (around 1:40pm on March 20, 2008) they contacted the General Motors response personnel who responded immediately and placed absorbent material down to absorb the spilled material. Additionally, since some material reached the storm catch basin within the General Motors property, a contracted vacuum truck was brought in to retrieve the material that had entered the storm drain. Although material entered the storm drain, it was contained on site, within the storm water piping system, preventing material from reaching any surface body of water. This piping was flushed with on site fire hydrant water to the collecting vac truck.

The Delaware DNREC spill hotline number (1-800-622-8802) was called at 2:33 pm on March 20, 2008 to report the incident. At approximately 3:00 pm DNREC representative Christopher Berlin arrived at the site and spoke with Mr. John Peronti, General Motors Sr. Environmental Engineer along with the driver of the truck, Mr. Bryon Lindo. Mr. Lindo has been banned from the site.

No known or anticipated acute or chronic health risks associated with the incident have been identified nor are any anticipated. No individuals were exposed therefore, no medical attention was or is necessary.

Please contact me at 302-428-7421 for more information if needed. Thank you.

Sincerely,

Jeffrey A. Holmes
Sr. Environmental Engineer

Cc: W. Fox

JEFF HOLMES/US/GM/GMC
03/25/2008 10:25 AM

To wendy.w.winey@gm.com
cc JOHN W PERONTI, Dan F Hughes/US/GM/GMC@GM
bcc
Subject Spill Report

Wendy,

Attached is the spill report from Thursday's spill.

Jeff Holmes
General Motors Corporation
Wilmington Assembly Plant

spilltrkdiesel032008.doc

GM Environmental Spill/Release Tracking Form

PRIVILEGED AND CONFIDENTIAL
ATTORNEY CLIENT COMMUNICATION

WFG Region Southeast **Division** NAVM
Plant Name Wilmington Assembly **Plant Address** Boxwood Rd, Wilmington, DE 19804
Reported to the agencies by Jeff Holmes **Report Date/Time** 3/20/08 at 2:33pm
Title Sr. Env. Eng. Phone Number 302-428-7421
Plant Response Personnel Contacted John Peronti, Terry Tyndell, Jeff Holmes, Security, Safety
Form Submitted by: Jeff Holmes

Incident Description

Date of incident 3/20/08 **Time** 01:45 pm am/pm Released during Production hours yes

Location of Incident (be specific) Bldg (#, name) West Parking lot Floor 1st Bay/Dock # N/A

Released offsite (be specific) No

Was the release to LAND X AIR WATER

Material Diesel Fuel **FID#** **WC#** N/A
(Canada only)

Duration of Release (minutes, hours, days, etc) 60 minutes **Total amount spilled/released** 225 gallons

How was the release discovered? Tow Truck Driver notified Security of leak from truck

Boxed Area to be completed by US Facilities

RQ Substance N/A CAS # 68334-30-5 **# of RQ substance released** N/A **Exceeded RQ ?** No

Was the release from a permitted source? No Exceed permit No Exceed permit by RQ? No

US EPA ID # DED002369205

Receiving body of water (stream, river, watershed, etc.) N/A

Describe the event (include equipment and other details)
Tractor trailer driver, Bryon Ignatius of Challenger Motor Freight found his Diesel fuel line leaking and called tow truck to fix.

When tow truck driver arrived and realized driver had not notified Security, tow truck operator did so and Security put out the call to response personnel. No cause of the fuel line rupture has been determined.

Describe Weather Conditions (precipitation, wind, temp. etc.) Sunny, windy, 45 degrees

Spill/Release reached (check all that apply)

1) Storm Sewer GM ✓ NonGM
2) Surface Water GM NonGM
3) Sanitary Sewer GM NonGM
4) Combined Sewer GM NonGM
5) Publicly Owned Treatment Works:
6) Groundwater
7) Soil
8) Industrial Wastewater Treatment Plant
9) Ambient Air
10) Other:

Bold Items –Required Information for Agency Reports
Supplement this report as new information arises.

GM Environmental Spill/Release Tracking Form

PRIVILEGED AND CONFIDENTIAL
ATTORNEY CLIENT COMMUNICATION

Action Taken

Material was contained(yes/no) yes Amount of material contained (gallons, pounds, or %of release) 100%

Describe containment/Clean-up procedures taken **Absorbent was spread down on parking lot and picked up and vac truck was brought in and vacced up effected catch basins. Collected water from vac truck was sent to on site wastewater treatment plant and diesel fuel was placed in drums for future disposal/energy recovery. The DNREC spill hotline was called and the incident was reported. DNREC personnel responded to the site and were satisfied with actions taken.**

Amount of material lost (gallons, pounds, or % of release) 0%

Was the material exposed to stormwater (yes/no/na) Yes If Yes; **Duration of exposure** (hours) 3 hours

Was the material disposed (yes/no/na) not yet. **Approved Licensed Disposal Facility** N/A

Total number of injuries Zero **Known health effects of material**

Describe any Corrective Action taken to prevent recurrence of the release
Discussed incident with truck driver, Security Personnel.

IMMEDIATE NOTIFICATION LOG

Was the release reported for information purposes only – NO RQ EXCEEDED? (yes/no) Yes

Agency Notified	Contact Person	Phone #	Date and Time(am/pm)	Report Number
DNREC	Dispatcher	800-662-8802	3/20/08 at 02:33 pm	13055

GM Notification

Department Notified	Contact Person	Phone #	Date &Time (am/pm)	Other
Plant Manager	Robert Dolan	302-428-7010	3/25/08 at 7:00 am	On vacation 3/20/08
GM Legal	J. Walle	313-665-4877	3/20/08 at 02:00 pm	
Regional Office	D. Hughes	770-318-4611	3/20/08 at 3:40 pm	
Plant Communications	P. Whalen	302-428-7995	3/25/08 at 9:35 am	
Div. Communications	N/A			

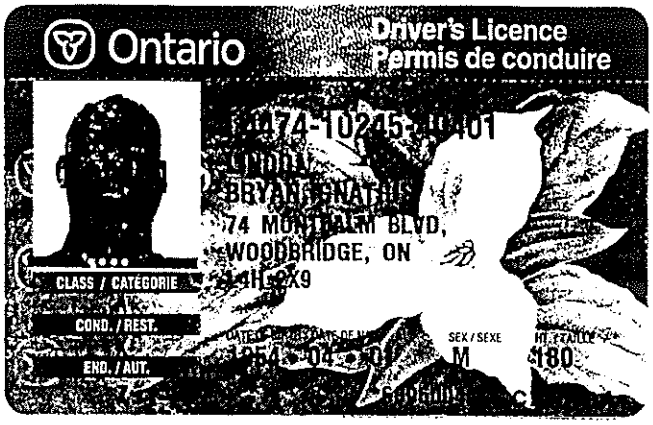
Plants: *Fax Completed Form to your Regional Manager*
Regional Managers: *Fax Completed Form to Chemical Risk Mgmt. @ 8-564-4266 (313/974-4266) and appropriate Legal Staff Representative*

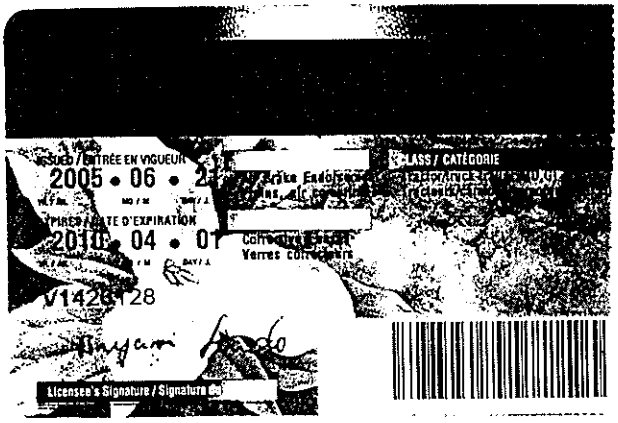
Bold Items –Required Information for Agency Reports
Supplement this report as new information arises.

Challenger Motor Freight
Safety Dept:- 1888-263-2769
Name: Bryan Lindo, Driver
TRK: 61025
Plate:- H33 6PC
VIN:- # 4VHNC9EJ28N261670
fuel test About 200 GALs.
1/4 of Gas left in Both Tanks
Lic: L4447H-10245-40401, AZ
Bryan Lindo
74 Monica Dr Blvd
Woodbridge, ONT
L4H 2X9
CANADA

1-800.361.3231 # option 1
Kris Mussmel - Spoke to Contractors
B&F Towing

326 Slapes Corner Rd
Corney's Point N.J. 08069-0506 7
Total # 965.30
245.061 Gallons of Gas


Ontario
Driver's Licence
Permis de conduire
CLASS / CATÉGORIE
COND. / REST.
END. / AUT.
SEX / SEXE
M
180


CLASS / CATÉGORIE
2005 • 06 •
2010 • 04 • 01
Licensee's Signature / Signature du titulaire

Allstate Power-Vac

928 E. HAZELWOOD AVE.
RAHWAY, NJ 07065

INVOICE NO. 64169

PAGE 1

FOR CUSTOMER SERVICE/BILLING INQUIRIES
CALL (732) 815-0220
FAX (732) 815-9892

Job No: 03-01898-000

TO: GENERAL MOTORS
ATT: ACCOUNTS PAYABLE
POB 1512, 801 BOXWOOD RD
WILMINGTON, DE 19804

Job Location:
GM PLANT/EMERGENCY SPILL
GM PLANT
801 BOXWOOD RD
WILMINGTON, DE 19804-2041

INVOICE DATE	INVOICE NO.	CUSTOMER NO.	PAYMENT TERMS	CONTRACT NO.
03-26-2008	64169	G-GEN151	ON RECEIPT	

Units	Unit of Measure	Description	Unit Price	Amount
		INVOICE SUMMARY		
1.00		TIME & MATERIAL SERVICES RENDERED PER THE ATTACHED BREAKDOWN	2,403.4500	2,403.45

PURCHASE ORDER NO.
PER: JEFF HOLMES

CLEAN UP DIESEL SPILL
PLANT PARKING LOT

Allstate Power-Vac

Amount Billed	$2,403.45
Total Tax	.00
Retainage Held	.00
Amount Due	$2,403.45

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

BOC LANSING AUTOMOTIVE

April 24, 1996

Mr. Robert Norris
Environmental Scientist
Pollution Control Branch
State of Delaware, DNREC
89 Kings Highway, P. O. Box 1401
Dover, Delaware 19903

Dear Mr. Norris:

This letter is to document the incident that occurred at our plant on Friday, April 19, 1996 in which about 10 to 20 gallons of process wastewater spilled into our stormwater system.

At about 10 A. M. on April 19, 1996, a glued joint in a PVC pipe carrying process wastewater from our Phosphate area came apart and spilled wastewater onto the floor of the plant. Some of this water flowed out a door at the back of the plant. About 10 to 20 gallons made it into a storm drain.

Pumps supplying the pipe in the area were immediately shut off. After booms were set in place and a dike made to prevent additional water from entering the storm drain, the state's spill hotline (1-800-662-8802 dispatch #8281) was immediately notified (about 10:15 A. M.).

Our stormwater outfall (NPDES permit # DE 0000523) was then checked and found to look normal (crystal clear) and test normal for pH (7.06). About 50,000 gallons was pumped to our holding tanks as a precaution to assure nothing was discharged to Little Mill Creek.

A grab sample was taken of the spilled material and the permitted outfall. Also, a sampler was set up to collect a 24-hour composite sample of the outfall. These samples will be analyzed for metals most likely present in the wastewater. These results will be forwarded as they are received.

The source of the problem was a broken 90 degree CPVC elbow. This has been replaced and the cause of the break is being investigated to determine what can be done to prevent a similar incident from happening again.

Should additional information be required, please contact this office at (302) 428-7421.

Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: A. Spadaccini
E. Bosetti

N

April 24, 1996

Mr. Robert Norris
Environmental Scientist
Pollution Control Branch
State of Delaware, DNREC
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Dear Mr. Norris:

This letter is to document the incident that occurred at our plant on Friday, April 19, 1996 in which about 10 to 20 gallons of process wastewater spilled into our stormwater system.

At about 10 A. M. on April 19, 1996, a glued joint in a PVC pipe carrying process wastewater from our Phosphate area came apart and spilled wastewater onto the floor of the plant. Some of this water flowed out a door at the back of the plant. About 10 to 20 gallons made it into a storm drain.

Pumps supplying the pipe in the area were immediately shut off. After booms were set in place and a dike made to prevent additional water from entering the storm drain, the state's spill hotline (1-800-662-8802 dispatch #8281) was immediately notified (about 10:15 A. M.).

Our stormwater outfall (NPDES permit # DE 0000523) was then checked and found to look normal (crystal clear) and test normal for pH (7.06). About 50,000 gallons was pumped to our holding tanks as a precaution to assure nothing was discharged to Little Mill Creek.

A grab sample was taken of the spilled material and the permitted outfall. Also, a sampler was set up to collect a 24-hour composite sample of the outfall. These samples will be analyzed for metals most likely present in the wastewater. These results will be forwarded as they are received.

The source of the problem was a broken 90 degree CPVC elbow. This has been replaced and the cause of the break is being investigated to determine what can be done to prevent a similar incident from happening again.

Should additional information be required please contact this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: A. Spadaccini
E. Bosetti

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

GM
BOC LANSING
AUTOMOTIVE

April 26, 1996

Mr. Robert Norris
Environmental Scientist
Pollution Control Branch
State of Delaware, DNREC
89 Kings Highway, P. O. Box 1401
Dover, Delaware 19903

Dear Mr. Norris:

Enclosed are the analytical results of the samples sent for testing from the process wastewater incident last week.

The results confirm our expectation that there was no discharge through our NPDES permitted outfall of the process wastewater from the incident.

Should additional information be required, please contact this office at (302) 428-7421.

Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: A. Spadaccini
E. Bosetti

ARTESIAN LABORATORIES

Artesian Laboratories, Inc.
630 Churchmans Road
Newark, Delaware 19702
(302) 453-6920 • 453-6986 (FAX)

REPORT OF ANALYSIS

Clean Technologies
2700 Capitol Trail
Newark, DE 19711

Attn: Ms. Deborah Buniski

Order #: 96-04-673
Date: 04/24/96 15:37
Work ID: GM- Spill Response 4/19-4/20
Date Received: 04/23/96
Date Completed: 04/24/96

Purchase Order: 786 Acct:1070267
Invoice Number:
Client Code: CLEAN_TECH

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	Puddle	03	NPDES Out
02	NPDES Out-1		

This cover page is an integral part of the analytical report that follows.

Certified By
Warren Van Arsdall

TO: JEFF Holmes
From: Chris Candela.

04/24/1996 17:12 3024536986 ARTESIAN LABS PAGE 02

04/25/96 06:12 TX/RX NO.2957 P.001

Order # 96-04-673
04/24/96 15:37

TEST RESULTS BY SAMPLE

Sample: 01A Puddle
Collected: 04/19/96 10:50

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Digestion, Microwave	04/23/96		date digested	RJM	04/23/96 11:00
Lead, ICP	0.410	0.024	mg/L	RJM	04/24/96 13:11
Molybdenum, ICP	0.288	0.005	mg/L	RJM	04/24/96 13:11
Nickel, ICP	0.710	0.011	mg/L	RJM	04/24/96 13:11
Zinc, ICP	5.66	0.003	mg/L	RJM	04/24/96 13:11

Sample: 02A NPDES Out-1
Collected: 04/19/96 11:25

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Digestion, Microwave	04/23/96		date digested	RJM	04/23/96 11:00
Lead, ICP	ND	0.024	mg/L	RJM	04/24/96 13:15
Molybdenum, ICP	ND	0.005	mg/L	RJM	04/24/96 13:15
Nickel, ICP	ND	0.011	mg/L	RJM	04/24/96 13:15
Zinc, ICP	0.219	0.003	mg/L	RJM	04/24/96 13:15

Sample: 03A NPDES Out
Collected: 04/20/96 13:00

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Digestion, Microwave	04/23/96		date digested	RJM	04/23/96 11:00
Lead, ICP	ND	0.024	mg/L	RJM	04/24/96 13:19
Molybdenum, ICP	0.10	0.005	mg/L	RJM	04/24/96 13:19
Nickel, ICP	ND	0.011	mg/L	RJM	04/24/96 13:19
Zinc, ICP	0.120	0.003	mg/L	RJM	04/24/96 13:19

Sample: 03B NPDES Out
Collected: 04/20/96 13:00

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Phosphorous, Total	0.05	0.02	mg/L as P	JJ	04/24/96 07:45

TEST METHODOLOGIES

Microwave Digestion

Wastewater	Federal Register 9/11/92
Soils/Solids	SW-846 Method 3051

Molybdenum (Mo) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Nickel (Ni) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Lead (Pb) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Zinc (Zn) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Phosphorous, Total

EPA Method 365.3

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General Motors Corporation
Wilmington Plant
P O Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING
AUTOMOTIVE

December 14, 1994

Mr.Christopher Berlin
Environmental Scientist
DNREC ERB
715 Grantham Lane
New Castle, Delaware 19720

Dear Mr. Berlin:

This letter is to document our telephone conversation on December 4, 1994. In that conversation I told you that a process waste sump had overflowed to the storm water collection system on site at this plant. Action was then taken to prevent any discharge to Little Mill Creek. This included closing the gates on that system and pumping the water to a holding tank.

This incident occurred from about a little before 2 A. M. to about 2:20 A. M. on December 4, 1994. A sample of the outfall water was taken at the time the water was pumped to the holding tank. Also, a sample of the process water that had overflowed was taken. These results will be forwarded as soon as they are received.

The source of the problem appears to have been a partially closed valve that restricted the flow of process water out of the sump that overflowed. This valve has since been opened completely and the handle to it has been secured to prevent a similar incident from happening again.

Should additional information be required please contact this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: A. Spadaccini
E. Bosetti

Clean Tech, Inc.
Environmental Consultants

2700 Capitol Trail
Newark, DE 19711
302•999•0924
FAX: 302•999•0925

CLEANTECH

January 9, 1994

Mr. Jeff Holmes
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington, DE 19899

Re: December 4, 1994 Process Waste Water Spill Analyses

Dear Jeff:

Enclosed please find the results from the water samples taken during the December 4, 1994 waste water spill. The samples submitted to Clean Tech were analyzed for Nickel, Zinc and Lead. The following table summarizes these results:

SAMPLE CODE	NICKEL (ppm)	ZINC (ppm)	LEAD (ppm)
Redundant Out	U0.040	0.17	0.0058
Process Waste	2.0	19.0	1.2

U2.0 = Non-Detect: Detection Limit

If you should have any questions regarding this data, please feel free to contact our office.

Sincerely,

Christopher J. Candela
Environmental Scientist
CLEAN TECH

(gm\124spl.ltr)

Jeff Holmes : 14/6/94

Any More Information
on This Incident?
What is Status?

12/5/94

TONY SPADACINNI,

AT ABOUT 2 AM SUNDAY MORNING I RECEIVED A CALL FROM JIM SPECKHALS INFORMING ME OF AN OVERFLOW CONDITION IN THE GRIT SEPERATOR BUILDING. HE SAID HE HAD ALREADY CALLED PAINT AND TOLD THEM TO SHUT THEIR PUMPS DOWN. I TOLD HIM TO GO TO THE CONTROL ROOM AT WASTE TREATMENT AND CLOSE THE GATES AT REDUNDANT AND THEN SHUT OFF THE GROUNDWATER PUMPS OUT AT MOD PAINT. WHEN I CALLED HIM BACK A FEW MINUTES LATER, HE HAD CLOSED THE GATES AND HAD BILL BULL OUT AT REDUNDANT. BILL SAID THE WATER OUT THERE WAS STILL CRYSTAL CLEAR. BY THIS TIME THE OVERFLOWING CONDITION IN THE GRIT BUILDING HAD STOPPED.

I CAME IN TO SURVEY THE SITUATION AND CHECK A NUMBER OF THINGS OUT.

WE PUMPED ABOUT 40,000 GALLONS OF WATER INTO THE HOLDING TANK AT REDUNDANT. PAINT FINISHED THEIR SATURDAY NIGHT DUMPING WITHOUT FURTHER INCIDENT. WE CHECKED THE SCREEN AT THE INFLUENT SUMP AT THE WASTEWATER TREATMENT PLANT AND FOUND NOTHING THAT MIGHT LOOK LIKE IT COULD HAVE CLOGGED THE PIPE. WE LOOKED IN THE CORNER SUMP IN THE GRIT BUILDING AND FOUND NOTHING BLOCKING THE DISCHARGE PIPE.

WHEN WE CHECKED THE VALVE BETWEEN THE GRIT BUILDING AND THE FIRST MANHOLE BY TURNING IT COUNTER CLOCKWISE IT JUST KEPT TURNING. THIS WILL BE INVESTIGATED FURTHER WITH ALLSTATE POWER VAC WHEN THEY COME IN WITH THEIR TV CAMERA EITHER TODAY OR TOMOROW.

PAINT SAYS THEY WERE NOT DUMPING ANY MORE THAN THEY NORMALLY DO ON A SATURDAY NIGHT AND THAT THEY DUMPED EVEN MORE ON THIS PAST WEDNESDAY NIGHT - WHICH DIDN'T CAUSE A PROBLEM.

HOWEVER, INFORMATION WE JUST RECEIVED FROM SOME PIPEFITTERS SAY THAT THE GRIT BUILDING HAD A SIMILAR INCIDENT TWO WEEKS AGO ON A SATURDAY NIGHT BUT THAT IT DIDN'T GET OUT OF THE GRIT BUILDING AND STOPPED.

AT ABOUT 6:30 I SHOWED FRED STEIFFEL WHAT NEEDED TO BE DONE TO CLEAN UP THE AREA AROUND THE GRIT BUILDING.

FURTHER INVESTIGATION INTO THE CAUSE OF THIS INCIDENT AND THE PREVENTION OF FUTURE SUCH INCIDENTS IS CONTINUEING. I WILL KEEP YOU UP TO DATE ON ANY FINDINGS.

I CALLED THE STATE'S SPILL HOTLINE AND REPORTED WHAT HAD HAPPENED AND EMPHASIZED THAT WE HAD COLLECTED THE WATER IN THE STORM SYSTEM AND NOTHING GOT TO THE CREEK. I TOOK A SAMPLE OF THE WATER GOING OVER THE WEIR JUST AS THE GATES WERE BEING CLOSED TO VERIFY THIS.

PLEASE CONTACT ME WITH ANY FURTHER QUESTIONS.

JEFFREY HOLMES
ENVIRONMENTAL ENGINEER

CC: E. BOSETTI

12/5/94

TONY SPADACINNI,

AT ABOUT 2 AM SUNDAY MORNING I RECEIVED A CALL FROM JIM SPECKHALS INFORMING ME OF AN OVERFLOW CONDITION IN THE GRIT SEPERATOR BUILDING. HE SAID HE HAD ALREADY CALLED PAINT AND TOLD THEM TO SHUT THEIR PUMPS DOWN. I TOLD HIM TO GO TO THE CONTROL ROOM AT WASTE TREATMENT AND CLOSE THE GATES AT REDUNDANT AND THEN SHUT OFF THE GROUNDWATER PUMPS OUT AT MOD PAINT. WHEN I CALLED HIM BACK A FEW MINUTES LATER, HE HAD CLOSED THE GATES AND HAD BILL BULL OUT AT REDUNDANT. BILL SAID THE WATER OUT THERE WAS STILL CRYSTAL CLEAR. BY THIS TIME THE OVERFLOWING CONDITION IN THE GRIT BUILDING HAD STOPPED.

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PLEASE CONTACT ME WITH ANY FURTHER QUESTIONS.

JEFFREY HOLMES
ENVIRONMENTAL ENGINEER

CC: E. BOSETTI

Division of
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General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING
AUTOMOTIVE

January 13, 1995

Mr.Christopher Berlin
Environmental Scientist
DNREC/ERB
715 Grantham Lane
New Castle, Delaware 19720

Dear Mr. Berlin:

This letter is to follow up on my letter of December 14, 1994 in which I reported a process waste sump overflow incident.

As the attached letter shows, the results of the two samples taken clearly demonstrate that the steps taken prevented any discharge of process wastewater to Little Mill Creek.

Should additional information be required please contact this office at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: A. Spadaccini
E. Boaetti

CLEAN**TECH**

January 9, 1994

Mr. Jeff Holmes
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington, DE 19899

Re: December 4, 1994 Process Waste Water Spill Analyses

Dear Jeff:

Enclosed please find the results from the water samples taken during the December 4, 1994 waste water spill. The samples submitted to Clean Tech were analyzed for Nickel, Zinc and Lead. The following table summarizes these results:

SAMPLE CODE	NICKEL (ppm)	ZINC (ppm)	LEAD (ppm)
Redundant Out	U0.040	0.17	0.0058
Process Waste	2.0	19.0	1.2

U2.0 = Non-Detect: Detection Limit

If you should have any questions regarding this data, please feel free to contact our office.

Sincerely,

Christopher J. Candela
Environmental Scientist
CLEAN TECH

(gm\124spl.ltr)

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Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING
AUTOMOTIVE

July 25, 1994

Mr. Joe Mulrooney, Compliance Supervisor
DNREC
Division of Water Resources
P. O. Box 1401
Dover, DE 19903

Dear Mr. Mulrooney:

This letter is to document the circumstances involved in the process waste lift station overflow that occurred at this plant on July 13, 1994 and to answer the additional questions you had during your July 14, 1994 investigative visit.

On July 13, 1994 at about 3:30 A. M. a two inch city water line was opened to our prime booth tank for the purpose of forcing water out the overflow pipe from the tank to a process waste lift station and to the on site industrial wastewater pretreatment system. At the time, about one foot of freeboard (about 10,700 gallons) remained before water would start to flow out the overflow pipe. It has been determined that the flow rate of water going into this tank was about 400 gallons per minute.

At about 5:30 A. M. a sweeper operator noticed the process waste lift station overflowing. He immediately called security. Security immediately called the supervisor and the pipefitter by radio. Within minutes the pipefitter had pressed the pump resets and the pumps started pumping the water in the lift station.

At about 6:35 A. M. I arrived and was notified immediately of the incident. Security drove me to the overflow location where I noticed some of this water had reached the storm drain. I then went to our storm water "redundant" area and closed the sluice gates to stop any flow. The spill was not evident at this area at this time and the flow through the storm water system was relatively low (about 37 gallons per minute). As a precautionary measure, 50,000 gallons of water in the stormwater collection system was pumped to an on site holding tank.

I then returned to the plant to investigate the events surrounding the incident and assure the clean-up was progressing.

At about 8:30 A. M. I called the state spill hotline at 1-800-662-8802 and reported the incident.

The supervisor who opened the city water line checked the pumps before he left the area and found them running. Electricians found the heaters in the power supply cabinet had tripped causing the pumps to stop running.

The heaters have since been replaced and testing of the operation of the pumps and float mechanism was performed. During this testing it was found that both of the pumps pumped fine, but one of the pumps did not shut off when the level dropped to the off elevation. This may have caused the pump to trip out after running for an excessive amount of time.

The installation of a high level alarm at this lift station is being investigated. Also, a survey of other lift stations will be conducted in an attempt to prevent similar incidents of this nature.

Biomonitoring results (verbal from the lab) from samples collected during the week of this incident, have shown no adverse effect of our NPDES permitted discharge to the receiving stream. The written results of these tests will be submitted with our July NPDES monitoring report.

Should additional information be required, please contact me at (302) 428-7421. Thank you.

Respectfully,

Jeffrey A. Holmes
Environmental Engineer

cc: E. Bosetti
A. Spadaccini
R. Harting

July 22, 1994

Mr. Joe Mulrooney, Compliance Supervisor
DNREC
P. O. Box 1401
Dover, DE 19903

Dear Mr. Mulrooney:

This letter is to document the circumstances involved in the process waste sump overflow that occurred at this plant on July 13, 1994 and to answer the additional questions you had during your July 14, 1994 investigative visit.

On July 13, 1994 at about 3:30 A. M. a two inch city water line was opened to our prime booth tank for the purpose of forcing water out the overflow pipe from the tank to a process waste lift station and to the on site industrial wastewater pretreatment system. At the time, about one foot of freeboard (about 10,700 gallons) remained before water would start to flow out the overflow pipe. It has been determined that the flow rate of water going into this tank was about 400 gallons per minute. At about 5:30 A. M. a sweeper operator noticed the process waste lift station overflowing. He immediately called security. Security immediately called the supervisor and the pipefitter by radio. Within minutes the pipefitter had pressed the pump resets and the pumps started pumping the water in the lift station.

At about 6:35 A. M. I arrived and was notified immediately of the situation. Security drove me back to the overflow location where I noticed some of this water had reached the storm drain. I then went to our storm water "redundant" area and closed the sluice gates to stop any flow. The spill was not evident at this area at this time and the flow through the storm water system was ~~relatively low~~ about 37 gallons per minute. Water in the stormwater collection system was pumped to a tank anyway and about 50,000 gallons were collected.

I then went back to the plant to investigate what exactly happened and assure the cleanup was progressing.

At about 8:30 A. M. I called the state spill hotline at 1-800-662-8802 and reported the incident.

Electricians found the heaters in the power supply cabinet had tripped causing the pumps to stop running. The supervisor who opened the city water line checked the pumps before he left the area and they were running.

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Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING AUTOMOTIVE

July 25, 1994

Mr. Joe Mulrooney, Compliance Supervisor
DNREC
Division of Water Resources
P. O. Box 1401
Dover, DE 19903

Dear Mr. Mulrooney:

This letter is to document the circumstances involved in the process waste lift station overflow that occurred at this plant on July 13, 1994 and to answer the additional questions you had during your July 14, 1994 investigative visit.

On July 13, 1994 at about 3:30 A. M. a two inch city water line was opened to our prime booth tank for the purpose of forcing water out the overflow pipe from the tank to a process waste lift station and to the on site industrial wastewater pretreatment system. At the time, about one foot of freeboard (about 10,700 gallons) remained before water would start to flow out the overflow pipe. It has been determined that the flow rate of water going into this tank was about 400 gallons per minute.

At about 5:30 A. M. a sweeper operator noticed the process waste lift station overflowing. He immediately called security. Security immediately called the supervisor and the pipefitter by radio. Within minutes the pipefitter had pressed the pump resets and the pumps started pumping the water in the lift station.

At about 6:35 A. M. I arrived and was notified immediately of the incident. Security drove me to the overflow location where I noticed some of this water had reached the storm drain. I then went to our storm water "redundant" area and closed the sluice gates to stop any flow. The spill was not evident at this area at this time and the flow through the storm water system was relatively low (about 37 gallons per minute). As a precautionary measure, 50,000 gallons of water in the stormwater collection system was pumped to an on site holding tank.

I then returned to the plant to investigate the events surrounding the incident and assure the clean-up was progressing.

At about 8:30 A. M. I called the state spill hotline at 1-800-662-8802 and reported the incident.

The supervisor who opened the city water line checked the pumps before he left the area and found them running. Electricians found the heaters in the power supply cabinet had tripped causing the pumps to stop running.

The heaters have since been replaced and testing of the operation of the pumps and float mechanism was performed. During this testing it was found that both of the pumps pumped fine, but one of the pumps did not shut off when the level dropped to the off elevation. This may have caused the pump to trip out after running for an excessive amount of time.

The installation of a high level alarm at this lift station is being investigated. Also, a survey of other lift stations will be conducted in an attempt to prevent similar incidents of this nature.

Biomonitoring results (verbal from the lab) from samples collected during the week of this incident, have shown no adverse effect of our NPDES permitted discharge to the receiving stream. The written results of these tests will be submitted with our July NPDES monitoring report.

Should additional information be required, please contact me at (302) 428-7421. Thank you.

Respectfully,

Jeffrey A. Holmes
Environmental Engineer

cc: E. Bosetti
A. Spadaccini
R. Harting

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING
AUTOMOTIVE

March 24, 1993

Mr. Chris Cleaver
DNREC - Water Pollution Branch
State of Delaware
89 Kings Highway
P. O. Box 1401
Dover, DE 19903

Dear Mr. Cleaver:

This letter is to notify you of a recent sampling event that indicated our stormwater discharge concentration of Oil & Grease to be above our NPDES permitted maximum instantaneous limit for that parameter.

On March 16, 1993, at about 7 A.M., a tractor trailer on our property broke a fuel line and spilled approximately 10 to 20 gallons of diesel fuel on the paving, in the back of our plant while preparing to back up to a loading dock. Most of this material was absorbed with oil dry and cleaned up. However, approximately a gallon or two escaped to the storm drain before it could be blocked off. The storm ditch was checked and looked normal with our skimmer and booms in place. As a precaution, one set of booms was replaced.

DNREC was notified of the spill and Mr. Dennis Wallace EPO, responded and was informed of our response actions.

A sample was taken later that day to confirm compliance with our permit limits. The analyses of this sample indicated otherwise. This analyses showed an Oil & Grease concentration of 65.9 mg/l. The monthly sample taken earlier in the month did not detect any level of oil & grease. Also, another sample was taken on 3/23/93 to assure return to compliance levels. This result will be included in a follow-up letter as soon as we receive the results.

After the sample was taken on 3/16/93 additional booms were put in place to enhance oil removal operations. All booms were replaced and doubled up on 3/18/93 to assure maximum oil removal.

Should additional information be required, please contact me at 428-7421. Thank you.

Jeffrey A. Holmes
Environmental Engineer

cc: E. Bosetti

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING
AUTOMOTIVE

March 30, 1993

Mr. Chris Cleaver
DNREC - Water Pollution Branch
State of Delaware
89 Kings Highway
P. O. Box 1401
Dover, DE 19903

Dear Mr. Cleaver:

This letter is to follow-up on my March 24, 1993 letter, in which I notified the department of a sampling event that indicated an excursion to our NPDES permit following a spill by an outside transporter on our property. Additional sampling indicated the following levels.

The sample taken on March 23, 1993 showed an Oil & Grease concentration of 28.7 mg/l. Another sample taken on March 26, 1993 showed an Oil & Grease concentration of 27.8 mg/l. A follow-up sample on March 27, 1993 did not show any detectable Oil & Grease (Detection Limit of 5 mg/l).

The data from these samples will be included in our Discharge Monitoring Report for the month of March.

The following measures have already been taken in response to the above information. Anchor Motor Freight (who leases property that drains to the storm ditch) has been visited and told to keep better housekeeping in relation to operations involving oil and grease. Additional booms have been put in place for added protection. Also, the importance of immediate notification to our response personnel will be reiterated to our loading dock personnel.

Should additional information be required, please contact me at (302) 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc: E. Bosetti

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING AUTOMOTIVE

November 30, 1992

Mr. Joe Kilby
Water Resources Section
DNREC
P. O. Box 1401
89 Kings Highway
Dover, DE 19903

Subject: October 6, 1992 Sanitary Lift Station Incident

Dear Mr. Kilby:

This letter is a document for your files on the following incident and reporting actions taken, along with equipment changes taken to prevent its reoccurrence.

On Tuesday, October 6, 1992 from about 6:30 AM to 7:15AM liquid from a sewage pump station at the plant overflowed(trickled over) to our storm water collection system. Upon discovery of this overflow, the gates at our stormwater ditch were closed and the water in the storm pipe containing the overflowed water was pumped to the on site holding tanks. Due to the low flow of this system and our quick response, all of the material from this incident was collected in our holding tanks. No material reached Little Mill Creek.

We will request approval from the county to discharge this collected water to their sewer collection system for proper treatment.

Upon investigation of this incident, it was found that one pump's impeller was clogged and the other pump's suction line was blocked with one of the floats that control the pumps. Also, the float ~~mechanism~~ that activates the alarm that was recently installed did not have enough buoyancy to trip the alarm.

After setting up the collection of the storm water, assuring the pumps were back in operation and discussing what happened with the pipefitters, ~~I called~~ Mr. Joe Mulrooney was contacted to report the incident (at 8:05 AM on 10/6/92). He informed me that you would now be handling our NPDES permit issues. He recommended that I send this letter for the record and to let you know what our plans are for this lift station. He also said he would inform you about this incident and recommended not calling the 1-800 spill number since all the material was collected on site. Also, since no reportable quantity of material was released, the National Response Center was not notified.

Initially, I discussed the advantages and disadvantages of installing an ultrasonic level indicator/pump controller with Mr. Mulrooney. However, after further investigation and consultation with other plant engineers, it was decided to continue using the present float system with some modifications.

Instead of using only two Flygt ENH-10 type floats (one to turn both pumps on and one to turn both pumps off), a third float has been put on line. Two floats activate the pumps (one for each pump and at different elevations) and the third one to shut both pumps off. This will enhance response and diagnosis of a clogged or otherwise malfunctioning pump. Also, the floats have been raised about six inches so they will not be drawn into the suction line of the pumps.

A larger diameter stainless steel float has also been installed and tested successfully to activate the high level alarm. This will activate the alarm if the water rises above the first pump start elevation. This will notify us of a problem with the first pump and give us a chance to repair it while the backup pump carries the load. With the previous setup, we would not know when a pump wasn't pumping until both pumps failed.

The float that had blocked the suction pipe of one of the pumps has been raised so it cannot enter this pipe.

I had originally intended to send you this letter within days of the incident. However, since Mr. Mulrooney said he would tell you about it and since it was not a reportable incident, I felt it was best to wait and tell you what we did rather than what we planned on doing. This took longer than I had anticipated.

After completion of the above items, the regular service pump worked fine. However, when the backup pump was tested, it would run but would not pump. Our pipefitters determined the problem to be a worn check valve causing the pump to lose its prime. The check valve was ordered and installed on both pumps. During installation of the check valve on the regular service pump, the pump housing cracked. A new pump casing has been ordered and will be installed when received. However, until that time, the crack has been filled and the pump is pumping normally.

Presently, both pumps and the alarm are in working order.

Should you require additional information or have any questions, please call me at 428-7421. Thank you.

Sincerely,

Jeffrey A. Holmes
Environmental Engineer

cc E. Bosetti

July 9, 1991

Mr. John Mohrman
ERB Branch, DNREC
P.O. Box 1401
89 Kings Highway
Dover, DE 19903

Subject: July 2, 1991 Elpo Stage 2 Rinse Water Spill

Dear Mr. Mohrman:

On Tuesday July 2, 1991 at about 2:13 A.M. a spill occurred from our Elpo Stage 2 Rinse Water tank causing approximately five (5) gallons of this liquid to flow to our stormwater collection system.

Upon investigation of this incident, it was found that the pipe that empties a trench that receives the drained liquid from the Elpo Stage 2 Rinse water was clogged. This caused the trench and the surrounding ramp area to become filled with the liquid, after which it started to flow toward the storm drain. The operator draining the tank left the area to perform other work and returned to find the spill.

The area was diked and the material cleaned up. However, the supervisor responsible for the cleanup estimated about five (5) gallons of liquid escaped into the stormwater collection system.

The sluice gates at the stormwater collection system were closed and at least 25,000 gallons of water that had the possibility of being contaminated was pumped to the collection system holding tanks. We believe this was sufficient to collect any of the spilled material that entered the system and prevent any discharge to Little Mill Creek. Due to heavy rains that started at approximately 7:15 A.M., the sluice gates were opened and the collection pump shut off at 7:30 A.M.

At about 10:30 A.M. on 7/02/91, Mr. Mike Cook of the DNREC was notified of the incident by telephone at: 1-800-662-8802.

Since no reportable quantity of material was released, the National Response Center was not notified.

To prevent future incidents of this nature, plant personnel are considering the possibility of installing a diked containment area that would hold the total volume of the tank.

Should additional information be required, please contact this office at 428-7421. Thank you.

On Tuesday, July 2, 1991 at about 6:00 AM, as I was entering the plant, I was informed by security that we had an Elpo rinse stage 2 spill. I read the security report (see attachment) and went to the spill site with Powerhouse Supervisor J. Taylor and Security Guard J. Hagerman. The spill had already been cleaned up. I then interviewed Mr. Floyd Wright (Housekeeping Supervisor), who informed me that dikes were in place prior to any liquid reaching the storm drain, however, he said about five (5) gallons managed to go through the dikes and reach the storm drain.

According to Mr. Wright, the Elpo rinse stage 2 was being emptied into a trench which drains to a sump. The pipe which connects the trench to the sump clogged and material filled the trench and the truck unloading area and then flowed outside the building.

I then spoke with Mr. Steve Ferrara (the PPG rep. - makers of the Elpo material) who estimated the quantity of the spill to be 330 gallons. This was estimated by using the volume of the tank, the time it takes to drain it and the approxximate time the valve was open.

While I was talking to Mr. Wright and Mr. Ferrara about this incident, Mr. Jim Taylor at about 7:30 AM went out to the collection ditch and shut off the pump that was pumping the storm water into the holding tanks and opened the sluice gates that had been closed earlier. This was done because at about 7:15 AM it had started to rain very hard. If the gates are kept closed during a heavy rain water will back up into the plant and cause major problems. When these gates were opened it could not be determined from the looks of the water if any of the spilled material was still flowing through the system, however at least about 25,000 gallons of water was collected from the storm drains and pumped to three holding tanks.

At about 9:00 to 9:30 AM I met with Mr. Tony Spadacini, Mr. Ernie Bosetti, Mr. John Peronti, Mr. Jim Taylor, and Mr. Mark Endres to discuss what happened, and what further action to take.

I then took the lab representative I had called in out to the collection tanks to collect a sample and look at the water in the storm ditch.

I then came back to my desk and called the DNREC at about 10:30 AM to report the incident. I told Mr. Mike Cook the Environmental Officer, that we had a spill of about 330 gallons of Elpo, our primer paint, and that only about 5 gallons got into the storm drain. I also told him that we pumped the storm ditch into holding tanks and collected about 25,000 gallons prior to opening the sluice gates again due to heavy rains. I also told him that I didn't think any of it got off site.

When Mr. Cook asked why we didn't report the spill sooner than we did, I told him we wanted to make sure we got everything cleaned up and pumped into the holding tanks and all the information before we made the call.

The next day I talked to the operator who informed me that the spill did reach the storm drain prior to dikes

TO: Dan Bicknell

From: Jeff Holmes, Wilmington Env. Eng.

Subject: July 2, 1991 Elpo Rinse Water Stage 2 Spill

On Tuesday, July 2, 1991 at 2:13 A.M. a spill from the Elpo stage 2 rinse water tank occurred causing approximately 5 gallons of this liquid to flow to the storm drain.

The sluice gates at the storm water collection ditch were closed and the water pumped to holding tanks until about 7:30 A.M. at which time, due to heavy rains which started at about 7:15 A.M., the gates had to be opened to prevent possible flooding in the plant.

We believe the small amount of material that got to the storm drain was contained by pumping the storm water (about 25,000 gallons) to our holding tanks.

Since no reportable quantity of material was released, we did not contact the National Response Center. However, we did contact the state DNREC and reported the spill, explained what happened, what we did to capture the material and that we believe none of the material left the site.

We took a sample of the material in the holding tanks and it is presently being analyzed for lead.

A copy of the report to the state will be faxed to your attention as soon as it is complete.

Should additional information be required please contact this office at 8-438-7421. Thank you.

Jeffrey A. Holmes
Environmental Engineer

cc: F. Rindhage
G. Bozak
P. Zavala
E. Bosetti

Division of
Buick•Oldsmobile•Cadillac Group
General Motors Corporation
Wilmington Plant
P.O. Box 1512, Boxwood Road
Wilmington, Delaware 19899

B·O·C LANSING AUTOMOTIVE

July 8, 1991

Mr. John Mohrman
ERB Branch, DNREC
P.O. Box 1401
89 Kings Highway
Dover, DE 19903

Subject: July 1, 1991 Sewage Pump Station Overflow

Dear Mr. Mohrman:

On Monday July 1, 1991 from about 6:30 A.M. until 9:15 A.M. liquid from a sewage pump station at the plant overflowed (trickled over) to our storm water collection system.

On the previous day, Sunday June 30, 1991 at about 4:30 P.M. the plant experienced an unusual power outage we believe was caused by lightning striking the plant. This caused many problems including a blown fuse on the control circuit to the pumps in the sewage pumping station.

This station receives only the discharge from three bathrooms in the Mod Paint building. From security logs, no overflow was noted during regular rounds or at 6:00 A.M. when one guard drove by the area. At about 7:00 A.M. the maintenance department was notified that the sump was overflowing. Pipefitters were sent to the area to diagnose the problem. When they realized it was an electrical problem, Electricians were sent to correct the problem. Meanwhile, housekeeping personnel made a dike to prevent any more liquid from reaching the storm drain. The sluice gates at the storm water ditch were also closed and the water pumped to the holding tanks.

The pumping station was back in operation by 9:30 A.M. At this time the dike was removed and the area was washed down for about a half hour forcing the overflowed liquid to the collection pump and holding tank. Water from the ditch was pumped to the holding tank until 4:30 P.M. that day. We collected at least 25,000 gallons of storm water that had the possibility of being contaminated with the small amount of sewage water that overflowed from the sump. We believe this was sufficient time to collect any of the spilled liquid and prevent any discharge to Little Mill Creek. We also wanted to leave some capacity in the collection tanks in case we had a more serious incident.

Since no reportable quantity of material was released, the National Response Center was not notified.

To prevent future incidents of this nature, plant personnel are considering the possibility of installing a diked containment area that would hold the total volume of the tank.

Should additional information be required, please contact this office at 428-7421. Thank you.

Respectfully yours,

Jeffrey A. Holmes
Environmental Engineer

cc:
F. Rindhage
G. Boszak
P. Zavala
E. Bosetti
b:jah9

July 9, 1991

Mr. John Mohrman
ERB Branch, DNREC
P.O. Box 1401
89 Kings Highway
Dover, DE 19903

Subject: July 2, 1991 Elpo Stage 2 Rinse Water Spill

Dear Mr. Mohrman:

On Tuesday July 2, 1991 at about 2:13 A.M. a spill occurred from our Elpo Stage 2 Rinse Water tank causing approximately five (5) gallons of this liquid to flow to our stormwater collection system.

Upon investigation of this incident, I found that the pipe that empties a trench that receives the drained liquid from the Elpo Stage 2 Rinse water was clogged. This caused the trench and the surrounding ramp area to become filled with the liquid, after which it started to flow toward the storm drain. Apparently the operator draining the tank left the area to perform other work and returned to find the spill.

The area was diked and the material cleaned up. However, the supervisor responsible for the cleanup estimated about five (5) gallons of liquid escaped into the stormwater collection system.

The sluice gates at the stormwater collection system were closed and at least about 25,000 gallons of water that had the possibility of being contaminated was pumped to the collection system holding tanks. We believe this was sufficient to collect any of the spilled material that entered the system and prevent any discharge to Little Mill Creek. Due to heavy rains that started at approximately 7:15 A.M., the sluice gates were opened and the collection pump shut off at 7:30 A.M.

At about 10:30 A.M. on 7/02/91, Mr. Mike Cook of the DNREC was notified of the incident by telephone at: 1-800-662-8802.

Since no reportable quantity of material was released, we did not contact the National Response Center.

To prevent future incidents of this nature, plant personnel are considering the possibility of installing a diked containment area that would hold the total volume of the tank.

Should additional information be required, please contact this office at 428-7421. Thank you.

To: Mr. John Mohrman

From: Jeffrey A. Holmes, Environmental Engineer

Subject: July 1, 1991 Sewage Pump Station Overflow

On Monday July 1, 1991 from about 5:30 A.M. until 9:10 A.M. liquid from a sewage pump station at the plant overflowed to our storm water collection system.

For the previous day, Sunday June 30, 1991 at about 4:30 P.M. the plant experienced an unusual power outage we believe was caused by lightning striking the plant. This caused many problems including a blown fuse on the control circuit to the pumps in the sewage pumping station.

This station receives only the discharge from three bathrooms in the Mod Paint building. From security logs, no overflow was noted during regular rounds or at 6:00 A.M. when one guard drove by the area. At about 7:00 A.M. the maintenance department was notified that the sump was overflowing. Fipefitters were sent to the area to diagnose the problem. When they realized it was an electical problem, Electricians were sent to correct the problem. Meanwhile, housekeeping personel made a dike to prevent any more liquid from reaching the storm drain. The sluice gates at the storm water ditch were also closed and the water pumped to the holding tanks.

The pumping station was back in operation by 9:30 A.M. At this time the dike was removed and the area was washed down for about a half hour forcing the overflowed liquid to the collection pump and holding tank. Water from the ditch was pumped to the holding tank until 4:30 P.M. that day, collecting at least 25,000 gallons of storm water and overflowed sewage water from the ditch. We believe this was sufficient time to collect any of the spilled liquid. We also wanted to leave some capacity in the collection tanks in case we had a more serious incident.

At approximately 11:30 A.M. I tried reporting the incident to Mr. Joe Mulrooney. However, since he wasn't in at the time, a message was left for him to return my call. At about 12:45 P.M. he still was not in, so I talked to Mr. Chris Cleaver who told me to call 1-800-662-8802. I called this number and reported the incident to Ms. Sandy Johnson. I was told a message would be given to the appropriate person.

At about 3:30 P.M. a sample was taken of the ditch below the sluice gates which contained water from the storm water collection system prior to closing the sluice gates. This sample is being analyzed for Fecal Coliform contamination.

Should additional information be required, please contact this office at 428-7421. Thank you.

Jeffrey A. Holmes
Environmental Engineer

cc: F. Rindhage
G. Bozak
P. Zavala



<DNREC_AWM_TierIIMgr@state.de.us>
03/18/2009 02:10 PM

To <john.w.peronti@gm.com>
cc
bcc
Subject Online Tier II Reporting System - Tier II Submission

This is an automated message from the Online Tier II Reporting System.

At 3/18/2009 2:10:02 PM, the following activity took place: Tier II Certification Letter Received for Report Year 2008.
The action was done by the System Administrator for GM Wilmington Assembly Plant, Facility ID : 977

The Tier II Submission ID is 7015



<DNREC_AWM_TierIIMgr@state.de.us>
03/18/2009 02:10 PM

To <john.w.peronti@gm.com>
cc
bcc
Subject Online Tier II Reporting System - Tier II Submission

This is an automated message from the Online Tier II Reporting System.

At 3/18/2009 2:10:02 PM, the following activity took place: Tier II Certification Letter Received for Report Year 2008.
The action was done by the System Administrator for GM Wilmington Assembly Plant, Facility ID : 977

The Tier II Submission ID is 7015

Wilmington Assembly General Motors Corporation
801 Boxwood Road
Wilmington, DE 19804

February 27, 2009

Delaware EPCRA Reporting Program
Air Quality Management Section
156 South State Street
Dover, DE 19901

Gentlemen:

The Annual Hazardous Chemical Inventory for reporting year 2008 has been submitted electronically for the facility listed below as required under Title III of the Federal Superfund Amendments and Reauthorization Act, and the Delaware Emergency Planning and Community Right-to-Know Act. If there are any questions regarding this report, our Regulatory Point of Contact is John W. Peronti, Sr. Environmental Engineer, phone number (302) 428-7422:

Facility ID: 977
GM Wilmington Assembly Plant
801 Boxwood Road
Newport, DE 19804

Data for this facility was certified and submitted online thru the Tier II Manager system on 2/26/2009 at 12:44:25 P.M. The Transmission number for the submission was 7015

Reporting Fees for this site have been calculated as follows:

Number of Hazardous Chemicals	65	X $40 =	$ 2,600
Number of EHS:	2	X $80 =	$ 160
Number of Mixtures < 10 % EHS	0	X $40 =	$ 0
Number of Mixtures >= 10 % EHS	1	X $80 =	$ 80
Number of M.V.F. for Retail Sales	0	NA	
Number of Exempt Substances	0	NA	
Total Number of Substances Reported	68	Total Fee Due	$ 2,840

"Chang, Belssi"
<Belssi.Chang@geotransinc.com>
02/25/2009 10:46 AM

To "john.w.peronti@gm.com" <john.w.peronti@gm.com>
cc "Locke, Scott" <Scott.Locke@TetraTech.com>
bcc
Subject Wilmington Draft SARA 312 Report

History: This message has been replied to.

John,

Here is the draft SARA 312 report for your review. Please note the following:

- Assumed lead acid battery info is the same as in 2007 (have not received confirmation from Keith Welding).
- The following were below the reporting threshold or were discontinued – therefore they are not being reported (but were previously reported in 2007):
  - Chemtreat CL 2871
  - Cyclone
  - Microkleen 7287
  - Omnisperse 2702
  - Assassin 650
  - Halogene T30
  - Weld-Aid Weld Kleen 350
- New products being reported are Chemtreat CL 4847, Acticide L30, and SUVA 409.
- For the Ridolene, Parco Purge 20, and Nitric Acid Tier2 forms, a storage location (labeled "Once per year event") was added to differentiate the bulk tanker volumes used during system boil outs from volumes typically found at the plant.

Please let me know if you have any questions or comments on the calculations or if I can finalize the report.

If there are no changes on the forms, the submission can be completed online by logging onto:

https://apps.dnrec.state.de.us/tier2/submit/

Username: gmde1
Password: GMwde2008

(case sensitive)

Thank you!
Belssi

Belssi Chang Lee | Project Engineer
Main: 410-990-4607 | Fax: 410-990-4749
belssi.chang@geotransinc.com

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844 West Street, Suite 200 | Annapolis, MD 21401 | www.geotransinc.com

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"Please consider your environmental responsibility before printing this e-mail"


SARA 312 Text_Wilmington_RY2008.doc


DRAFT Tier2Form WILMINGTON 2008.pdf


SARA 312 Calcs_Wilmington_RY2008.xls



<DNREC_AWM_TierIIMgr@state.de.us>
03/11/2009 10:38 AM

To <john.w.peronti@gm.com>
cc
bcc
Subject Online Tier II Reporting System - 311 Report

This is an automated message from the Online Tier II Reporting System.

At 3/11/2009, the following activity took place: 311 Submitted
Changes were made by username: gmdel for GM Wilmington Assembly Plant,
Facility ID : 977

The 311 Report ID is 290.

STATE OF DELAWARE

Hazardous Chemical Inventory (Tier II) Report

Certification Letter with Fee Summary

The Annual Hazardous Chemical Inventory for reporting year 2008 has been submitted electronically for the facility listed below as required under Title III Section 312 of the Federal Superfund Amendments and Reauthorization Act, and the Delaware Emergency Planning and Community Right-to-Know Act. If there are any questions regarding this report, our Regulatory Point of Contact is John Peronti, Sr. Env. Engineer, 3024287422

Facility ID: 977
GM Wilmington Assembly Plant
801 Boxwood Road
Newport, DE, 19804

Data for this facility was certified and submitted online thru the Tier II Manager system on 2/26/2009 12:44:25 PM. The transmission number for the submission was 7015.

Reporting fees for this site have been calculated as follows:

Number of Hazardous Chemical	65	x $40 =	$2,600.00
Number of Extremely Hazardous Substance (EHS)	2	x $80 =	$160.00
Number of Mix with <10% EHS	0		
Number of Mix with > or equal to 10% EHS	1	x $80 =	$80.00
Number of Motor Vehicle Fuel for Retail Sale	0		
Number of Voluntary Substances	0		
Total # of Substances Reported	68	Total Fee Due	$2,840.00

In addition to this certification letter, this submission also includes the following: (check off and complete items as necessary)

☐ Site Plot Plan (hardcopy attached)
☑ Site Plot Plan (submitted electronically)
☐ Fee Payment by Check (if required) : Check Number(s)
☑ Fee Payment by electronic payment (if required) : Confirmation #: 4923

I certify under penalty of law that I have personally examined and am familiar with the information contained in the referenced submittal and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

John Peronti, Sr. Env. Engineer
Name and Title of Owner/Operator or Owner/Operator's Authorized Representative

Signature

2/26/2009 12:44:25 PM
Date



Patrick J. McCarroll/US/GM/GMC
03/13/2009 11:09 AM

To JOHN W PERONTI/US/GM/GMC@GM
cc Leonard C. Hanson/US/GM/GMC@GM, Beatrice Schmidt/US/GM/GMC@GM
bcc
Subject Re: Fw: 2008 Tier II Report

John

Other than the DNREC form letter not containing the additional certification language we have on our letter, is there any substantive difference between the two? They both looked like the contained the same information to me. If there is no real substantive difference, then I would provide them their form version and keep a copy of both in our file.

Pat

Patrick J. McCarroll
(313) 665-4767 (8/255)
(313) 665-4896 (Fax)
(313) 549-1664 (Mobile)
patrick.j.mccarroll@gm.com
GM Legal Staff, M/C: 482-C24-D24
300 Renaissance Center, Detroit, MI 48265-3000

JOHN W PERONTI/US/GM/GMC



JOHN W PERONTI/US/GM/GMC
03/12/2009 09:55 AM

To Patrick J. McCarroll
cc Leonard C. Hanson/US/GM/GMC@GM
Subject Fw: 2008 Tier II Report

Pat,

Hate to bother you but, I received this e-mail from the DNREC. I spoke with Ms Splittorff and she indicated that she wanted the "State's" certification letter and not the one generated by GM. Attached are both letters. Let me know how to proceed.

Regards,
John W. Peronti
Sr. Environmental Engineer
GMVM Wilmington Assembly
801 Boxwood Road
Newport, DE 19804
302-428-7422 - Desk
302-463-7934 - Cell
—— Forwarded by JOHN W PERONTI/US/GM/GMC on 03/12/2009 09:52 AM ——



"Splittorff Shannon H. (DNREC)" <Shannon.Splittorff@state.de.us>
03/12/2009 09:27 AM

To "'john.w.peronti@gm.com'" <john.w.peronti@gm.com>
cc
Subject 2008 Tier II Report

Good morning John,

Our records indicate that the General Motors, Wilmington Assembly Plant has completed the on-line submission for the 2008 Tier II Reporting year. However, our records indicate that a signed Certification Letter with Fee Summary has not been received for this facility. In order to print a Fee Summary with Certification Letter, please follow the steps below:

1. Log into Tier II Manager, https://apps.dnrec.state.de.us/tier2/submit/
2. Once at the Reporting Guidance page, click "Continue."
3. At the main menu, click on the Facility/Site Name link.
4. Once at the Submissions Listings page, go to the 312 section and follow the 2008 row to the Certification Letter column and click on the "pen to paper" icon.
5. Print the copy "Certification Statement and Fee Summary" and have it signed by an authorized agent.
6. Submit the signed copy of the Certification Statement and Fee Summary to the address below.

Please be advised that the letter you sent as the Certification Statement is insufficient to meet the needs of this program. If you have any questions regarding this process, please feel free to give me a call at the number below. Please complete these steps as soon as possible as the reporting deadline was March 1.

Thanks, Shannon

Shannon H. Splittorff
DE EPCRA Program
Emergency Prevention & Response Branch, DNREC
156 South State Street
Dover, Delaware 19901
Phone: (302)739-9405
Fax: (302)739-3106

e-mail: Shannon.Splittorff@state.de.us
www.serc.delaware.gov/epcra.shtml

[attachment "EPRCA Tramission Letter RY 2008.DOC" deleted by Patrick J. McCarroll/US/GM/GMC] [attachment "DNREC Cert Letter0001.pdf" deleted by Patrick J. McCarroll/US/GM/GMC]



<DNREC_AWM_TierIIMgr@state.de.us>
02/26/2009 12:44 PM

To <john.w.peronti@gm.com>
cc
bcc
Subject Online Tier II Reporting System - Tier II Submission

This is an automated message from the Online Tier II Reporting System.

At 2/26/2009 12:44:49 PM, the following activity took place: Tier II Submission Completion for Report Year 2008.
The action was done by username: gmdel for GM Wilmington Assembly Plant, Facility ID : 977

The Tier II Submission ID is 7015



<DNREC_AWM_TierIIMgr@state.de.us>
03/12/2009 09:15 AM

To <john.w.peronti@gm.com>
cc
bcc
Subject Online Tier II Reporting System - Tier II Submission

This is an automated message from the Online Tier II Reporting System.

At 3/12/2009 9:15:48 AM, the following activity took place: Tier II Submission has been reviewed for Report Year 2008.
The action was done by the System Administrator for GM Wilmington Assembly Plant, Facility ID : 977

The Tier II Submission ID is 7015



"Chang, Belssi" <Belssi.Chang@geotransinc.com>
03/11/2009 10:02 AM

To "john.w.peronti@gm.com" <john.w.peronti@gm.com>
cc
bcc
Subject RE: SARA 311 Update

John,

The 311 update is ready to be certified. If you would please log on to:

https://apps.dnrec.state.de.us/tier2/submit/

Completed 3/11/09

Username: gmde1
Password: GMwde2008
(case sensitive)

On the first screen click on "Continue"
Click on "GM Wilmington Plant"
Scroll down to the "311 Reports" section
Click on Certify

All the products reported in the SARA 312 are included in this 311 update. Under the "Threshold Exceed Date" I entered 1/1/2008 for all products since many of the updates were replacement products (e.g., Orca 180 replaced by Orca 160) or new products in 2008 (e.g., SUVA 409). Let me know if you want me to change the date or if you have any questions.

Thanks!
Belssi

Belssi Chang Lee | Project Engineer
Main: 410-990-4607 | Fax: 410-990-4749
belssi.chang@geotransinc.com

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844 West Street, Suite 200 | Annapolis, MD 21401 | www.geotransinc.com

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"Please consider your environmental responsibility before printing this e-mail"

From: Chang, Belssi
Sent: Tuesday, March 10, 2009 1:06 PM
To: 'john.w.peronti@gm.com'
Subject: SARA 311 Update
Importance: High

Hi John,

Following the recent SARA 312 submission, I took a look at the SARA 311 update on the DNREC – see attached (it's from 2007). The following products need to be added or updated:

Chemtreat CL 4847
Chemtreat CL 49
Ferric Chloride Solution
Acticide LA Biocide
Acticide L30 Biocide
Filmex
Orca 160 (replaces Orca 180)
Primer 40
Plastic Cleaner 2595
Parcosol 302/402 (replaces Parcosol 130)
SUVA 409

I can update online - let me know if I can proceed.

Thanks,
Belssi

Belssi Chang Lee | Project Engineer
Main: 410-990-4607 | Fax: 410-990-4749
belssi.chang@geotransinc.com

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TETRA TECH, INC.

GM Wilmington Assembly Plant
Newport, Delaware

SARA 312 TIER TWO INVENTORY REPORT
REPORTING YEAR 2008

Prepared By

Tetra Tech, Inc.
Ann Arbor, Michigan

February 2009

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Purpose

Tier Two Emergency and Chemical Inventory reports for reporting year 2008 are required under Section 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA, or Title III of the Superfund Amendments and Reauthorization Act). Reporting is required to provide the State emergency response commission, local emergency planning committee, and local fire department with the necessary information needed to plan for and respond to emergencies. Reports are due by March 1st for the previous calendar year.

What Is Reported

Chemicals subject to the Section 312 include any substance for which the facility must maintain a Manufacturer's Material Data Safety Sheet (MSDS) under OSHA's Hazard Communication Standard. Chemicals excluded from Tier Two requirements include:

- Food, food additives, color additives, drug or cosmetics regulated by the Food and Drug Association,
- Any substance present as a solid in any manufactured item to the extent exposure does not occur under normal conditions of use,
- Any substance to the extent it is used for personal, family, or household purposes, or is present in the same form and concentration as a product packaged for distribution and use by the general public,
- Any substance to the extent it is used in a research laboratory or a hospital or other medical facility under the direct supervision of a technically qualified individual,
- Any substance to the extent it is used in routine agricultural operations or is a fertilizer held for sale by a retailer to the ultimate customer.

Chemical Identification

Reportable chemicals were identified through review of storage tank capacities, chemical storage inventories and process knowledge. Chemical product inventories were aggregated for the entire facility, including the powerhouse and wastewater treatment plant. MSDSs and the GM Supplier Portal Reports were reviewed in order to identify Extremely Hazardous Substances (EHSs) as well as determine hazard classifications and densities. As required by the State of Delaware, EPCRA Reporting Program, Emergency Prevention & Response Branch (DNREC), those products exceeding 500 pounds or 55 gallons for hazardous chemicals or the TPQ for EHSs were reported for all sites.

What Is Submitted

Completed Tier Two forms must be submitted for hazardous chemicals present at the facility at any time during the previous calendar year in quantities equal to or greater than the established threshold amounts (500 pounds or 55 gallons for hazardous chemicals, the lesser of 500 pounds or the threshold planning quantity for extremely hazardous substances). As defined at 40 CFR Part 370.2, a facility includes all buildings,

equipment, structures, and other stationary items that are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person. This includes manmade and natural structures in which chemicals are purposefully placed or removed through human means such that it functions as a containment structure for human use. Therefore, hazardous chemicals and EHSs located on-site in process equipment and holding tanks must be included in threshold determinations.

Facility Information

Title	Plant Information
Reporting Year	2008
Facility Name	GM Wilmington Assembly Plant
Facility Address	801 Boxwood Road, Newport, Delaware 19804
County	New Castle
Parent Company or Public Entity Identification	General Motors Corporation
Address	300 Renaissance Center, Detroit, Michigan 48265
Operating Division Name	GM Vehicle Manufacturing
Facility Name	GM Wilmington Assembly Plant
Mailing Address	801 Boxwood Road, Newport, Delaware 19804
NAICS Code	336111
Dun & Bradstreet Number	00-535-6811
Emergency Contact	Plant Security
Emergency 24 Hour Phone	(302) 428-7911
Contact 1	John Peronti
Contact 1 Phone	(302) 428-7422, cell (302) 463-7934
Contact 1 Fax	(302) 428-7246
Contact 1 Email	john.w.peronti@gm.com
Alternate Contact	Jeff Holmes
Alternate Contact Phone	(302) 428-7421, cell (302) 463-7935
Alternate Contact Fax	(302) 428-7246
Alternate Contact Email	jeff.holmes@gm.com
Fire Department	Five Points Fire Company
Fire Department Phone Number	911 (Business Phone: 302-994-0114)
Latitude	39-43-41
Longitude	075-36-39
Number of Employees	600
RCRA ID Number	DED002369205
NPDES Permit Number	DE0000523
TRI ID Number	19899CPCWLPOBOX
Duly Authorized Representative	Robert F. Dolan, Plant Manager
Office Telephone Number	(302) 428-7010

Report Development Methodology

The report was completed according to the following steps:

1. Maximum and average chemical storage quantities and container types were obtained from the following reports/sources:
    - GM Supplier Portal Reports - Tier 2 Worksheet Report and EHS Report
    - Static Inventory data for drum and tote storage and production areas provided by the Plant Environmental Engineer on February 9, 2009
    - Facility Walk-Through on February 9, 2009
    - Information from Chemical Management (Haas/Ed Schreppler) on February 13, 2009

2. Hazardous chemical storage areas are depicted on the following site map provided by the Plant Environmental Engineer (if applicable).
    - GM Wilmington Assembly Plant, SARA Information, Chemical Storage Locations, February 2008.

3. Chemicals with maximum on-site storage potentially over over 500 pounds or 55 gallons or the TPQ if an Extremely Hazardous Substance, based on information available in the sources listed above were identified. Extremely Hazardous Substances in a mixture are only required to be included in the threshold evaluation if their concentration is above de minimus quantities (greater than 1 percent, 0.1 percent if carcinogenic). In addition to typical maximum and average storage quantities for chemicals, container type, locations, HMCS ID, and previous year's maximum and average quantities were identified. Specific gravities were obtained from HMCS.

4. All products over the above identified threshold were entered into Delaware's online reporting system Tier II Manager™ (https://apps.dnrec.state.de.us/tier2/submit)

5. A rough draft of the report, with all support documentation available, was provided and reviewed with the Plant Environmental Engineer.

6. Necessary updates were completed and the final report was submitted to the Plant Environmental Engineer.

Assumptions, References, Calculations, Exemptions, and Exceptions

1. Maximum and average storage quantities were based on bulk storage capacities of any containers identified in the facility storage inventories, purchase inventory data, or identified during the facility walk through. The inventory data was then reviewed against the Tier 2 Worksheet Report and EHS Report. These reports summarize product threshold data based on total transactions for the facility. The Tier 2 Worksheet Report and EHS Report were used to assist in determining report accuracy. The Tier 2 Worksheet Report and EHS Report were used to check large chemical purchases compared to the floor inventory and/or facility storage inventories.

2. In the Tier 2 Worksheet Report, the calculated "maximum" on site is determined based on 1.5 times the maximum transaction amount.

3. Road salt should be included on the Tier Two Chemical inventory reports if it is stored on site in bulk quantities greater than 10,000 pounds. If the facility purchases 50-pound bags of salt that are packaged for distribution to the general public then it is exempt from SARA 312 reporting.

4. Assumptions regarding any quantity data supplied were always based on the "worst case" scenario.

5. Storage quantities for atmospheric gases (i.e., nitrogen, argon, carbon dioxide, and ammonia) were assumed to be constant based on tank capacities.

6. Total sulfuric acid amount in lead acid batteries was calculated using the total number of batteries and approximate weight of the battery reported by the Plant's Mobile Equipment Supervisor, Keith Welding. It was assumed that the sulfuric acid content is 25% of the weight of the battery.

7. Physical and Health Hazards indicated on the Tier II Form were obtained by one or more of the following methods: a) HMCS, b) facility-specific knowledge obtained from the Plant Environmental Engineer, c) hazard determination made by Regulatory Reporting staff (see SARA 312 Hazard Determinations guidance document) and/or e) hazard tags used from prior reporting years. It is assumed that the Plant Environmental Engineer has reviewed the physical and health Hazards indicated for each product.

Comparison of Previous Year Reportable Chemicals

The results of our analysis indicate the GM Wilmington Assembly Plant is required to submit Tier Two forms for 65 different products and three (3) EHS chemicals. The reportable chemicals are listed below. In the previous year, 2007, 69 different products and three EHS chemicals were reported; a comparison to the chemicals reported in the previous year (2007) is found in Appendix C. Products not being reported are Chemtreat CL 2871, Cyclone, Microkleen 7287, Omnisperse 2702, Assassin 650, Halogene T30, and Weld-Aid Weld Kleen 350 as the amount purchased/stored was below the reporting threshold or they were discontinued. New products for 2008 include Chemtreat CL 4847, Acticide L30, and SUVA 409.

2008 Reportable Chemicals/Products

2008 REPORTABLE CHEMICALS/PRODUCTS			
CAS #	**Chemical Name**	**CAS #**	Chemical Name
74-86-2	Acetylene	N/A	Hasco Jupiter
107-21-1	Antifreeze Coolant Texaco	N/A	Hasco MD NF
N/A	Architectural Paints	N/A	Hasco Orca 160C Flocculent
7440-37-1	Argon, Liquid and Compressed	N/A	Hasco Shark 2001
N/A	Automotive Sealers	N/A	Hasco Tahoe
N/A	Brake Fluid Delco Supreme	N/A	Henkel 1523R Parco Cleaner
124-38-9	Carbon Dioxide - Air Mixture	N/A	Henkel 1523S Parco Cleaner
N/A	Chemtreat BL 1106	N/A	Henkel Accelerator 131
N/A	Chemtreat BL 122	N/A	Henkel Bonderite 958 Replenisher
N/A	Chemtreat BL 1558	N/A	Henkel Fixodine Z-8
N/A	Chemtreat CL 4847*	N/A	Henkel P-3 E Coat Cleaner 2250
N/A	Chemtreat CL 2112	N/A	Henkel Parco Additive 22
N/A	Chemtreat CL 49	N/A	Henkel Parco Primer 40
68476-34-6	Diesel Fuel Oil #2	N/A	Henkel Plastic Cleaner 2595*
7705-08-0	Ferric Chloride Solution	N/A	Henkel Parcolene 91
75-45-6	Freon 22	N/A	Henkel Preclean 2960
68553-00-4	Fuel Oil #6	N/A	Henkel Ridolene 422E
8006-61-9	Gasoline	1333-74-0	Hydrogen (H2)
N/A	Haas Acticide LA Biocide	N/A	Janitorial Cleaners
N/A	Haas Acticide L30 Biocide*	N/A	Oils and Lubes
N/A	Haas Barracuda 100	7782-44-7	Oxygen, Compressed
N/A	Haas Filmex	N/A	Parco Purge 20/Deoxidine A-500
N/A	Haas Hyperstrip	N/A	Parcosol 302 & Solvents
N/A	Haas Klenziod CWT 8954	N/A	Power Steering Fluid
N/A	Haas MBC-215	N/A	Quadrasperse Cl 4846
N/A	Haas Omnicool 2602	7681-52-9	Sodium Hypochlorite
N/A	Hasco Assassin 800	N/A	Haas Omnicool 3000N

2008 REPORTABLE CHEMICALS/PRODUCTS			
N/A	Haas P3 Paint Line Cleaner 213C/200	N/A	Solvent Based Paints
N/A	Haas Spectrux NX114	N/A	SUVA 134A
N/A	Haas Slimicide AQ	N/A	SUVA 409A*
N/A	Haas Snow White Booth Coatings	N/A	Water Based Paints
N/A	Haas Terminator 100	N/A	Welding Rods & MIG Wire
		67-56-1	Windshield Washer Solvent

Extremely Hazardous Substances	
7664-93-9	Sulfuric Acid
7664-93-9	Lead Acid Batteries (Sulfuric Acid)
7697-37-2	Nitric acid (Parco Purge 20)

Appendix A

Tier II Certification Letter &

Tier II Forms

STATE OF DELAWARE

Hazardous Chemical Inventory (Tier II) Report

Certification Letter with Fee Summary

The Annual Hazardous Chemical Inventory for reporting year 2008 has been submitted electronically for the facility listed below as required under Title III Section 312 of the Federal Superfund Amendments and Reauthorization Act, and the Delaware Emergency Planning and Community Right-to-Know Act. If there are any questions regarding this report, our Regulatory Point of Contact is John Peronti, Sr. Env. Engineer, 3024287422

Facility ID: 977
GM Wilmington Assembly Plant
801 Boxwood Road
Newport, DE, 19804

Data for this facility was certified and submitted online thru the Tier II Manager system on 2/26/2009 12:44:25 PM. The transmission number for the submission was 7015.

Reporting fees for this site have been calculated as follows:

Number of Hazardous Chemical	65	x $40 =	$2,600.00
Number of Extremely Hazardous Substance (EHS)	2	x $80 =	$160.00
Number of Mix with <10% EHS	0		
Number of Mix with > or equal to 10% EHS	1	x $80 =	$80.00
Number of Motor Vehicle Fuel for Retail Sale	0		
Number of Voluntary Substances	0		
Total # of Substances Reported	68	Total Fee Due	$2,840.00

In addition to this certification letter, this submission also includes the following: (check off and complete items as necessary)

☐ Site Plot Plan (hardcopy attached)
☑ Site Plot Plan (submitted electronically)
☐ Fee Payment by Check (if required) : Check Number(s)
☑ Fee Payment by electronic payment (if required) : Confirmation #: 4923

I certify under penalty of law that I have personally examined and am familiar with the information contained in the referenced submittal and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

John Peronti , Sr. Env. Engineer
Name and Title of Owner/Operator or Owner/Operator's Authorized Representative

Signature

2/26/2009 12:44:25 PM
Date

Chang, Belssi

From: john.w.peronti@gm.com
Sent: Thursday, February 26, 2009 1:01 PM
To: Chang, Belssi
Subject: Re: Wilmington Draft SARA 312 Report

Belsi,

Submitted information at 12:44:25 P.M. February 26, 2009. Submittal Number 7015.

Regards,
John W. Peronti
Sr. Environmental Engineer
GMVM Wilmington Assembly
801 Boxwood Road
Newport, DE 19804
302-428-7422 – Desk
302-463-7934 - Cell

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL FACILITY FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City	Newport	1.6 State	DE
1.7 Zip	19804	1.8 County	New Castle
1.9 EIN		1.10 Dun & Brad	002369205
1.11 NAICS	336111		
1.12 SIC Code(s) Or Business Description	3711		

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City	Newport	2.4 State	DE
2.5 Zip	19804	2.6 Phone	3024287010

3. REGULATORY POINT OF CONTACT

3.1 Name	John Peronti		
3.2 Title	Sr. Env. Engineer		
3.3 Mail Address	801 Boxwood Road		
3.4 City	Wilmington	3.5 State	DE
3.6 Zip	19804	3.7 Phone	3024287422
3.8 Email	john.w.peronti@gm.com		

4. EMERGENCY CONTACTS

4.1 Site Phone 3024287911 — 4.2 Site Fax 3024287246

	4.3 Name	4.4 Title	4.5 Work Phone	4.6 24-Hr. Ph.	4.7 Pager#
CONTACT # 1 (Mandatory)	General Motors	Plant Security	3024287911	3024287911	
CONTACT # 2 (Mandatory)	Terry Tyndall	Safety Supervisor	3024287992	3024287911	7328597083
CONTACT # 3 (Mandatory)	John Peronti	Sr. Env. Engineer	3024287422	3024287911	3024637934
CONTACT # 4 (Optional)	Jeff Holmes	Sr. Env. Engineer	3024287421	3024287911	3024637935

5. REPORTING STATUS

5.1 Reporting Period From January 1, 2008 to December 31, 2008

5.2 Reporting Status - Check Option A, B, C below

OPTION A ☐	OPTION B ☐	OPTION C ☑
No chemicals on site. Submitting annual facility form only.	Chemicals on site but not reportable. Submitting annual facility form only.	Reportable chemicals on site. Submitting annual chemical inventory form(s) and plot plan with this form only.

5.3 Optional Attachments-If Checked Option C under 5.2 answer the following N/A ☐

List of site coordinate abbreviations attached? YES ☐ NO ☑

Description of dikes and other safeguard meaures attached? YES ☐ NO ☑

6. REPORTING FEE SUMMARY N/A ☐

6.1 Exempt Government Facility?	YES ☐	NO ☑	
6.2 Exempt Non-Profit Facility?	YES ☐	NO ☑	
6.3 Hazardous Chemical	65	x $40	$2,600.00
6.4 Extremely Hazardous Substance(EHS)	2	x $80	$160.00
6.5 Mix with < 10% EHS	0	x $40	$0.00
6.6 Mix with > or equal to 10% EHS	1	x $80	$80.00
6.7 Motor Vehicle Fuel for Retail Sale	0	x $0	$0.00
6.8 Voluntary	0	x $0	$0.00
6.9 Total Reporting Fee Due			$2,840.00

7. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	74862
4.3 Chemical Name	ACETYLENE
4.4 Description (Answer All)	
Pure	YES ☑ NO ☐
Mix	YES ☐ NO ☑
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐ NO ☑
Delayed (Chronic)	YES ☐ NO ☑

Solid	YES ☐ NO ☑
Liquid	YES ☐ NO ☑
Gas	YES ☑ NO ☐
Fire	YES ☑ NO ☐
Sudden Release of Pressure	YES ☑ NO ☐
Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical ☑	Motor Vehicle Fuel for Retail Sale ☐
Mix with < 10% EHS ☐	Extremely Hazardous Substance (EHS) ☐
	Mix with > or equal to 10% EHS ☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2268
7.2 Average daily amount in pounds	623
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	2268	COLUMN BB-12 OUTSIDE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
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1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☒
4.2 CAS Number	107211
4.3 Chemical Name	ANTIFREEZE COOLANT TEXACO
4.4 Description (Answer All)	Solid YES ☐ NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒ NO ☐
Mix YES ☒ NO ☐	Gas YES ☐ NO ☒
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒ NO ☐	Sudden Release of Pressure	YES ☐ NO ☒
Delayed (Chronic)	YES ☒ NO ☐	Reactivity	YES ☐ NO ☒
		Fire	YES ☐ NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	69639
7.2 Average daily amount in pounds	39805
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	A	1	4	69639	TANK FARM
# 2	D	1	4	440	POWER HOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

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2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	ARCHITECTURAL PAINTS			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☑	NO ☐
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1184
7.2 Average daily amount in pounds	888
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	F	1	4	4720	COLUMN A-17
# 2	F	2	4	125	COLUMN A-17
# 3	F	1	4	136	COLUMN BB-19
# 4	F	1	4	755	TIRE BUILDING
# 5	F	2	4	125	TIRE BUILDING
# 6	F	1	4	660	COLUMN QQ-23
# 7	F	1	4	315	POWERHOUSE
# 8	F	2	4	125	POWERHOUSE
# 9	F	1	4	170	WASTE TREATMENT BUILDING
# 10	F	2	4	50	WASTE TREATMENT BUILDING

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

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2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☒
4.2 CAS Number	7440371			
4.3 Chemical Name	ARGON, COMPRESSED & LIQUID			
4.4 Description (Answer All)		Solid	YES ☐	NO ☒
Pure	YES ☒ NO ☐	Liquid	YES ☒	NO ☐
Mix	YES ☐ NO ☒	Gas	YES ☒	NO ☐
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒ NO ☐	Fire	YES ☐	NO ☒
Delayed (Chronic)	YES ☐ NO ☒	Sudden Release of Pressure	YES ☒	NO ☐
		Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	148543
7.2 Average daily amount in pounds	28773
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	104000	COLUMN BB-15 OUTSIDE
# 2	L	2	4	14854	COLUMN BB-21
# 3	L	2	4	14854	COLUMN C-17
# 4	L	2	4	14854	COLUMN NN-21

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	AUTOMOTIVE SEALERS			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	105574
7.2 Average daily amount in pounds	35073
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	80574	TIRE BUILDING
# 2	D	1	4	15000	COLUMN FF-27
# 3	D	1	4	5000	COLUMN L-5
# 4	D	1	4	5000	COLUMN K-19

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	BRAKE FLUID DELCO SUPREME			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐ NO ☑	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	13500
7.2 Average daily amount in pounds	8100
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	5400	K14 (NEAR FINAL REPAIR AREA)
# 2	O	1	4	8100	TIRE BUILDING

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	124389			
4.3 Chemical Name	CARBON DIOXIDE-AIR MIXTURE			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☐	NO ☑
Mix	YES ☑ NO ☐	Gas	YES ☑	NO ☐
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐ NO ☑	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☑	NO ☐
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	13432
7.2 Average daily amount in pounds	1669
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	576	COLUMN AA-20
# 2	L	2	4	576	CENTRAL TOOLING
# 3	L	2	4	576	COLUMN AA-22
# 4	L	2	4	576	COLUMN BB-15.5
# 5	L	2	4	576	COLUMN C-17
# 6	L	2	4	9403	COLUMN BB-14 OUSTIDE
# 7	L	2	4	576	COLUMN NN-22
# 8	L	2	4	576	COLUMN SS-25

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	CHEMTREAT BL 1106	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Sudden Release of Pressure	YES ☐ NO ☑
Delayed (Chronic)	YES ☑	NO ☐	Reactivity	YES ☐ NO ☑
			Fire	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1735
7.2 Average daily amount in pounds	1193
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	1735	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	CHEMTREAT BL 122			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1704
7.2 Average daily amount in pounds	1193
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	1704	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — Signature
2/26/2009 12:44 PM — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	CHEMTREAT BL 1558	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Sudden Release of Pressure	YES ☐ NO ☑
Delayed (Chronic)	YES ☑	NO ☐	Reactivity	YES ☐ NO ☑
			Fire	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	662
7.2 Average daily amount in pounds	440
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	662	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	CHEMTREAT CL 2112			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1547
7.2 Average daily amount in pounds	1009
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	1547	POWER HOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — Signature

2/26/2009 12:44 PM — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	CHEMTREAT CL 4847			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☑ NO ☐	Liquid	YES ☑	NO ☐
Mix	YES ☐ NO ☑	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1591
7.2 Average daily amount in pounds	795
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	1591	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	CHEMTREAT CL 49			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	3660
7.2 Average daily amount in pounds	1220
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	3660	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — Signature

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	68476346			
4.3 Chemical Name	DIESEL FUEL OIL #2			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	27900
7.2 Average daily amount in pounds	27900
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	A	1	4	3300	GENERATOR ON NORTH SIDE OF BLDG
# 2	A	1	4	3000	GENERATOR ON WEST SIDE OF BLDG
# 3	A	1	4	2200	GENERATOR ON EAST SIDE OF BLDG
# 4	A	1	4	7200	GENERATOR IN WWTP
# 5	A	1	4	2000	GENERATOR IN PAINT MIX ROOM
# 6	A	1	4	2200	GENERATOR IN POWERHOUSE
# 7	A	1	4	2000	PUMP HOUSE EAST WATER TOWER
# 8	A	1	4	2000	PUMP HOUSE NORTH WATER TOWER
# 9	A	1	4	2000	PUMP HOUSE SOUTH WATER TOWER
# 10	A	1	4	2000	POWERHOUSE BASEMENT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	7705080			
4.3 Chemical Name	FERRIC CHLORIDE SOLUTION			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Reactivity	YES ☑	NO ☐

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	917
7.2 Average daily amount in pounds	917
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	917	WASTEWATER TREATMENT PLANT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE	2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	75456	
4.3 Chemical Name	FREON 22	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☑ NO ☐	Liquid YES ☑	NO ☐
Mix YES ☐ NO ☑	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐	NO ☑	
Delayed (Chronic)	YES ☐	NO ☑	
Fire	YES ☐	NO ☑	
Sudden Release of Pressure	YES ☑	NO ☐	
Reactivity	YES ☐	NO ☑	

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	788
7.2 Average daily amount in pounds	140
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	6	788	COLUMN AA-16

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	68553004			
4.3 Chemical Name	FUEL OIL #6			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑
5. PHYSICAL HEALTH HAZARDS (Answer All)		Fire	YES ☑	NO ☐
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☐	NO ☑
6. FEE CLASSIFICATION(Check only one)		Motor Vehicle Fuel for Retail Sale		☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)		☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS		☐

7. INVENTORY

7.1 Maximum daily amount in pounds	562821
7.2 Average daily amount in pounds	562821
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	A	1	5	562821	TANK FARM

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	8006619			
4.3 Chemical Name	GASOLINE			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☑	NO ☐
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	132681
7.2 Average daily amount in pounds	89760
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	F	1	4	123	TIRE BUILDING
# 2	F	1	4	31	COLUMN AA02, AA05, BB02, CENTRAL TOOLING
# 3	F	1	4	92	COLUMN AA13.5, AA15, BB-13.5
# 4	F	1	4	31	COLUMN HH-28
# 5	F	1	4	31	PUMP HOUSE
# 6	F	1	4	31	COLUMN B-UU-23
# 7	F	1	4	62	POWER HOUSE
# 8	F	1	4	62	COLUMN U-9.5
# 9	A	1	4	75060	TANK FARM
# 10	R	1	4	72	COLUMN M-10.5
# 11	A	1	4	75060	TANK FARM

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City	Newport
1.6 State	DE
1.7 Zip	19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City	Newport	2.4 State	DE
2.5 Zip	19804	2.6 Phone	3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☒
4.2 CAS Number	N/A	
4.3 Chemical Name	HAAS ACTICIDE L30 BIOCIDE	
4.4 Description (Answer All)	Solid	YES ☐ NO ☒
Pure YES ☒ NO ☐	Liquid	YES ☒ NO ☐
Mix YES ☐ NO ☒	Gas	YES ☐ NO ☒
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒ NO ☐	Fire	YES ☐ NO ☒
Delayed (Chronic)	YES ☒ NO ☐	Sudden Release of Pressure	YES ☐ NO ☒
		Reactivity	YES ☐ NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2439
7.2 Average daily amount in pounds	1083
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	2439	COLUMN FF-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HAAS ACTICIDE LA BIOCIDE	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic) YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	8257
7.2 Average daily amount in pounds	1376
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	8257	COLUMN FF-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☒
4.2 CAS Number	N/A
4.3 Chemical Name	HAAS BARRACUDA 100
4.4 Description (Answer All)	Solid YES ☐ NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒ NO ☐
Mix YES ☒ NO ☐	Gas YES ☐ NO ☒
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒	NO ☐	Fire	YES ☐	NO ☒
Delayed (Chronic)	YES ☐	NO ☒	Sudden Release of Pressure	YES ☐	NO ☒
			Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	55982
7.2 Average daily amount in pounds	10150
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	C	1	4	31275	COLUMN B-SS-24
# 2	O	1	4	3440	COLUMN B-SS-25
# 3	E	1	4	2752	COLUMN B-SS-25
# 4	O	1	4	6881	COLUMN CC-28
# 5	C	1	4	7506	WASTEWATER TREATMENT PLANT
# 6	E	1	4	4128	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
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1.4 Development/Industrial Park			
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2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HAAS FILMEX	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic) YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	542
7.2 Average daily amount in pounds	362
7.3 Number of days on site	60

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	542	COLUMN B-RR-24

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant				
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1.5 City Newport	1.6 State DE	1.7 Zip 19804			

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS HYPERSTRIP			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure YES ☐ NO ☑		Liquid	YES ☑	NO ☐
Mix YES ☑ NO ☐		Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic) YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	4155
7.2 Average daily amount in pounds	2770
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	4155	COLUMN QQ-16

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — Signature

2/26/2009 12:44 PM — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS KLENZIOD CWT 8954			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	690
7.2 Average daily amount in pounds	460
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	690	COLUMN QQ-17

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS MBC-215			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	3000
7.2 Average daily amount in pounds	500
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	250	COLUMN QQ-15
# 2	D	1	4	250	COLUMN CC-28
# 3	D	1	4	2000	COLUMN B-SS-26
# 4	D	1	4	250	COLUMN W-11
# 5	D	1	4	250	COLUMN KK-11

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant				
1.2 Facility/Site Name	GM Wilmington Assembly Plant				
1.3 Physical Location/Street	801 Boxwood Road				
1.4 Development/Industrial Park					
1.5 City Newport	1.6 State DE	1.7 Zip 19804			

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS OMNICOOL 2602			
4.4 Description (Answer All)	Solid	YES ☐	NO ☑	
Pure YES ☐ NO ☑	Liquid	YES ☑	NO ☐	
Mix YES ☑ NO ☐	Gas	YES ☐	NO ☑	
4.5 Substance is or contains EHS?			YES ☐	
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.			N/A ☑	

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☐	NO ☑	
Delayed (Chronic) YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑	
	Reactivity	YES ☐	NO ☑	

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical ☑	Motor Vehicle Fuel for Retail Sale ☐		
Mix with < 10% EHS ☐	Extremely Hazardous Substance (EHS) ☐		
	Mix with > or equal to 10% EHS ☐		

7. INVENTORY

7.1 Maximum daily amount in pounds	6000
7.2 Average daily amount in pounds	2000
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	500	COLUMN CC-28
# 2	E	1	4	500	COLUMN QQ-15
# 3	E	1	4	4500	COLUMN B-SS-25
# 4	E	1	4	500	COLUMN B-SS-26

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS OMNICOOL 3000N			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	5283
7.2 Average daily amount in pounds	1176
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	5283	COLUMN B-SS-23

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City	Newport
1.6 State	DE
1.7 Zip	19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City	Newport
2.4 State	DE
2.5 Zip	19804
2.6 Phone	3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☒
4.2 CAS Number	N/A
4.3 Chemical Name	HAAS SLIMICIDE AQ
4.4 Description (Answer All)	Solid YES ☐ NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒ NO ☐
Mix YES ☒ NO ☐	Gas YES ☐ NO ☒
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒	NO ☐	Fire YES ☐ NO ☒
Delayed (Chronic)	YES ☒	NO ☐	Sudden Release of Pressure YES ☐ NO ☒
			Reactivity YES ☐ NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2718
7.2 Average daily amount in pounds	453
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	2718	COLUMN B-SS-24

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS SNOW WHITE BOOTH COATINGS			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	3715
7.2 Average daily amount in pounds	1238
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	2477	COLUMN DD-28
# 2	D	1	4	1238	COLUMN 2-AA-22

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Name and official title of owner/operator or authorized representative

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE	2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HAAS SPECTRUS NX114	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☐	NO ☑	Sudden Release of Pressure	YES ☐ NO ☑
			Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	825
7.2 Average daily amount in pounds	550
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	825	TIRE BUILDING

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HAAS TERMINATOR 100			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2539
7.2 Average daily amount in pounds	1740
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	2539	COLUMN B-SS-24
# 2	E	1	4	580	COLUMN CC-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HASCO ASSASSIN 800	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic) YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	6037
7.2 Average daily amount in pounds	1337
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	6037	COLUMN B-RR-23

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HASCO JUPITER			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	3713
7.2 Average daily amount in pounds	2475
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	3713	COLUMN QQ-16

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☒
4.2 CAS Number	N/A	
4.3 Chemical Name	HASCO MD NF	
4.4 Description (Answer All)	Solid YES ☐	NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒	NO ☐
Mix YES ☒ NO ☐	Gas YES ☐	NO ☒
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☒ NO ☐	Fire	YES ☐	NO ☒
Delayed (Chronic) YES ☒ NO ☐	Sudden Release of Pressure	YES ☐	NO ☒
	Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

	Motor Vehicle Fuel for Retail Sale		☐
Hazardous Chemical ☒	Extremely Hazardous Substance (EHS)		☐
Mix with < 10% EHS ☐	Mix with > or equal to 10% EHS		☐

7. INVENTORY

7.1 Maximum daily amount in pounds	6728
7.2 Average daily amount in pounds	3579
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	4010	COLUMN QQ-16
# 2	O	1	4	2718	COLUMN 2-CC-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
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1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HASCO ORCA 160C			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1985
7.2 Average daily amount in pounds	448
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	1419	COLUMN B-SS-24
# 2	D	1	4	567	COLUMN CC-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HASCO SHARK 2001	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐ NO ☑
		Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	59314
7.2 Average daily amount in pounds	53489
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	C	1	4	47664	COLUMN B-SS-24
# 2	O	1	4	5940	COLUMN CC-28
# 3	O	1	4	5940	COLUMN B-SS-25

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HASCO TAHOE			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
		Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	8290
7.2 Average daily amount in pounds	2870
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	2870	COLUMN NN-18
# 2	O	1	4	2870	COLUMN B-QQ-24
# 3	O	1	4	2870	COLUMN B-QQ-16

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

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2. OWNER/OPERATOR

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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL 1523R PARCO CLEANER			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	66462
7.2 Average daily amount in pounds	40810
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	16772	COLUMN FF-28
# 2	C	1	4	66462	COLUMN LL-30

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant				
1.2 Facility/Site Name	GM Wilmington Assembly Plant				
1.3 Physical Location/Street	801 Boxwood Road				
1.4 Development/Industrial Park					
1.5 City Newport	1.6 State DE	1.7 Zip 19804			

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret					YES ☐	NO ☒
4.2 CAS Number	N/A					
4.3 Chemical Name	HENKEL 1523S PARCO CLEANER					
4.4 Description (Answer All)			Solid		YES ☐	NO ☒
Pure	YES ☐	NO ☒	Liquid		YES ☒	NO ☐
Mix	YES ☒	NO ☐	Gas		YES ☐	NO ☒
4.5 Substance is or contains EHS?						YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.						N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒	NO ☐	Fire	YES ☐	NO ☒
Delayed (Chronic)	YES ☐	NO ☒	Sudden Release of Pressure	YES ☐	NO ☒
			Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	5170
7.2 Average daily amount in pounds	5170
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	990	COLUMN FF-28
# 2	O	1	4	2585	COLUMN FF-29
# 3	O	1	4	2585	COLUMN JJ-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

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1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL ACCELERATOR 131			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	6866
7.2 Average daily amount in pounds	6866
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	3443	COLUMN FF-28
# 2	O	1	4	3443	COLUMN FF-29
# 3	O	1	4	3443	COLUMN GG-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
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2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL BONDERITE 958 REPLENISHER			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	62700
7.2 Average daily amount in pounds	38500
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	3025	Column FF-28
# 2	O	1	4	3025	Column JJ-20
# 3	C	1	4	62700	Column LL-30

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
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1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
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2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL FIXODINE Z-8			
4.4 Description (Answer All)		Solid	YES ☑	NO ☐
Pure	YES ☐ NO ☑	Liquid	YES ☐	NO ☑
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2268
7.2 Average daily amount in pounds	835
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	G	1	4	2250	COLUMN FF-28
# 2	G	1	4	1125	COLUMN EE-30

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	N/A
4.3 Chemical Name	HENKEL P3 ECOAT CLEANER 2250
4.4 Description (Answer All)	Solid YES ☐ NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑ NO ☐
Mix YES ☑ NO ☐	Gas YES ☐ NO ☑
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐ NO ☑
		Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1880
7.2 Average daily amount in pounds	1880
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	8860	COLUMN GG-28
# 2	E	1	4	8860	COLUMN LL-23
# 3	E	1	4	8860	COLUMN LL-28
# 4	E	1	4	17720	COLUMN LL-27

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL P3 PAINT LINE CLEANER 213C/200			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	22883
7.2 Average daily amount in pounds	4589
7.3 Number of days on site	60

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	22883	PAINT BUILDING

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL PARCO ADDITIVE 22			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	33695
7.2 Average daily amount in pounds	2000
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	1000	COLUMN 2-GG-28
# 2	E	1	4	30000	COLUMN FF-28
# 3	E	1	4	2000	COLUMN GG-28
# 4	E	1	4	2000	COLUMN LL-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer — Signature

2/26/2009 12:44 PM — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☒
4.2 CAS Number	N/A	
4.3 Chemical Name	HENKEL PARCO PRIMER 40	
4.4 Description (Answer All)	Solid YES ☐	NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒	NO ☐
Mix YES ☒ NO ☐	Gas YES ☐	NO ☒
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒	NO ☐	Fire YES ☐	NO ☒
Delayed (Chronic)	YES ☐	NO ☒	Sudden Release of Pressure YES ☐	NO ☒
			Reactivity YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	3713
7.2 Average daily amount in pounds	2200
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	3713	COLUMN FF-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City	Newport
1.6 State	DE
1.7 Zip	19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City	Newport	2.4 State	DE
2.5 Zip	19804	2.6 Phone	3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HENKEL PARCOLENE 91	
4.4 Description (Answer All)		
Pure	YES ☐	NO ☑
Mix	YES ☑	NO ☐
4.5 Substance is or contains EHS?	YES ☐	
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑	

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	
Delayed (Chronic)	YES ☐	NO ☑	
Fire	YES ☐	NO ☑	
Sudden Release of Pressure	YES ☐	NO ☑	
Reactivity	YES ☐	NO ☑	

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	4050
7.2 Average daily amount in pounds	2025
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	4050	COLUMN LL-28
# 2	E	1	4	1820	COLUMN MM-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	HENKEL PARCOSOL 302/402 & MISC. SOLVENTS	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Fire YES ☑ NO ☐
Delayed (Chronic)	YES ☑	NO ☐	Sudden Release of Pressure YES ☐ NO ☑
			Reactivity YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	88330
7.2 Average daily amount in pounds	66247
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	88330	COLUMN KK-28

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Name and official title of owner/operator or authorized representative

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	N/A
4.3 Chemical Name	HENKEL PLASTIC CLEANER 2595
4.4 Description (Answer All)	
Pure	YES ☐ NO ☑
Mix	YES ☑ NO ☐
Solid	YES ☐ NO ☑
Liquid	YES ☑ NO ☐
Gas	YES ☐ NO ☑
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Fire YES ☐ NO ☑
Delayed (Chronic)	YES ☐	NO ☑	Sudden Release of Pressure YES ☐ NO ☑
			Reactivity YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	8445
7.2 Average daily amount in pounds	5630
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	3500	COLUMN FF-29
# 2	O	1	4	5000	BODY WASHER 2-FF-29

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	N/A
4.3 Chemical Name	HENKEL PRECLEAN 2960
4.4 Description (Answer All)	Solid YES ☐ NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑ NO ☐
Mix YES ☑ NO ☐	Gas YES ☐ NO ☑
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐ NO ☑
		Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	48678
7.2 Average daily amount in pounds	34160
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	2535	COLUMN HH-28
# 2	C	1	4	48678	COLUMN LL-30

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☒
4.2 CAS Number	N/A			
4.3 Chemical Name	HENKEL RIDOLENE 422E			
4.4 Description (Answer All)		Solid	YES ☐	NO ☒
Pure	YES ☐ NO ☒	Liquid	YES ☒	NO ☐
Mix	YES ☒ NO ☐	Gas	YES ☐	NO ☒
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒ NO ☐	Fire	YES ☐	NO ☒
Delayed (Chronic)	YES ☒ NO ☐	Sudden Release of Pressure	YES ☐	NO ☒
		Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	126017
7.2 Average daily amount in pounds	675
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	6075	COLUMN GG-28
# 2	P	1	4	126017	ONCE PER YEAR EVENT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	1333740	
4.3 Chemical Name	HYDROGEN (H2)	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☑ NO ☐	Liquid YES ☐	NO ☑
Mix YES ☐ NO ☑	Gas YES ☑	NO ☐
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐	NO ☑	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☐	NO ☑	Sudden Release of Pressure	YES ☑ NO ☐
			Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	858
7.2 Average daily amount in pounds	500
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	858	COLUMN BB-12 OUTSIDE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	JANITORIAL CLEANERS			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2672
7.2 Average daily amount in pounds	2004
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	N	1	4	2672	COLUMN M-11 (MAIN JANITORIAL CLOSET)
# 2	N	1	4	1000	JANITORIAL CLOSETS THROUGHOUT FACILITY

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☒
4.2 CAS Number	7664939			
4.3 Chemical Name	LEAD ACID BATTERIES (SULFURIC ACID)			
4.4 Description (Answer All)		Solid	YES ☒	NO ☐
Pure	YES ☐ NO ☒	Liquid	YES ☐	NO ☒
Mix	YES ☒ NO ☐	Gas	YES ☐	NO ☒
4.5 Substance is or contains EHS?				YES ☒
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒ NO ☐	Fire	YES ☒	NO ☐
Delayed (Chronic)	YES ☒ NO ☐	Sudden Release of Pressure	YES ☐	NO ☒
		Reactivity	YES ☒	NO ☐

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☐	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☒

7. INVENTORY

7.1 Maximum daily amount in pounds	114000
7.2 Average daily amount in pounds	114000
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	R	1	4	114000	COLUMN B-31 TO F-32 (NEAR TRUCK REPAIR AREA)

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant				
1.2 Facility/Site Name	GM Wilmington Assembly Plant				
1.3 Physical Location/Street	801 Boxwood Road				
1.4 Development/Industrial Park					
1.5 City Newport	1.6 State DE	1.7 Zip 19804			

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	7697372			
4.3 Chemical Name	NITRIC ACID (PARCO PURGE 20)			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☑
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☑	NO ☐
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☑	NO ☐

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☐	Extremely Hazardous Substance (EHS)	☑
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	48633
7.2 Average daily amount in pounds	400
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	400	PAINT MIX ROOM
# 2	P	1	4	48633	ONCE PER YEAR EVENT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☒
4.2 CAS Number	N/A			
4.3 Chemical Name	OILS AND LUBES			
4.4 Description (Answer All)		Solid	YES ☐	NO ☒
Pure	YES ☐ NO ☒	Liquid	YES ☒	NO ☐
Mix	YES ☒ NO ☐	Gas	YES ☐	NO ☒
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☒	NO ☐
Immediate (Acute)	YES ☒ NO ☐	Sudden Release of Pressure	YES ☐	NO ☒
Delayed (Chronic)	YES ☒ NO ☐	Reactivity	YES ☐	NO ☒

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☒	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	1746
7.2 Average daily amount in pounds	1310
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	D	1	4	2320	POWERHOUSE
# 2	D	1	4	1000	TRUCK REPAIR AREA
# 3	D	1	4	1000	COLUMN L-9
# 4	N	1	4	100	THROUGHOUT PLANT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	7782447			
4.3 Chemical Name	OXYGEN, COMPRESSED			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☑ NO ☐	Liquid	YES ☐	NO ☑
Mix	YES ☐ NO ☑	Gas	YES ☑	NO ☐
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☐ NO ☑	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☑	NO ☐
		Reactivity	YES ☑	NO ☐

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	7182
7.2 Average daily amount in pounds	1874
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	7182	COLUMN BB-12 OUTSIDE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	PARCO PURGE 20 & DEOXIDINE A-500			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport	2.4 State DE		
2.5 Zip 19804	2.6 Phone 3024287010		

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

7. INVENTORY

7.1 Maximum daily amount in pounds	243163
7.2 Average daily amount in pounds	2000
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	2000	COLUMN KK-28
# 2	P	1	4	243163	ONCE PER YEAR EVENT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	POWER STEERING FLUID			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure YES ☐ NO ☑		Liquid	YES ☑	NO ☐
Mix YES ☑ NO ☐		Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic) YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	88070
7.2 Average daily amount in pounds	69301
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	A	1	4	100000	TANK FARM

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

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Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City	Newport
1.6 State	DE
1.7 Zip	19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City	Newport
2.4 State	DE
2.5 Zip	19804
2.6 Phone	3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☒
4.2 CAS Number	N/A	
4.3 Chemical Name	QUADRASPERSE CL 4846	
4.4 Description (Answer All)	Solid YES ☐	NO ☒
Pure YES ☐ NO ☒	Liquid YES ☒	NO ☐
Mix YES ☒ NO ☐	Gas YES ☐	NO ☒
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☒

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☒	NO ☐	Fire	YES ☐ NO ☒
Delayed (Chronic)	YES ☐	NO ☒	Sudden Release of Pressure	YES ☐ NO ☒
			Reactivity	YES ☐ NO ☒

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☒	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	2394
7.2 Average daily amount in pounds	1027
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	E	1	4	2394	POWERHOUSE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

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Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	7681529
4.3 Chemical Name	SODIUM HYPOCHLORITE 10%
4.4 Description (Answer All)	
Pure	YES ☑ NO ☐
Mix	YES ☐ NO ☑
Solid	YES ☐ NO ☑
Liquid	YES ☑ NO ☐
Gas	YES ☐ NO ☑
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐ NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐ NO ☑
		Reactivity	YES ☐ NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	4879
7.2 Average daily amount in pounds	4879
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	C	1	4	4879	WASTEWATER TREATMENT PLANT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	SOLVENT BASED PAINTS	
4.4 Description (Answer All)	Solid YES ☐	NO ☑
Pure YES ☐ NO ☑	Liquid YES ☑	NO ☐
Mix YES ☑ NO ☐	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic)	YES ☑	NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
			Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	30812
7.2 Average daily amount in pounds	16696
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	F	1	4	464	MOD PAINT MIX ROOM
# 2	D	1	4	30000	MOD PAINT MIX ROOM
# 3	O	1	4	12331	MOD PAINT MIX ROOM
# 4	D	1	4	15385	COLUMN EE-29
# 5	F	1	4	464	COLUMN X-17

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer 2/26/2009 12:44 PM

Signature Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	7664939			
4.3 Chemical Name	SULFURIC ACID			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☑ NO ☐	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☑
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☐
CAS 1 7664-93-9		SULFURIC ACID		

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑ NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Sudden Release of Pressure	YES ☐	NO ☑
		Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☐	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☑
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	30608
7.2 Average daily amount in pounds	30608
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	C	1	4	30608	WASTEWATER TREATMENT PLANT

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	SUVA 134A			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☑ NO ☐	Liquid	YES ☐	NO ☑
Mix	YES ☐ NO ☑	Gas	YES ☑	NO ☐
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☐ NO ☑	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	32100
7.2 Average daily amount in pounds	19260
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	A	1	7	32100	Column S-24 Outside

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM
Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant
1.2 Facility/Site Name	GM Wilmington Assembly Plant
1.3 Physical Location/Street	801 Boxwood Road
1.4 Development/Industrial Park	
1.5 City Newport	1.6 State DE — 1.7 Zip 19804

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan
2.2 Mail Address	801 Boxwood Road
2.3 City Newport	2.4 State DE
2.5 Zip 19804	2.6 Phone 3024287010

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐ NO ☑
4.2 CAS Number	N/A
4.3 Chemical Name	SUVA 409
4.4 Description (Answer All)	Solid YES ☐ NO ☑
Pure YES ☑ NO ☐	Liquid YES ☐ NO ☑
Mix YES ☐ NO ☑	Gas YES ☑ NO ☐
4.5 Substance is or contains EHS?	YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.	N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute)	YES ☑	NO ☐	Fire	YES ☐	NO ☑
Delayed (Chronic)	YES ☐	NO ☑	Sudden Release of Pressure	YES ☑	NO ☐
			Reactivity	YES ☑	NO ☐

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	563
7.2 Average daily amount in pounds	375
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	L	2	4	563	COLUMN S-24 OUTSIDE

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

ANNUAL CHEMICAL FORM

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret	YES ☐	NO ☑
4.2 CAS Number	N/A	
4.3 Chemical Name	WATER BASED PAINTS	
4.4 Description (Answer All)		
Pure YES ☐ NO ☑	Solid YES ☐	NO ☑
Mix YES ☑ NO ☐	Liquid YES ☑	NO ☐
	Gas YES ☐	NO ☑
4.5 Substance is or contains EHS?		YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.		N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

Immediate (Acute) YES ☑ NO ☐	Fire	YES ☑	NO ☐
Delayed (Chronic) YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

Hazardous Chemical	☑	Motor Vehicle Fuel for Retail Sale	☐
Mix with < 10% EHS	☐	Extremely Hazardous Substance (EHS)	☐
		Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	32192
7.2 Average daily amount in pounds	15507
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	77126	MOD PAINT MIX ROOM
# 2	D	1	4	2646	MOAD PAINT MIX ROOM
# 3	D	1	4	883	COLUMN 2-DD-22
# 4	C	1	4	48000	COLUMN LL-26
# 5	O	1	4	24000	COLUMN LL-26

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	N/A			
4.3 Chemical Name	WELDING RODS AND MIG WIRE			
4.4 Description (Answer All)		Solid	YES ☑	NO ☐
Pure	YES ☐ NO ☑	Liquid	YES ☐	NO ☑
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☐	NO ☑
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	800
7.2 Average daily amount in pounds	800
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	J	1	4	800	THROUGHOUT ASSEMBLY AREAS

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

STATE OF DELAWARE EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY	**ANNUAL CHEMICAL FORM**	

1. FACILITY IDENTIFICATION

1.1 Company Name	General Motors - GMVM Wilmington Assembly Plant		
1.2 Facility/Site Name	GM Wilmington Assembly Plant		
1.3 Physical Location/Street	801 Boxwood Road		
1.4 Development/Industrial Park			
1.5 City Newport	1.6 State DE	1.7 Zip 19804	

2. OWNER/OPERATOR

2.1 Name	Robert F. Dolan		
2.2 Mail Address	801 Boxwood Road		
2.3 City Newport		2.4 State DE	
2.5 Zip 19804		2.6 Phone 3024287010	

3. REPORTING PERIOD

Reporting Period From January 1, 2008 to December 31, 2008

4. CHEMICAL DESCRIPTION

4.1 Trade Secret			YES ☐	NO ☑
4.2 CAS Number	67561			
4.3 Chemical Name	WINDSHIELD WASHER SOLVENT			
4.4 Description (Answer All)		Solid	YES ☐	NO ☑
Pure	YES ☐ NO ☑	Liquid	YES ☑	NO ☐
Mix	YES ☑ NO ☐	Gas	YES ☐	NO ☑
4.5 Substance is or contains EHS?				YES ☐
4.6 If substance contains EHS(s) enter CAS # and Chemical name for each EHS below.				N/A ☑

5. PHYSICAL HEALTH HAZARDS (Answer All)

		Fire	YES ☑	NO ☐
Immediate (Acute)	YES ☑ NO ☐	Sudden Release of Pressure	YES ☐	NO ☑
Delayed (Chronic)	YES ☑ NO ☐	Reactivity	YES ☐	NO ☑

6. FEE CLASSIFICATION(Check only one)

		Motor Vehicle Fuel for Retail Sale	☐
Hazardous Chemical	☑	Extremely Hazardous Substance (EHS)	☐
Mix with < 10% EHS	☐	Mix with > or equal to 10% EHS	☐

7. INVENTORY

7.1 Maximum daily amount in pounds	7101
7.2 Average daily amount in pounds	7101
7.3 Number of days on site	365

8. STORAGE CODES AND LOCATIONS

	Container Type	Pressure	Temperature	Maxmum Daily Amount (lbs.)	Storage Location Description
# 1	O	1	4	4590	COLUMN M-11
# 2	O	1	4	4590	TIRE BUILDING

9. CERTIFICATION (READ AND SIGN AFTER COMPLETING ALL SECTIONS)

I certify under penalty of law that I have personally examined and am familiar with the information submitted, and that based on my inquiry of those individuals responsible for obtaining the information, I beleive that the submitted information is true, accurate, and complete.

John Peronti, Sr. Env. Engineer

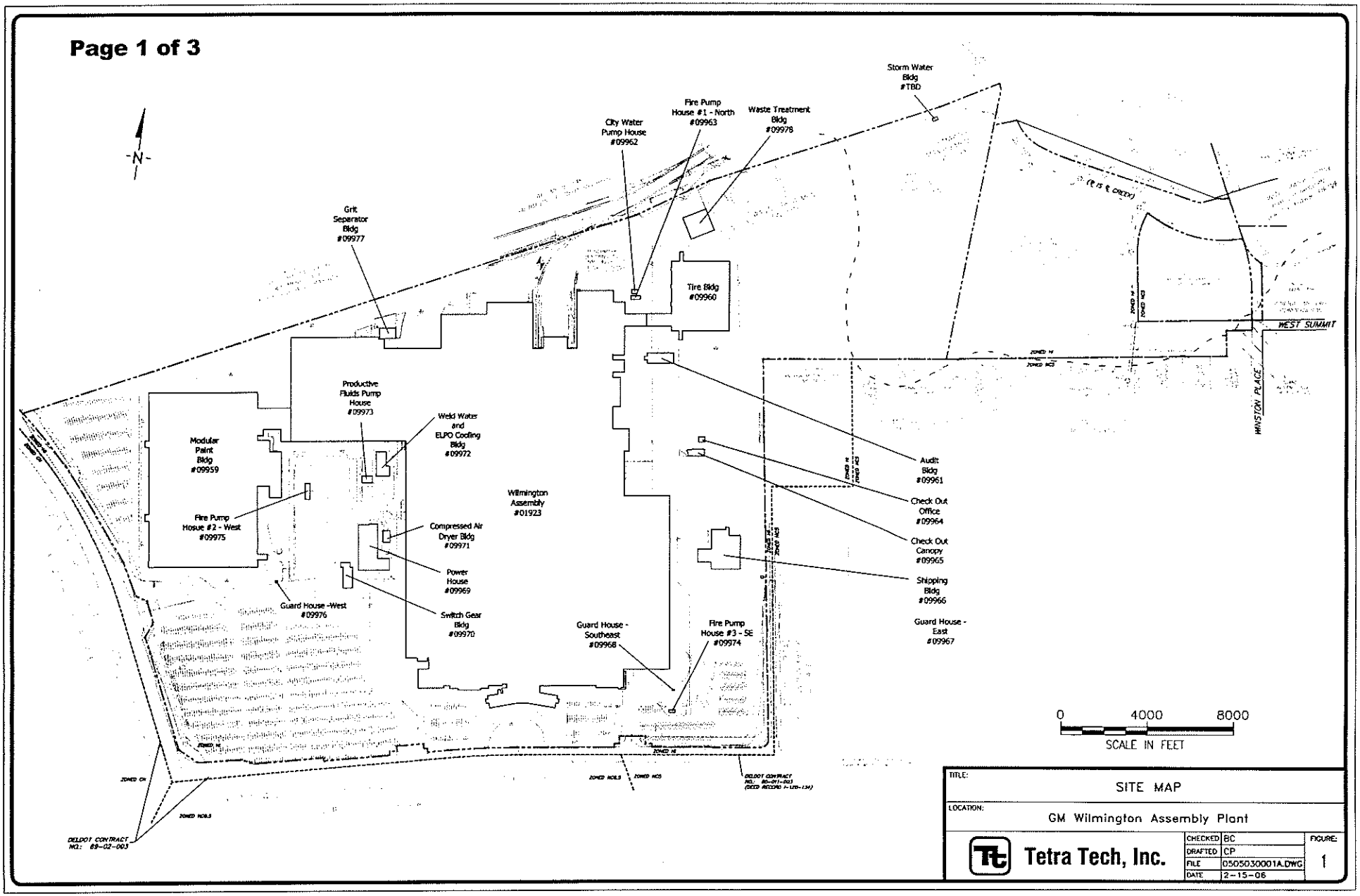
Name and official title of owner/operator or authorized representative

John Peronti, Sr. Env. Engineer — 2/26/2009 12:44 PM

Signature — Date Signed

Appendix B

Site Map



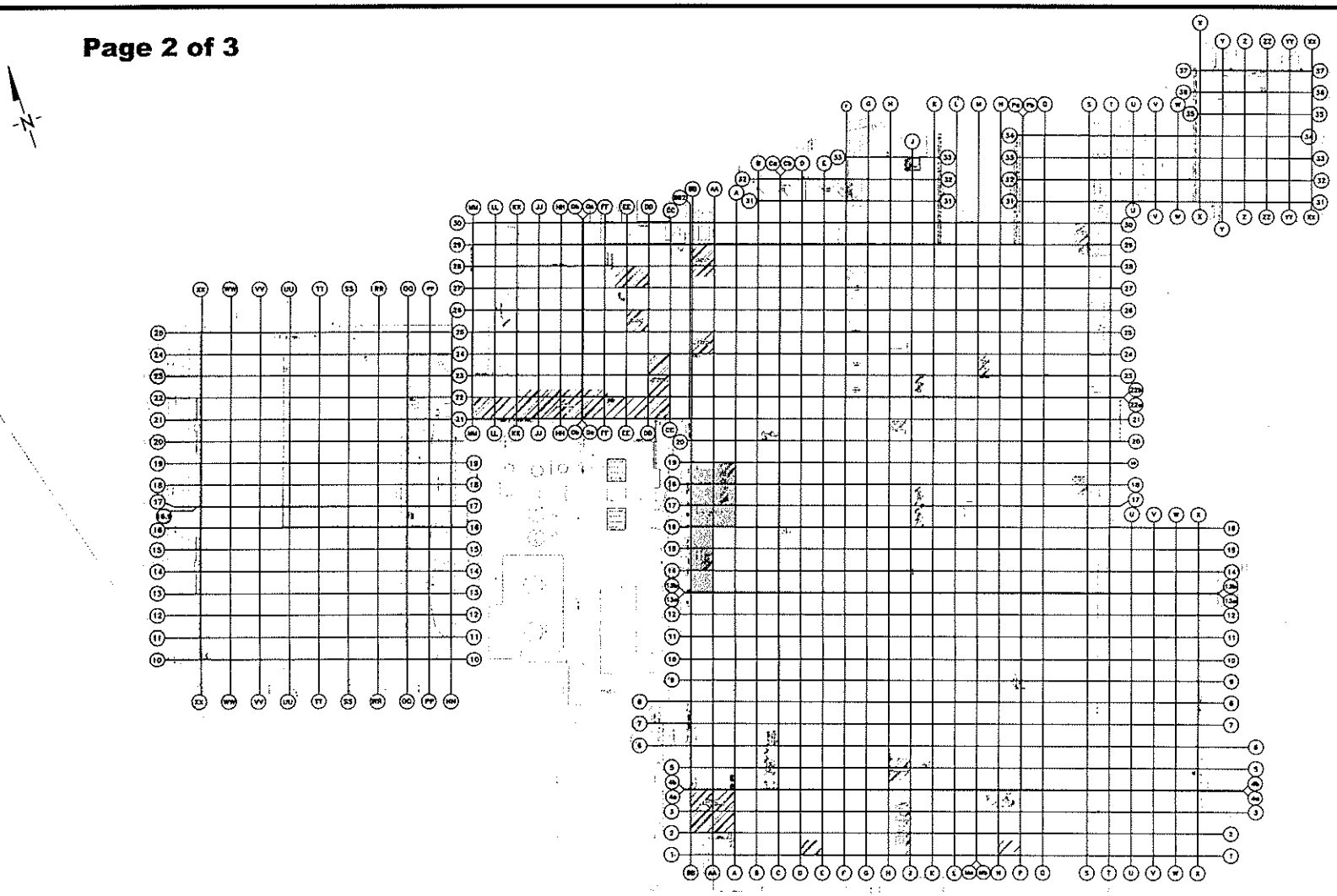
TITLE: SITE MAP

LOCATION: GM Wilmington Assembly Plant

Tetra Tech, Inc.

CHECKED	BC
DRAFTED	CP
FILE	0505030001A.DWG
DATE	2-15-06

FIGURE: 1



0 2500 5000

SCALE IN FEET

TITLE: SITE MAP

LOCATION: GM Wilmington Assembly Plant

Tetra Tech, Inc.

CHECKED	BC
DRAFTED	CP
FILE	0505030002A.DWG
DATE	2-15-06

FIGURE: 2

EXPLANATION OF LOCATION CODES

The GM NAO Wilmington Assembly Plant Location designations are based on column and aisle locations. The columns are alpha designations and the aisles are numeric designations. The original building began with Column A and progressed sequentially as one proceeded east. When building additions were made, the columns started at AA and progressed sequentially as one proceeded west.

The aisles begin at 1 and progress sequentially as one proceeds north.

Prefix Designations:

(B) Basement of Mod Paint Building
(2) Second Floor
(3) Third Floor

Appendix C

Calculations, Tier II Summary, EHS Summary

Comparison of Reportable Chemicals: 2007 - 2008

CAS #	Chemical Name	2007 Threshold Amt (Average Lbs)	2008 Threshold Amt (Average Lbs)	% Change
74-86-2	Acetylene	425	623	32%
107-21-1	Antifreeze Coolant Texaco	46,258	39,805	-16%
N/A	Architectural Paints	1,207	888	-36%
7440-37-1	Argon, Liquid and Compressed	3,480	28,773	88%
N/A	Automotive Sealers	97,026	35,073	-177%
N/A	Brake Fluid Delco Supreme 11	8,100	8,100	0%
124-38-9	Carbon Dioxide - Air Mixture	3,480	1,669	-108%
N/A	Chemtreat BL 1106	1,710	1,157	-48%
N/A	Chemtreat BL 122	2,010	1,858	-8%
N/A	Chemtreat BL 1558	2,045	962	-113%
N/A	Chemtreat CL 4847*	0	1,591	100%
N/A	Chemtreat CL 2112	1,610	1,032	-56%
N/A	Chemtreat CL 49	1,832	1,000	-83%
68476-34-6	Diesel Fuel Oil #2	27,900	27,900	0%
7705-08-0	Ferric Chloride Solution	1,835	917	-100%
75-45-6	Freon 22	1,155	140	-727%
68553-00-4	Fuel Oil #6	789,416	562,821	-40%
8006-61-9	Gasoline	97,621	132,681	26%
N/A	Haas Acticide LA Biocide	1,800	1,800	0%
N/A	Haas Acticide L30 Biocide*	0	6,504	100%
N/A	Haas Barracuda 100	19,133	10,150	-89%
N/A	Haas Filmex	362	362	0%
N/A	Haas Hyperstrip	2,906	10,944	73%
N/A	Haas Klenziod CWT 8954	1,835	4,623	60%
N/A	Haas MBC-215	5,670	4,000	-42%
N/A	Haas Omnicool 2602	5,504	4,000	-38%
N/A	Haas Omnicool 3000N	2,936	3,522	17%
N/A	Haas P3 Paint Line Cleaner 213C/200	27,150	55,069	51%
N/A	Haas Spectrux NX114	1,105	825	-34%
N/A	Haas Slimicide AQ	1,816	2,265	20%
N/A	Haas Snow White Booth Coatings	4,325	5,573	22%
N/A	Haas Terminator 100	4,514	4,514	0%
N/A	Hasco Assassin 800	45,252	21,393	-112%
N/A	Hasco Jupiter	2,500	2,475	-1%
N/A	Hasco MD NF	2,271	2,271	0%
N/A	Hasco Orca 160C Flocculent	5,046	5,376	6%
N/A	Hasco Shark 2001	59,314	59,314	0%
N/A	Hasco Tahoe	5,800	5,800	0%

Comparison of Reportable Chemicals: 2007 - 2008

CAS #	Chemical Name	2007 Threshold Amt (Average Lbs)	2008 Threshold Amt (Average Lbs)	% Change
N/A	Henkel 1523R Parco Cleaner	40,810	40,810	0%
N/A	Henkel 1523S Parco Cleaner	5,170	5,170	0%
N/A	Henkel Accelerator 131	6,866	6,866	0%
N/A	Henkel Bonderite 958 Replenisher	38,500	38,500	0%
N/A	Henkel Fixodine Z-8	2,250	2,250	0%
N/A	Henkel P-3 E Coat Cleaner 2250	1,880	1,880	0%
N/A	Henkel Parco Additive 22	2,000	2,000	0%
N/A	Henkel Parco Primer 40	2,200	2,200	0%
N/A	Henkel Plastic Cleaner 2595	5,630	5,630	0%
N/A	Henkel Parcolene 91	4,050	4,050	0%
N/A	Henkel Preclean 2960	34,160	34,160	0%
N/A	Henkel Ridolene 422E	6,075	6,075	0%
1333-74-0	Hydrogen (H2)	500	500	0%
N/A	Janitorial Cleaners	2,177	2,004	-9%
N/A	Oils and Lubes	2,604	1,310	-99%
7782-44-7	Oxygen, Compressed	500	500	0%
N/A	Parco Purge 20 & Deoxidine A-500	2,000	2,000	0%
N/A	Parcosol 302/402 & Misc. Solvents	72,589	66,247	-10%
N/A	Power Steering Fluid	49,494	88,070	44%
N/A	Quadrasperse CI 4846	1,063	2,563	59%
7681-52-9	Sodium Hypochlorite	4,879	4,879	0%
N/A	Solvent Based Paints	35,450	30,812	-15%
N/A	SUVA 134A	19,260	19,260	0%
N/A	SUVA 409A*	0	375	100%
N/A	Water Based Paints	36,586	32,192	-14%
N/A	Welding Rods & MIG Wire	800	800	0%
67-56-1	Windshield Washer Solvent	7,101	7,101	0%
Extremely Hazardous Substances				
7664-93-9	Sulfuric Acid	30,608	30,608	0%
7664-93-9	Lead Acid Batteries (Sulfuric Acid)	114,000	114,000	0%
7697-37-2	Nitric acid (Parco Purge 20)	400	400	0%

* new products in 2008

PRODUCTS REPORTED IN 2007 BUT NOT IN 2008		
N/A	Chemtreat CL 2871	Discontinued - approx. 10 gallons onsite in 2008
N/A	Haas Cyclone	Discontinued - none onsite in 2008
N/A	Haas Microkleen 7287	Discontinued - none onsite in 2008
N/A	Haas Omnisperse 2702	Discontinued - none onsite in 2008
N/A	Halogene T-30	Ave amount in 2008 below reporting threshold
N/A	Hasco/AEI Assassin 650	None onsite in 2008 - replaced by Assassin 800
N/A	Weld-Aid Weld Kleen 350 A*	Ave amount in 2008 below reporting threshold

GM WILMINGTON ASSEMBLY PLANT
GM Supplier Portal Reports - Tier 2 Worksheet Report

Plant ID: 550747
Reporting Year 2008

PART NUMBER	HMCS ID	SOURCE	TRADE NAME	313 PROCESS	Total (Pounds)	Max (Pounds)	Calculated Max Onsite (1.5 * Max Monthly Usage)	COMMENTS	MAX	AVE
BULK FLUIDS										
AntiFreeze	229999	TT	ANTI-FREEZE/COOLANT TEXAC	Fluid Fill - Antifre	191,446	-	-	TANK FARM LOG (lbs)	69,639	39,805
#6FuelOil	223758	313 FUI	MAPLLC NO. 6 FUEL OIL	Combustion - No	-	-	-	TANK FARM LOG (lbs)	562,821	562,821
Gasoline	306613	TT	BP UNLEADED GASOLINES WIT	Fluid Fill - Gasoli	464,002	-	-	TANK FARM LOG (lbs)	132,681	89,760
PowerStee	108763	TT	01833 PS FLUID 4634	Fluid Fill - Power	30,420	-	-	TANK FARM LOG (lbs)	88,070	69,301
BrakeFluid	327256	TT	BRAKE FLUID DELCO SUPREME	Fluid Fill - Brake	26,021	-	-	Max (5 totes); Ave (3 totes) K14 & Tire Bldg (2 & 3 totes, 2700lb/tote)	8,100	13,500
Windshield	128462	TT	WINDSHIELD WASHER SOLUTIC	Fluid Fill - Winds	23,531	-	-	Max=Ave=7101 lbs; 3 totes (320 gal each), sp =0.86		
534574-1	341054	Haas	123455-29 DIESEL #2, OFF ROAI	Combust-No.2 D	8,003	4,047	6,070	Total combined capacity of all diesel tanks onsite = 27900 lbs		
BIOCIDES										
549467-1	PENDING	Haas	Acticide L30		6,504	1,626	2,439	=Max; Ave = 2drums, sp 1.18 =		1,083
536724-1	PENDING	Haas	ACTICIDE LA		14,678	5,504	8,257	=Max; Ave = 3 drums, sp 1.00 =		1,376
534633-1	356349	Haas	SLIMICIDE AQ	3 Water Additive	2,265	1,812	2,718	= MAX; AVE = 1 drums = 1* 453 lbs =		453
BOOTH CLEANERS										
534624-1	331494	Haas	HASCO TAHOE	Booth Clean Sol	28,807	5,527	8,290	= MAX; AVE = 1 tote (360 gal) =		2,870
536107-1	343490	Haas	HASCO MD NF - Tote	Water Additive	8,019	2,673	4,010	MAX = max tote + max drum =		6,728
519794-1	343490	Haas	HASCO MD NF - Drum	Water Additive	4,984	1,812	2,718	AVE= 1(2673 lb/tote) + 2 dr (453 lbs/dr)		3,579
521026-1	227995	Haas	AEI SNOWHITE 65	Water Additive	5,573	2,477	3,715	= MAX; AVE = 2 drums (sg 1.35) =		1,238
534623-1	354548	Haas	HASCO JUPITER		2,475	2,475	3,713	= MAX AVE = 1 tote (2475 lbs/tote)=		2,475
550887-1	358417	Haas	SUVA 409A		375	375	563	= MAX AVE=		375
-	-	EE	SUVA 134					Max=32100/Ave=19260 lbs (7500-gal tank + cylinders) (J.Peronti)		

PART NUMBER	HMCS ID	SOURCE	TRADE NAME	313 PROCESS	Total (Pounds)	Max (Pounds)	Calculated Max Onsite (1.5 * Max Monthly Usage)	COMMENTS	
ParcoPurg	311450	TT	PARCO PURGE 20	Phosphate Clear	80,019	80,019	120,029	AVE = 4 drums (500lb/dr) =	2,000
534592-1	357053	Haas	DEOXIDINE A-500	MiscSolvents	2,631	2,105	3,158	Nitric Acid content = 20% --> MAX =	48,633
Parcolene_	1181425	TT	PARCOLENE 91	Phosphate Clear	11,250	1,350	2,025	=AVE MAX = 9 drums (450 lb/dr) =	4,050
Primer_40	150169	TT	PRIMER 40	15 Phosphate Clear	1,375	1,375	2,063	Max =	3,713
534059-1	150169	Haas	PRIMER 40	15016901	1,100	1,100	1,650	Ave = 4 drums (550 lb/drum) =	2,200
Ridoline_4:	310394	TT	RIDOLINE 422E	Phosphate Clear	670	670	1,005	PRODUCTION SIDE Average = 1 drum = 675 lb	
525736-1	310394	Haas	RIDOLINE 422E	Phosphate Clear	126,017	126,017	=MAX	BOIL OUT OF SYSTEM (DRAIN, RECIRCULATE THROUGH SYSTEM) (USED OVER ONE WEEKEND IN AUGUST)	
547861-1	1181103	Haas	P3 PAINT LINE CLEANER 200	LineCleaner	27,924	9,308	13,962	MAX = 2 (4654lb) + 3 (4525lb) totes =	22,883
535161-1	343821	Haas	P3 PAINT LINE CLEANER 213 EC	LineCleaner	27,145	13,575	20,362	AVE = Total Transaction/12 =	4,589
533943-1	336727	Haas	SPECTRUS NX114	Water Additive	825	550	825	= MAX AVE = 2 drums (275lb/dr) =	550
INDUSTRIAL GASES									
533805-1	043771	Haas	ACETYLENE	Not Reportable	7,182	1,512	2,268	= Max onsite (max monthly usage * 1.5)	
533807-1	043771	Haas	ACETYLENE	Not Reportable	77	44	66	Monthly average (total lbs/12) =	623
533806-1	043771	Haas	ACETYLENE		12	12	18		
554944-1	173535	Haas	ACETYLENE	173535	202	202	303		
533816-1	300355	Haas	Argon, compressed	Not Reportable	40,000	10,000	15,000	Monthly average (total lbs/12) =	28,773
533815-1	300355	Haas	Argon, compressed	Not Reportable	19,448	5,005	7,508	Monthly Max (lbs) =	148,543
533817-1	300355	Haas	Argon, compressed	Not Reportable	532	228	342	Assumed 70% stored outside BB-15	103,980
553421-1	185878	Haas	LIQUID ARGON	185878	44,328	11,378	17,067	Assumed 10% stored in BB-21	14,854
535447-1	300772	Haas	Liquid Argon	Not Reportable	202,866	54,512	81,768	Assumed 10% stored in NN-21	14,854
535446-1	300772	Haas	Liquid Argon	Not Reportable	38,103	17,904	26,856	Assumed 10% stored in C-17	14,854
535657-1	300772	Haas	Liquid Argon	Not Reportable	1	1	2		
533811-1	356753	Haas	MIXTURE OF CARBON DIOXIDE	Not Reportable	15,000	6,000	9,000	Monthly average (total lbs/12) =	1,669
533809-1	356753	Haas	MIXTURE OF CARBON DIOXIDE	Not Reportable	3,861	2,145	3,218	Monthly MAX (lbs) =	13,432
533808-1	356753	Haas	MIXTURE OF CARBON DIOXIDE	Not Reportable	456	228	342	Assumed 70% stored outside BB-15	9,403
508128-1	306976	Haas	Air, Compressed	Not Reportable	665	532	798	Assumed remaining 30% divided in 7 other	576
547742-1	1190785	Haas	AIR, COMPRESSED	Not Reportable	50	50	75	locations: AA20-22, BB15, NN22, SS25, C-17, central tooling	
533832-1	324142	Haas	OXYGEN, COMPRESSED GAS	Not Reportable	22,344	4,788	7,182	= Max	
554930-1	233873	Haas	OXYGEN	233873	149	119	179	Monthly average (total lbs/12) =	1,874
533823-1	116079	Haas	HYDROGEN	1Not Reportable	1,001	572	858	=MAX AVE =	500

GM WILMINGTON ASSEMBLY PLANT
GM Supplier Portal Reports - Tier 2 Worksheet Report

Plant ID: 550747
Reporting Year 2008

PART NUMBER	HMCS ID	SOURCE	TRADE NAME	313 PROCESS	Total (Pounds)	Max (Pounds)	Calculated Max Onsite (1.5 * Max Monthly Usage)	COMMENTS
OILS & LUBES								
529099-1	133985	Haas	LUBECON SERIES I/M LUBRICAI	Lubricating Oils	6,208	2,801	4,201	
525418-1	328255	Haas	MOLUB-ALLOY 40/220 SPECIAL (	Lubricating Oils	2,515	419	629	
300644-1	211986	Haas	UNOCAL MULTIPURPOSE ATF	Exempt-Vehicle	2,422	1,615	2,422	
453392-1	320841	Haas	TRIBOL 943/46 AW HYDRAULIC /	Lubricating Oils	809	809	1,214	
525660-1	332199	Haas	TRIBOL 1100/220 GEAR OIL TGC	Lubricating Oils	415	415	623	
513119-1	**PENDING**	**Haas**	**CASTROL HYSPIN RO 150**		**403**	**403**	**604**	
124062-1	143428	Haas	MOBIL DTE 25	Lubricating Oils	401	401	601	
152821-1	**PENDING**	**Haas**	**Mobil DTE 25**		**230**	**230**	**346**	
533950-1	121776	Haas	S00202 Sprayon Moly Chain & Pin	Lubricating Oils	92	28	42	
533936-1	345962	Haas	MOLUB-ALLOY 860/150-2 GREAS	Lubricating Oils	46	13	19	
513100-1	333884	Haas	TRIBOL 1100/100 GEAR OIL TGC	Lubricating Oils	37	37	56	
507246-1	344389	Haas	ALVANIA EP GREASE 2	Lubricating Oils	35	35	53	
533726-1	103261	Haas	Brakleen Brake Parts Cleaner (aer	Exempt-Vehicle	29	14	21	
534616-1	176167	Haas	NUTS OFF	17 Lubricating Oils	25	25	37	
535880-1	325148	Haas	NON-DETERGENT MOTOR OIL SAE 30		22	22	33	
429907-1	102287	Haas	CHEVRON SRI GREASE NO. 2	Lubricating Oils	12	4	7	
552532-1	133190	Haas	DOW CORNING STOPCOCK GRI	Lubricating Oils	0	0	0	
508517-1	122819	Haas	CIMSTAR 40	1: Lubricating Oils	220	220	330	
505599-1	099666	Haas	Ridgid Dark Thread Cutting Oil		15	15	22	
534033-1	198741	Haas	PARCO LUBRICANT PL-101	19874	35	35	53	
			LUBRICANTS & OILS TOTAL		**13,971**			
			MONTHLY MAX ([Total/12]*1.5)		**1,746**			
			MONTHLY AVERAGE (Monthly Max * 0.75)		**1,310**			
ARCHITECTURAL PAINTS								
533784-1	354347	Haas	CL74 STRIPE-PLEX WATER-BOF	Maint Paint	864	273	409	
533786-1	330048	Haas	73 STRIPE-PLEX TRAFFIC MARK	Maint Paint	532	145	218	
533773-1	346658	Haas	A87W51 SUPERPAINT INTERIOF	Maint Paint	418	139	209	
533759-1	315420	Haas	B42W2 WATERBORNE ACRYLIC	Maint Paint	265	159	238	
533774-1	346657	Haas	A88W51 SUPERPAINT INTERIOF	Maint Paint	214	86	129	
530830-1	357887	Haas	B58CQ5 ARMORSEAL EXPRESS	Maint Paint	204	144	216	
533787-1	308170	Haas	STRIPE-PLEX 1529-93 SAFETY C	Maint Paint	179	108	161	
529598-1	345238	Haas	B66W310 PRO-CRYL UNIVERSAI	Maint Paint	108	108	162	

PART NUMBER	HMCS ID	SOURCE	TRADE NAME	313 PROCESS	Total (Pounds)	Max (Pounds)	Calculated Max Onsite (1.5 * Max Monthly Usage)	COMMENTS	
PH CONTROL & WATER TREATMENT									
524904-1	073680	Haas	SULFURIC ACID	Not Reportable	104,985	65,042	97,562	WWTP 2000gal tank(sg 1.84) MAX/AVE	30,608
533933-1	117342	Haas	SODIUM HYPOCHLORITE 10% S	Water Additive	34,289	5,182	7,774	WWTP 500gal tank(sg 1.17) MAX/AVE	4,879
534762-1	117342	Haas	SODIUM HYPOCHLORITE 10% SOLUTION		1,076	1,076	1,614		
507123-1	351250	Haas	ChemTreat CL-49	Water Additive	5,712	2,440	3,660	=Max; Ave=2drums (55-gal, sg1.33) =	1,220
534640-1	356840	Haas	MBC 215	356 Water Additive	4,000	2,000	3,000	= MAX; AVE = 1 drum = 500 lbs	500
534631-1	356339	Haas	OMNIKOOL 2602	Water Additive	4,000	4,000	6,000	= MAX; AVE = 4 drums = 4* 500 lbs =	2,000
534632-1	357061	Haas	OMNIKOOL 3000 N	Phosphate Clear	3,522	3,522	5,283	= MAX; AVE = 2 drum = 2 * 588 lbs =	1,176
501594-1	347664	Haas	ChemTreat BL-122	Water Additive	1,858	1,136	1,704	=Max; Ave=2drums (55-gal, sg 1.3) =	1,193
549213-1	PENDING	Haas	Chemtreat CL-4847	Water Additive	1,591	1,061	1,591	=Max; Ave=1.5 dr (55-gal, sg 1.156) =	795
534062-1	358372	Haas	QUADRASPERSE CL-4846	Water Additive	2,563	1,596	2,394	=Max; Ave=2drums (55-gal, sg 1.12) =	1,027
534047-1	358371	Haas	CHEMTREAT BL-1106	Water Additive	1,157	1,157	1,735	=Max; Ave=2drums (55-gal, sg 1.3) =	1,193
508824-1	356565	Haas	CHEMTREAT CL-2112	Water Additive	1,032	1,032	1,547	=Max; Ave=2drums (55-gal, sg1.1) =	1,009
534061-1	358370	Haas	CHEMTREAT BL-1558	Water Additive	962	441	662	=Max; Ave=1 drum (55-gal, sg 0.96) =	440
534677-1	354407	Haas	KLENZOID CWT 8954	Water Additive	460	460	690	= MAX; AVE = 1 drum = 460 lbs	
535448-1	134203	Haas	NALCLEAR 7768	Water Additive	434	43	65	5-gallon container (43 lbs); below reporting threshold	
					Ave		**Max**		
534060-1	357048	Haas	FILMEX		**362**	362	**542**	60 days onsite; 1 drum 1 time use to winterize cooling towers	
534675-1	356347	Haas	HALOGENE T-30	356347	200	50	75	Average = one 50-lb pail	
516822-1	324095	Haas	FERRIC CHLORIDE SOLUTION	Water Additive	917	917	917	=Max/Ave; none purchased in 2008; 2 drums left in inventory	

GM WILMINGTON ASSEMBLY PLANT
GM Supplier Portal Reports - Tier 2 Worksheet Report

Plant ID: 550747
Reporting Year 2008

PART NUMBER	HMCS ID	SOURCE	TRADE NAME	313 PROCESS	Total (Pounds)	Max (Pounds)	Calculated Max Onsite (1.5 * Max Monthly Usage)	COMMENTS
514560-1	061923	Haas	REAGENT SOLUTION 44	Water Additive	38	15	23	Exempt
507184-1	309358	Haas	REAGENT SOLUTION 46	Water Additive	3	1	2	Exempt
533728-1	061912	Haas	INDICATOR 3	0 Water Additive	8	8	12	Exempt
501525-1	061912	Haas	INDICATOR 3	061912	0	0	1	Exempt
501521-1	104103	Haas	TITRATING SOLUTION 11	Water Additive	79	35	53	Exempt
501524-1	104102	Haas	TITRATING SOLUTION 15	Water Additive	15	7	10	Exempt
507185-1	226455	Haas	TITRATING SOLUTION 61	Water Additive	70	26	40	Exempt
								Exempt
MISCELLANEOUS								Exempt
519662-1	240420	Haas	122 PLUS - PART A	Exempt-Structura	255	170	255	Exempt
519662-2	240420	Haas	122 PLUS - PART A	Exempt-Structura	1,845	1,230	1,845	Exempt
535899-1	240420	Haas	122 PLUS - PART A	Exempt-Structura	102	102	153	Exempt
532964-1	302082	Haas	BRASSO POLISH FOR BRASS, C	Exempt-Structura	65	65	97	Exempt-Structural
533775-1	344840	Haas	C-70 SPACKLING AND PATCHIN	Exempt-Structura	19	19	28	Exempt-Structural
531515-1	317973	Haas	CFC-FREE ELECTRO CONTACT	Exempt-Structura	8	8	12	Exempt-Structural
534668-1	193806	Haas	COLOR GUARD TOUGH RUBBEI	Exempt-Structura	14	14	21	Exempt-Structural
502664-2	261916	Haas	DURO MASTER MEND E-POX-E	Exempt-Structura	3	2	2	Exempt-Structural
436832-1	177600	Haas	LEAK LOCK	1 Exempt-Structura	1	1	1	Exempt-Structural
534575-1	326430	Haas	LOCTITE LOCQUIC 736 PRIMER	Exempt-Structura	1	1	1	Exempt-Structural
547619-1	038819	Haas	Never-Seez Regular Grade Compc	Exempt-Structura	12	12	18	Exempt-Structural
542870-1	340939	Haas	PLASTI PUTTI	3 Exempt-Structura	16	16	24	Exempt-Structural
525811-1	345455	Haas	PS-100 WB PART B	Exempt-Structura	13	13	20	Exempt-Structural
525811-2	345455	Haas	PS-100 WB PART B	Exempt-Structura	31	31	46	Exempt-Structural
539741-1	221676	Haas	SHINELINE BASEBOARD STRIPF	Exempt-Structura	54	54	81	Exempt-Structural
508525-1	140237	Haas	SMOOTH-ON 4A CEMENT	Exempt-Structura	11	9	14	Exempt-Structural
508525-2	140237	Haas	SMOOTH-ON 4A CEMENT	Exempt-Structura	11	9	14	Exempt-Structural
550341-1	303637	Haas	TERRA GLAZE	Exempt-Structura	120	103	154	Exempt-Structural
552258-1	303637	Haas	TERRA GLAZE	Exempt-Structura	257	257	385	Exempt-Structural
547825-1	039061	Haas	WELD KLEEN 350	Exempt-Structura	24	24	36	Exempt-Structural
549317-1	029686	Haas	WELD-ON 705 FOR PVC PLASTI	Exempt-Structura	35	12	18	Exempt-Structural
526959-1	311444	Haas	VINEGAR - TABLE STRENGTH	Not Reportable	34	34	50	Not Reportable
534642-1	227981	Haas	KEROSENE 1-K	Exempt-Vehicle	780	390	585	Exempt-Vehicle
536662-1	317080	Haas	GAS LEAK DETECTOR; #4180-53	Equipment Maint	27	27	41	Equipment Maint
532354-1	PENDING	Haas	Clear 1 Ice Machine Cleaner		12	12	18	Cleaner for cafeteria ice machine
167290-1	060239	Haas	Spotcheck Cleaner/Remover SKC-S Aerosol		10	8	12	Exempt
555336-1	261745	Haas	SPOTCHECK PENETRANT SKL-SP AEROSOL		3	3	5	Exempt
534672-1	356618	Haas	CUSTOM PLASMA STANDARD-M	Water Additive	3	2	3	Exempt
534673-1	356618	Haas	CUSTOM PLASMA STANDARD-M	Water Additive	3	2	3	Exempt
250798-1	215584	Haas	Noalox Anti-Oxidant	Water Additive	3	3	5	Exempt

Antifreeze Average on Site

From Tank Farm Records
(Gallons)

Day	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1	3200	7300	4650	6300	4000	5950	3700	6750	5100	3650	2000	3,900
2	3200	7300	4600	6150	3700	5750	3700	6750	5100	3650	2000	3,800
3	3200	7250	4550	6150	3700	5650	3700	6750	4950	3650	2000	3,750
4	3200	7150	4300	6150	3700	5500	3700	6700	4950	3650	2000	3,600
5	3200	6950	4200	6000	3600	5400	3700	6600	4950	3650	2000	3,500
6	3200	6950	4000	6000	3500	5300	3700	6450	4700	3600	2000	3,500
7	3200	6600	4000	5950	7950	5300	3700	6350	4700	3350	2000	3,450
8	3200	6400	3850	5900	7900	5300	3700	6300	4600	3300	2000	3,450
9	3200	6400	3850	5700	7650	5100	3700	6300	4500	3200	2000	3,350
10	3200	6400	3650	5550	7650	5000	3700	6250	4400	3050	2000	3,300
11	8000	6150	8350	5550	7650	4900	3700	6100	4400	3050	2000	3,250
12	8000	6000	8000	5550	7600	4700	3700	6000	4100	3050	2000	3,200
13	8000	5900	8000	5550	7450	4700	3700	5950	4100	3000	2000	3,200
14	8000	5600	7900	5500	7350	4700	3650	5850	4100	2950	2000	3,200
15	8000	5500	7900	5300	7200	4700	3550	5700	4100	2800	2000	3,200
16	8000	5500	7900	5250	7100	4700	3450	5700	4100	2700	2000	3,050
17	8000	5500	7700	5150	7050	4600	3300	5700	4100	2500	2000	3,000
18	8000	5450	7500	5000	7050	4400	3300	5600	4100	2500	2000	3,000
19	8000	5140	7350	5000	6900	4300	3200	5400	4100	2500	2000	3,000
20	8000	5000	7350	5000	6750	4100	3200	5250	4100	2400	2000	3,000
21	8000	4850	7350	4900	6600	4100	3000	5250	4100	2350	2000	3,000
22	8000	4700	7200	4700	6500	4100	2950	5100	4000	2300	2000	2,900
23	8000	4700	7200	4600	6500	4050	2850	5100	4000	2300	2000	2,900
24	8000	4700	7200	4400	6500	3950	2750	5100	3850	2100	2000	2,900
25	8000	4700	7100	4300	6500	3950	7500	5100	3750	2100	4000	2,900
26	8000	4700	6800	4300	6500	3700	7500	5100	3650	2000	4000	2,900
27	8000	4700	6600	4300	6300	3700	7500	5100	3650	2000	4000	2,900
28	7950	4650	6400	4200	6200	3700	7300	5100	3650	2000	4000	2,900
29	7750	4650	6400	4150	6050	3700	7200	5100	3650	2000	4000	2,900
30	7600		6400	4000	5950	3700	7200	5100	3650	2000	4000	2,900
31	7400		6400		5950		7000	5100		2000		2,900

	Gal	Lbs
Daily Average:	**4,773**	**39,805**
Daily MAX:	**8,350**	**69,639**
Density:	1.00	

Fuel Oil Average on Site

From Boiler Fuel Usage Log
(Gallons)

Day	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
2	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
3	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
4	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
5	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
6	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
7	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
8	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
9	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
10	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
11	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
12	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
13	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
14	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
15	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
16	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
17	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
18	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
19	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
20	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
21	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
22	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
23	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
24	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
25	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
26	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
27	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
28	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
29	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
30	76687		76687	76687	76687	76687	76687	76687	76687	76687	76687	76687
31	76687		76687		76687		76687	76687		76687		76687

	GAL	LBS
Daily Average:	**76,687**	**562,821**
Daily MAX:	**76,687**	**562,821**
Density:	0.88	

Gasoline Average on Site

From Tank Farm Log (Convault West #1 + Convault East #2)
(Gallons)

Day	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1	10,020	16,328	17,881	18,162	19,050	11,991	14,610	9,824	13,809	18,121	13,625	13,071
2	10,020	16,328	17,881	17,923	18,395	11,725	14,610	9,823	13,553	18,112	13,625	13,071
3	9,988	16,289	17,493	17,923	18,395	11,358	14,610	9,820	13,216	18,112	13,625	12,507
4	9,962	15,852	17,054	17,702	18,395	10,997	14,610	9,523	12,965	18,099	13,625	12,235
5	9,962	15,429	16,609	17,434	18,044	10,675	14,610	17,996	12,965	18,099	13,625	11,980
6	9,962	15,429	16,181	17,431	17,694	10,292	14,610	17,662	12,654	17,849	13,625	11,967
7	9,962	14,572	15,747	17,205	17,349	10,292	14,610	17,364	12,651	17,532	13,625	11,959
8	9,962	14,097	15,732	16,942	17,061	10,291	14,610	17,062	12,338	17,244	13,625	11,783
9	9,962	14,094	15,732	16,666	16,679	9,998	14,610	17,030	12,021	16,994	13,625	11,657
10	18,540	14,068	15,247	16,415	16,666	9,636	14,610	17,018	11,692	16,727	13,625	11,525
11	18,540	13,529	14,306	16,123	16,660	9,274	14,610	16,675	11,397	16,727	13,617	11,401
12	18,540	13,041	13,888	16,123	16,296	17,493	14,610	16,352	11,073	16,727	13,613	11,247
13	18,520	12,601	13,888	16,123	15,930	17,497	14,610	16,039	11,071	16,406	13,613	11,237
14	18,505	12,176	13,511	15,848	15,561	17,497	14,185	15,736	11,071	16,075	13,613	11,234
15	18,479	11,732	13,511	15,581	15,221	17,497	13,863	15,426	11,071	15,769	13,613	11,113
16	18,456	11,732	13,511	15,266	14,890	17,176	13,559	15,426	11,071	15,520	13,613	10,949
17	18,439	11,717	13,126	14,924	14,878	16,832	13,278	15,425	11,068	15,200	13,613	10,817
18	18,434	11,279	21,212	14,606	14,874	16,493	12,973	15,134	11,066	15,200	13,613	10,817
19	18,429	10,782	20,709	14,606	14,493	16,169	12,973	14,790	11,064	15,169	13,613	10,817
20	18,412	10,311	20,282	14,606	14,126	15,868	12,973	14,448	11,047	14,840	13,522	10,521
21	18,377	9,874	20,282	14,259	14,126	15,868	12,680	14,146	11,046	14,560	13,522	10,514
22	18,360	9,446	20,282	13,906	13,439	15,868	12,369	13,838	10,749	14,241	13,522	10,422
23	18,294	9,443	20,282	13,663	13,435	15,542	12,012	13,838	10,549	14,241	13,481	10,391
24	18,294	9,442	20,278	13,346	13,435	15,221	11,706	13,838	10,213	13,973	13,481	10,385
25	18,294	9,442	19,815	13,013	13,435	14,908	11,390	13,838	18,432	13,973	13,481	10,385
26	18,289	9,442	19,364	13,011	13,435	14,610	11,390	13,838	18,139	13,708	13,481	10,385
27	18,289	9,442	18,932	13,003	13,113	14,610	11,390	13,838	18,139	13,708	13,481	10,385
28	17,935	17,881	18,519	12,709	12,745	14,610	11,077	13,817	18,134	13,674	13,372	10,385
29	17,523	17,881	18,518	12,362	12,375	14,610	10,757	13,814	18,130	13,655	13,372	10,385
30	17,150		18,512	19,050	11,994	14,610	10,757	13,809	18,125	13,633	13,372	10,385
31	16,739		18,316		11,992		10,151	13,809		13,633		10,385

	Gal	Lbs
Daily Average:	**14,350**	**89,760**
Daily MAX:	**21,212**	**132,681**
Density:	0.75	

Power Steering Fluid Average on Site

From Tank Farm Log
(Gallons)

Day	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
1	7750	7550	7050	11600	11100	10600	10150	9850	9500	9300	8950	8,950
2	7750	7550	7050	11600	11100	10550	10150	9850	9500	9300	8950	8,900
3	7750	7550	7050	11600	11100	10550	10150	9850	9450	9300	8950	8,900
4	7750	7550	7000	11600	11100	10550	10150	9850	9450	9300	8950	8,900
5	7750	7400	7000	11550	11050	10500	10150	9800	9450	9300	8950	8,850
6	7750	7400	6950	11550	11050	10500	10150	9800	9450	9300	8950	8,850
7	7750	7400	6950	11550	11050	10500	10150	9750	9400	9250	8950	8,850
8	7750	7400	6950	11550	11000	10500	10150	9750	9400	9150	8950	8,850
9	7750	7400	6950	11550	10950	10400	10150	9650	9400	9100	8950	8,850
10	7750	7400	6950	11500	10950	10400	10150	9650	9400	9100	8950	8,850
11	7750	7350	6850	11450	10950	10400	10150	9650	9400	9100	8950	8,750
12	7750	7300	6750	11450	10900	10400	10150	9650	9350	9100	8950	8,750
13	7750	7300	6750	11450	10900	10400	10150	9600	9350	9100	8950	8,750
14	7750	7300	12000	11400	10900	10400	10100	9600	9350	9050	8950	8,750
15	7750	7250	12000	11400	10900	10400	10100	9600	9350	9050	8950	8,750
16	7750	7250	12000	11200	10900	10400	10050	9600	9350	9050	8950	8,750
17	7750	7250	12000	11200	10850	10350	10050	9600	9350	9050	8950	8,750
18	7750	7200	12000	11200	10850	10300	10050	9550	9350	9050	8950	8,750
19	7750	7200	11950	11200	10750	10300	10050	9550	9350	9050	8950	8,750
20	7750	7200	11950	11200	10750	10250	10050	9500	9350	9000	8950	8,750
21	7750	7150	11900	11200	10750	10250	10000	9500	9350	8950	8950	8,750
22	7750	7150	11900	11200	10750	10250	10000	9500	9350	8950	8950	8,750
23	7750	7150	11900	11200	10750	10250	10000	9500	9350	8950	8950	8,700
24	7750	7150	11900	11200	10750	10150	9950	9500	9350	8950	8950	8,700
25	7750	7150	11850	11200	10750	10150	9950	9500	9300	8950	8950	8,700
26	7750	7150	11700	11200	10750	10150	9950	9500	9300	8950	8950	8,700
27	7750	7150	11700	11200	10600	10150	9950	9500	9300	8950	8950	8,700
28	7750	7050	11700	11200	10600	10150	9950	9500	9300	8950	8950	8,700
29	7750	7050	11700	11200	10600	10150	9900	9500	9300	8950	8950	8,700
30	7600		11700	11100	10600	10150	9900	9500	9300	8950	8950	8,700
31	7600		11650		10600		9900	9500		8950		8,700

	Gal	Lbs
Daily Average:	**9,443**	**69,301**
Daily MAX:	**12,000**	**88,070**
Density:	0.88	

Sealers - Miscellanous Sources

Usage in Gallons

Body Shop - ELPO RTO	Density (lb/gal)	HMCS #	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Uniseal 119	10.84	345295	120	120	90	90	180	90	90	120	180	-	-	-
Uniseal 162.2	12.09	352170	120	120	90	150	210	-	90	120	180	-	-	-
Uniseal 162.6	12.51	227575	-	-	-	-	-	-	-	2,010	58	-	-	-
Uniseal 175.8	12.51	324961	192	312	384	144	414	192	192	144	144	144	-	-
BetaSeal 1599N*	9.70	1187493	2,419	2,419	2,419	2,419	2,419	2,419	2,419	2,333	2,419	-	-	-
Therokal 455B	9.59	356589	-	150	120	186	120	240	-	168	120	-	-	-
Pliogrip 7400**Units are in Pounds	10.72	325870	564	2,256	3,588	3,588	2,392	2,392	3,588	3,588	-	-	-	-
Pliogrip 7651**Units are in Pounds	10.25	325871	5,980	2,392	5,640	-	2,256	-	2,556	-	-	-	-	-
BetaSeal 64362	7.03	3466685	-	-	2,240	2,240	-	2,240	-	-	-	280	-	-
PPG P8125 Hem Flange Sealer	13.20	1186517	-	-	-	-	-	1,750	200	200	-	200	-	-
Kent Clear Sealer Received in 11 Oz	7.77	230640	-	-	-	-	-	-	-	-	-	-	-	-
Kent Black Sealer Received in Pints	9.42	204025	-	-	-	-	-	-	-	-	-	-	-	-
Henkel Thumb Grade Sealer Units a	13.76	349021	-	-	-	-	-	-	-	-	-	-	-	-

Sealers - Miscellanous Sources

Usage in Pounds

Body Shop - ELPO RTO	Density (lb/gal)	HMCS #	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Uniseal 119	10.84	345295	1,301	1,301	976	976	1,951	976	976	1,301	1,951	-	-	-
Uniseal 162.2	12.09	352170	1,451	1,451	1,088	1,814	2,540	-	1,088	1,451	2,177	-	-	-
Uniseal 162.6	12.51	227575	-	-	-	-	-	-	-	25,145	726	-	-	-
Uniseal 175.8	12.51	324961	2,402	3,903	4,804	1,801	5,179	2,402	2,402	1,801	1,801	1,801	-	-
BetaSeal 1599N*	9.70	1187493	23,464	23,464	23,464	23,464	23,464	23,464	23,464	22,630	23,464	-	-	-
Therokal 455B	9.59	356589	-	1,439	1,151	1,784	1,151	2,302	-	1,611	1,151	-	-	-
Pliogrip 7400**Units are in Pounds	10.72	325870	564	2,256	3,588	3,588	2,392	2,392	3,588	3,588	-	-	-	-
Pliogrip 7651**Units are in Pounds	10.25	325871	5,980	2,392	5,640	-	2,256	-	2,556	-	-	-	-	-
BetaSeal 64362	7.03	3466685	-	-	15,747	15,747	-	15,747	-	-	-	1,968	-	-
PPG P8125 Hem Flange Sealer	13.20	1186517	-	-	-	-	-	23,100	2,640	2,640	-	2,640	-	-
Kent Clear Sealer Received in 11 Oz	7.77	230640	-	-	-	-	-	-	-	-	-	-	-	-
Kent Black Sealer Received in Pints	9.42	204025	-	-	-	-	-	-	-	-	-	-	-	-
Henkel Thumb Grade Sealer Units a	13.76	349021	-	-	-	-	-	-	-	-	-	-	-	-

TOTALS	35,162	36,206	56,458	49,174	38,933	70,383	36,714	60,168	31,270	6,410	-	-	420,878
MONTHLY LB AVERAGE USE (TOTAL /12) =													35,073
MAX ONSITE (lb) = MONTH MAX * 1.5													105,574

GM WILMINGTON 2008 CALENDAR YEAR

SARMOD SHOP PAINT USAGE SOLVENT Paints

SOLVENT BASED PAINTS --- GALLONS

COLOR	DENSITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	TOTAL (GAL)
CLEAR 2A	1.00	648	1,378	1,569	1,697	1,229	667	743	876	770	685	-	534	10,796
CLEAR 2B	1.06	247	504	579	447	414	384	247	247	247	242	-	212	3,770
SOL 32883	0.94	7	10	52	41	2	11	16	18	10	13	-	6	186
764-225AR	1.36	5	2	7	6	6	3	4	7	8	7	-	5	58
GRAY SURF	1.09	386	885	1,012	778	831	660	525	672	477	485	-	304	7,015
WHITE SURF	1.09	25	133	125	117	107	125	52	71	57	82	-	33	927
EOLR														
CODE 25	0.98	0	2	1	1	0	-	-	-	-	-	-	-	4.13
CODE 28	1.03	0	2	1	1	1	0	0	1	0	0	-	-	6.08
CODE 34	1.38	0	2	1	1	1	1	0	1	-	1	-	0	7.18
CODE 38	1.01	0	2	1	1	1	1	-	0	0	0	-	-	6.04
CODE 41	1.01	1	2	2	3	3	2	2	2	2	2	-	1	21.96
CODE 48	0.97	-	-	-	-	0	-	0	1	1	1	-	1	3.57
CODE 50	1.24	0	2	1	1	0	1	1	2	-	0	-	0	7.77
CODE 58	1.00	-	1	1	1	1	0	-	-	-	-	-	-	4.44
CODE 67	1.01	1	4	5	6	5	4	3	4	3	4	-	2	41.01
CODE 72	1.03	0	1	1	1	0	-	-	-	-	-	-	-	3.13
CODE 74	0.99	0	2	2	3	2	2	1	2	1	2	-	1	18.89
CODE 75	0.98	0	2	2	2	2	2	0	2	1	2	-	0	15.71
CODE 79	1.01	-	-	-	-	-	0	2	2	2	2	-	1	8.95
CLEAR 1K	0.98	3	12	14	18	14	9	7	9	7	8	-	5	104.82
RK- 4082	0.87	0	2	1	1	2	1	1	1	1	1	-	1	11.23
RK- 4083	0.84	0	1	1	1	1	1	0	1	0	0	-	0	7.06
818-2347	1.14	0	2	2	2	3	2	2	2	1	1	-	1	18.04
T-8139	0.85	0	2	2	3	2	2	1	1	1	1	-	1	15.67
T-8498	0.79	0	2	2	2	3	2	2	2	1	1	-	1	18.04
SPRAY														
CODE 25	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 28	0.76	-	-	-	-	-	-	-	0.47	-	-	-	-	0.47
CODE 34	0.77	0.51	-	-	-	-	-	-	-	-	-	-	-	0.51
CODE 38	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 41	0.76	0.47	-	-	-	-	-	-	-	-	-	-	-	0.47
CODE 48	0.76	-	-	-	-	0.66	-	0.08	0.47	-	-	-	-	1.21
CODE 50	0.78	0.47	-	-	-	-	-	-	0.47	-	-	-	-	0.94
CODE 58	0.76	-	-	-	0.20	0.08	-	-	-	-	-	-	-	0.28
CODE 67	0.76	0.47	-	-	-	-	-	-	0.94	-	-	-	-	1.41
CODE 72	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 74	0.76	0.47	-	-	-	-	-	-	0.47	-	-	-	-	0.94
CODE 75	0.77	-	-	-	-	-	-	-	0.47	-	-	-	-	0.47
CODE 79	0.77	-	-	-	-	-	0.16	-	0.47	-	-	-	-	0.63
CLEAR SPRA	0.99	-	-	-	-	-	-	-	-	-	-	-	-	-
TOUCH UP														
CODE 22	0.91	-	-	-	-	-	0.05	-	0.05	0.02	0.02	-	0.01	0.15
CODE 25	0.92	0.04	0.01	0.09	0.09	0.50	-	-	-	-	-	-	-	0.73
CODE 28	0.92	-	0.01	0.09	0.08	-	0.09	-	-	-	-	-	-	0.27
CODE 34	0.91	0.01	0.01	0.09	0.09	-	0.05	-	0.05	0.05	0.05	-	-	0.40
CODE 38	0.92	0.12	0.01	0.05	0.04	-	0.05	-	0.05	0.05	-	-	-	0.37
CODE 41	0.91	0.09	-	0.09	0.14	0.05	0.23	-	0.09	0.05	0.09	-	-	0.83
CODE 48	0.92	-	-	-	-	0.09	0.07	-	0.09	-	-	-	-	0.25
CODE 50	0.98	-	0.01	0.09	0.10	-	0.05	-	0.09	-	0.05	-	0.05	0.44
CODE 58	0.93	-	0.01	0.05	0.06	0.05	-	-	-	-	-	-	-	0.17
CODE 67	0.92	0.05	0.01	0.05	0.09	0.05	0.05	0.05	0.14	-	-	-	-	0.49
CODE 72	0.94	0.05	0.01	0.05	0.02	-	-	-	-	-	-	-	-	0.13
CODE 74	0.91	0.09	0.01	0.05	0.02	0.05	0.09	-	0.03	0.05	0.05	-	-	0.44
CODE 75	0.93	-	-	-	0.09	-	0.05	0.05	0.07	-	-	-	0.05	0.31
CODE 79	0.92	-	-	-	-	-	0.11	-	0.14	-	-	-	0.05	0.30
CLEAR	0.90	-	-	-	-	-	-	-	-	-	-	-	-	-

Usage Source: John W. Peronti

3/9/2009

SOLVENT BASED PAINTS --- POUNDS

COLOR	DENSITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	TOTAL (LB)
CLEAR 2A	1.00	5,404	11,493	13,085	14,153	10,250	5,563	6,197	7,306	6,422	5,713	-	4,454	90,039
CLEAR 2B	1.06	2,184	4,456	5,119	3,952	3,660	3,395	2,184	2,184	2,184	2,139	-	1,874	33,328
SOL 32883	0.94	55	78	408	321	16	86	125	141	78	102	-	47	1,458
764-225AR	1.36	51	23	76	68	66	34	43	73	85	82	-	57	657
GRAY SURF	1.09	3,505	8,036	9,189	7,064	7,546	5,993	4,767	6,102	4,331	4,404	-	2,760	63,697
WHITE SURF	1.09	227	1,208	1,135	1,062	972	1,135	472	645	518	745	-	300	8,417
EOLR														
CODE 25	0.98	2	16	7	7	2	-	-	-	-	-	-	-	34
CODE 28	1.03	3	17	4	6	8	2	2	7	2	1	-	-	52
CODE 34	1.38	3	22	9	9	12	8	4	9	-	6	-	1	83
CODE 38	1.01	3	16	9	5	8	5	-	3	1	2	-	-	51
CODE 41	1.01	4	18	19	25	22	20	15	20	15	16	-	10	185
CODE 48	0.97	-	-	-	-	2	-	3	8	6	6	-	4	29
CODE 50	1.24	2	20	12	5	4	8	5	15	-	5	-	4	80
CODE 58	1.00	-	7	9	8	11	2	-	-	-	-	-	-	37
CODE 67	1.01	8	33	38	51	41	37	27	34	26	32	-	19	345
CODE 72	1.03	2	9	9	6	1	-	-	-	-	-	-	-	27
CODE 74	0.99	2	16	18	23	20	20	9	14	11	15	-	8	156
CODE 75	0.98	3	16	15	19	18	16	2	13	8	15	-	2	129
CODE 79	1.01	-	-	-	-	-	3	14	19	14	16	-	10	75
CLEAR 1K	0.98	24	98	110	147	115	77	57	73	55	61	-	37	854
RK- 4082	0.87	2	12	11	10	11	7	5	8	5	6	-	4	81
RK- 4083	0.84	1	6	7	9	7	4	3	4	3	3	-	2	49
818-2347	1.14	4	19	22	23	24	23	17	15	8	9	-	8	172
T-8139	0.85	3	13	13	21	15	11	7	9	6	7	-	5	111
T-8498	0.79	3	13	15	16	16	16	12	11	6	6	-	5	119
SPRAY														
CODE 25	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 28	0.76	-	-	-	-	-	-	-	2.99	-	-	-	-	2.99
CODE 34	0.77	3.26	-	-	-	-	-	-	-	-	-	-	-	3.26
CODE 38	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 41	0.76	2.98	-	-	-	-	-	-	-	-	-	-	-	2.98
CODE 48	0.76	-	-	-	-	4.19	-	0.51	2.98	-	-	-	-	7.68
CODE 50	0.78	3.05	-	-	-	-	-	-	3.05	-	-	-	-	6.10
CODE 58	0.76	-	-	-	1.27	0.51	-	-	-	-	-	-	-	1.78
CODE 67	0.76	2.98	-	-	-	-	-	-	5.96	-	-	-	-	8.94
CODE 72	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 74	0.76	2.98	-	-	-	-	-	-	2.98	-	-	-	-	5.96
CODE 75	0.77	-	-	-	-	-	-	-	3.00	-	-	-	-	2.98
CODE 79	0.77	-	-	-	-	-	1.02	-	3.00	-	-	-	-	3.99
CLEAR SPRA	0.99	-	-	-	-	-	-	-	-	-	-	-	-	-
TOUCH UP														
CODE 22	0.91	-	-	-	-	-	0.38	-	0.38	0.15	0.15	-	0.08	1.14
CODE 25	0.92	0.31	0.08	0.72	0.69	3.83	-	-	-	-	-	-	-	5.62
CODE 28	0.92	-	0.08	0.72	0.61	-	0.69	-	-	-	-	-	-	2.09
CODE 34	0.91	0.08	0.08	0.71	0.68	-	0.38	-	0.38	0.38	0.38	-	-	3.06
CODE 38	0.92	0.92	0.08	0.36	0.31	-	0.38	-	0.38	0.38	-	-	-	2.80
CODE 41	0.91	0.68	-	0.71	1.06	0.38	1.75	-	0.68	0.38	0.68	-	-	6.33
CODE 48	0.92	-	-	-	-	0.69	0.54	-	0.69	-	-	-	-	1.91
CODE 50	0.98	-	0.08	0.76	0.81	-	0.41	-	0.73	-	0.41	-	0.41	3.61
CODE 58	0.93	-	0.08	0.36	0.46	0.39	-	-	-	-	-	-	-	1.29
CODE 67	0.92	0.38	0.08	0.36	0.69	0.38	0.38	0.38	1.07	-	-	-	-	3.72
CODE 72	0.94	0.39	0.08	0.36	0.15	-	-	-	-	-	-	-	-	0.98
CODE 74	0.91	0.68	0.08	0.36	0.15	0.38	0.68	-	0.23	0.38	0.38	-	-	3.32
CODE 75	0.93	-	-	-	0.69	-	0.39	0.39	0.54	-	-	-	0.39	2.39
CODE 79	0.92	-	-	-	-	-	0.84	-	1.07	-	-	-	0.38	2.29
CLEAR	0.90	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS		11,513	25,644	29,345	27,018	22,856	16,472	13,970	16,744	13,785	13,395	-	9,610	200,352
MONTHLY AVE (TOTAL/12)														16,696
MAX ONSITE (lb) = OVERALL MAX * 1.5														30,812

GM WILMINGTON 2008 CALENDAR YEAR

MOD SHOP PAINT USAGE

WATER BASED PAINTS --- GALLONS

COLOR	DENSITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	TOTAL (GAL)
CODE 22	1.043	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 25	1.01	40	140	200	110	-	-	-	-	-	-	-	-	490
CODE 28	1.03	10	60	60	80	110	60	44	40	100	30	-	40	634
CODE 34	1.17	25	147	140	85	140	105	46	70	50	275	-	35	1,118
CODE 38	1.02	5	80	117	75	10	65	35	58	50	20	-	-	515
CODE 41	1.01	180	530	863	759	720	563	275	330	225	287	-	-	4,732
CODE 48	1.02	-	-	-	-	-	20	95	100	125	95	-	65	500
CODE 50	1.20	25	156	164	120	120	140	120	100	80	82	-	55	1,162
CODE 58	1.01	10	55	75	212	423	-	-	-	-	-	-	-	775
CODE 67	1.02	160	799	1,173	710	650	737	507	485	440	391	-	294	6,346
CODE 72	1.03	10	74	113	35	-	-	-	-	-	-	-	-	232
CODE 74	1.04	90	424	450	280	290	280	150	280	150	145	-	120	2,659
CODE 75	1.02	30	160	195	100	170	140	50	208	45	55	-	40	1,193
CODE 79	1.03	-	-	-	-	-	117	190	300	199	210	-	110	1,126

WATER BASED PAINTS --- POUNDS

COLOR	DENSITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	TOTAL (LB)
CODE 22	1.043	-	-	-	-	-	-	-	-	-	-	-	-	-
CODE 25	1.01	348	1,218	1,740	957	-	-	-	-	-	-	-	-	4,262
CODE 28	1.03	86	514	514	686	943	514	377	343	857	257	-	343	5,436
CODE 34	1.17	244	1,434	1,366	829	1,366	1,025	449	683	488	2,683	-	342	10,909
CODE 38	1.02	43	681	995	638	85	553	298	493	425	170	-	-	4,381
CODE 41	1.01	1,516	4,464	7,269	6,393	6,065	4,742	2,316	2,780	1,895	2,418	-	-	39,860
CODE 48	1.02	-	-	-	-	-	170	806	848	1,060	806	-	551	4,241
CODE 50	1.20	250	1,561	1,641	1,201	1,201	1,401	1,201	1,001	801	821	-	550	11,629
CODE 58	1.01	84	461	629	1,779	3,549	-	-	-	-	-	-	-	6,502
CODE 67	1.02	1,361	6,797	9,978	6,040	5,529	6,270	4,313	4,126	3,743	3,326	-	2,501	53,984
CODE 72	1.03	85	633	966	299	-	-	-	-	-	-	-	-	1,983
CODE 74	1.04	781	3,678	3,903	2,429	2,515	2,429	1,301	2,429	1,301	1,258	-	1,041	23,063
CODE 75	1.02	255	1,358	1,656	849	1,443	1,189	425	1,766	382	467	-	340	10,129
CODE 79	1.03	-	-	-	-	-	1,009	1,638	2,587	1,716	1,811	-	949	9,710
TOTALS		5,052	22,800	30,659	22,100	22,697	19,301	13,124	17,056	12,669	14,016	-	6,616	186,090
MONTHLY AVE (TOTAL/12)														15,507
MAX ONSITE (lb) = OVERALL MAX * 1.5														32,192

Wilmington Battery Count / Updated 2-19-08 (Email) ASSUMED NO CHANGES FOR 2008

**

Amount	Descriptions	Used In	Status
27	Opportunity Rapid Charge / Lead Acid 85 AM Hrs	Tuggers	In Use
45	Maintenance Free / Gel Cell Batteries 750 AM Hrs.	Fork Trucks	In Use
25	Maintenance Free / Gel Cell Batteries 900 AM Hrs.	Fork Trucks	In Use
5	Maintenance Free / Gel Cell Batteries 1200 AM Hrs.	Fork Trucks	In Use
102	***Sub Total***		
8	Maintenance Free / Gel Cell Batteries 1200 AM Hrs.	Fork Trucks	Surplus
8	***Sub Total***		
37	**Lead Acid / Known Bad**	**N/A**	**Known Bad**
3	**Maintenance Free / Gel Cell Batteries 900 AM Hrs.**	**N/A**	**Known Bad**
1	**Maintenance Free / Gel Cell Batteries 1200 AM Hrs.**	**N/A**	**Known Bad**
1	**Maintenance Free / Gel Cell Batteries 750 AM Hrs.**	**N/A**	**Known Bad**
42	***Sub Total***		

152 Grand Total

NOTES:

Battery info above provided by:

Keith Weldin
Premier / WFG / Mobile Equipment Operations / Advisor
GM-Wilmington Assembly
901 Boxwood Rd.; Wilmington, DE 19804
mail code: 198-099-060
phone: (302) 428-7801
cell: (302) 293-3028
fax: (302) 428-7824
email : KEWeldin@premiermss.com
email: keith.weldin@gm.com

Per conversation with Keith Welding on 2/22/06, 2:45 PM, each battery weighs approximately 3000 pounds.

Per discussions w/ the Plant EE, sulfuric acid in batteries assumed to be equal to 25% of the total battery weight:

Total Sulfuric Acid = 152 x 3000 lbs x 0.25 = 114,000

Batteries are sealed and number of batteries is constant therefore max = average.

Wilmington Battery Count / Updated 3-2-09 (Email)

**

Amount	Descriptions	Used In	Status
22	Opportunity Rapid Charge / Lead Acid 425 AM Hrs	Tuggers	In Use
26	Opportunity Rapid Charge / Lead Acid 850 AM Hrs	Fork Trucks	In Use
13	Opportunity Rapid Charge / Lead Acid 1020 AM Hrs	Fork Trucks	In Use
12	Maintenance Free / Gel Cell Batteries 750 AM Hrs.	Fork Trucks	In Use
1	Maintenance Free / Gel Cell Batteries 900 AM Hrs.	Fork Trucks	In Use
9	Maintenance Free / Gel Cell Batteries 1200 AM Hrs.	Fork Trucks	In Use
83	***Sub Total***		
2	Maintenance Free / Gel Cell Batteries 1200 AM Hrs.	Fork Trucks	Surplus
2	***Sub Total***		
38	**Lead Acid / Known Bad**	**N/A**	**Known Bad**
4	**Maintenance Free / Gel Cell Batteries 900 AM Hrs.**	**N/A**	**Known Bad**
2	**Maintenance Free / Gel Cell Batteries 1200 AM Hrs.**	**N/A**	**Known Bad**
2	**Maintenance Free / Gel Cell Batteries 750 AM Hrs.**	**N/A**	**Known Bad**
46	***Sub Total***		
131	**Grand Total**		

NOTES:

Battery info above provided by:

Keith Weldin
Premier / WFG / Mobile Equipment Operations / Advisor
GM-Wilmington Assembly
901 Boxwood Rd.; Wilmington, DE 19804
mail code: 198-099-060
phone: (302) 428-7801
cell: (302) 293-3028
fax: (302) 428-7824
email : KEWeldin@premiermss.com
email: keith.weldin@gm.com

Per conversation with Keith Welding on 2/22/06, 2:45 PM, each battery weighs approximately 3000 pounds.

Per discussions w/ the Plant EE, sulfuric acid in batteries assumed to be equal to 25% of the total battery weight:

Total Sulfuric Acid = Battery Number x 3000 lbs x 0.25 = 98,250

Batteries are sealed and number of batteries is constant therefore max = average.

Chang, Belssi

From: john.w.peronti@gm.com
Sent: Monday, March 09, 2009 12:59 PM
To: Chang, Belssi
Subject: RE: FW: GM Wilmington Battery Count (Wilmington Battery Count 2008)

Belsi,

The result is not significant. We will pick it up next year.

Regards,
John W. Peronti
Sr. Environmental Engineer
GMVM Wilmington Assembly
801 Boxwood Road
Newport, DE 19804
302-428-7422 – Desk
302-463-7934 - Cell

"Chang, Belssi" <Belssi.Chang@geotransinc.com>

03/09/2009 12:40 PM

To "john.w.peronti@gm.com" <john.w.peronti@gm.com>
cc
Subject RE: FW: GM Wilmington Battery Count (Wilmington Battery Count 2008)

Hi John,

The updated battery count provided in the email below from March 2, 2009, results in 98,250 lbs of sulfuric acid in lead acid batteries. The Tier 2 Forms which were submitted before the updated battery count was received (to meet the March 1st deadline) reported 114,000 lbs. In my opinion, the difference is not significant but let me know if you would like to submit an online amendment to the DNREC.

Thanks,
Belssi

Belssi Chang Lee | Project Engineer
Main: 410-990-4607 | Fax: 410-990-4749
belssi.chang@geotransinc.com

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"Please consider your environmental responsibility before printing this e-mail"

From: keith.weldin@gm.com [mailto:keith.weldin@gm.com]
Sent: Monday, March 02, 2009 12:11 PM
To: Chang, Belssi
Cc: john.w.peronti@gm.com; Weldin, Keith
Subject: Re: FW: GM Wilmington Battery Count (Wilmington Battery Count 2008)

Hello Chang,

Attached is GM-Wilmington Assembly's Battery Count.

Keith Weldin

Premier / WFG / Mobile Equipment Operations / Advisor
GM-Wilmington Assembly
901 Boxwood Rd.; Wilmington, DE 19804
mail code: 198-099-060
phone: (302) 428-7801
cell: (302) 293-3028
fax: (302) 428-7824
email : KEWeldin@premiermss.com
email: keith.weldin@gm.com

"Chang, Belssi" <Belssi.Chang@geotransinc.com>

02/17/2009 01:00 PM

To "Weldin, Keith" <Keith.Weldin@Voith.com>, "keith.weldin@gm.com" <keith.weldin@gm.com>
cc "john.w.peronti@gm.com" <john.w.peronti@gm.com>
Subject FW: GM Wilmington Battery Count

Hi Keith,
I am following up on my email below. Would it be possible to get an updated lead acid battery count this week? That would help me out with my draft report which is due on 2/20/09.
Thank you,
Belssi

-----Original Message-----
From: Chang, Belssi
Sent: Friday, February 06, 2009 12:04 PM
To: 'Weldin, Keith'; keith.weldin@gm.com
Cc: john.w.peronti@gm.com
Subject: RE: GM Wilmington Battery Count

Hi Keith,

I am looking for updated battery count for 2008 for the GM Wilmington Plant. The numbers from last year are attached. If you would let me know in the next couple of days, I'd appreciate it.

Thank you,
Belssi

-----Original Message-----
From: Weldin, Keith [mailto:Keith.Weldin@Voith.com]
Sent: Tuesday, February 19, 2008 11:40 AM
To: Chang, Belssi; keith.weldin@gm.com
Cc: john.w.peronti@gm.com
Subject: RE: GM Wilmington Battery Count

Yes, you can utilize the 2007 battery information.

From: Chang, Belssi [mailto:bchang@geotransinc.com]
Sent: Thu 2/14/2008 5:05 PM
To: keith.weldin@gm.com; Weldin, Keith
Cc: john.w.peronti@gm.com
Subject: GM Wilmington Battery Count

Keith,

Hi. I am writing to find out what the battery count for 2007 was at the GM Wilmington Plant. The battery count you provided for 2006 is attached. Let me know if the count was the same in 2007.

Thank you,
Belssi

Belssi A. Chang | GeoTrans, Inc.
844 West Street, Suite 200 | Annapolis, MD 21401 | www.geotransinc.com
Office: 410.990.4607 | Cell: 301.442.3918 | Fax: 410.990.4749
bchang@geotransinc.com <mailto:bchang@geotransinc.com>

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GMVM Wilmington Assembly (550747)

EHS Analysis RY 2008

Product Name	HMCS ID	Transaction Amount Lbs	Location ID	EHS Name	Report CAS No.	MSDS Wt Percent	Calculated Wt Percent	Calculation Rule	Max EHS Transaction Amount lbs
REAGENT SOLUTION 44	061923	15	'aint Dept.	Sulfuric acid	7664-93-9	= 50	50	=	8
SULFURIC ACID	073680	37,877	WWT	Sulfuric acid	7664-93-9	= 93.2	93.2	=	35,302
REAGENT SOLUTION 140A	191487	5	'aint Dept.	Sulfuric acid	7664-93-9	= 20	20	=	1
				Sulfuric acid Total					**35,310**
PARCO PURGE 20	204481	40,000	'aint Dept.	Nitric acid	7697-37-2	000 - 25.000	20	R	8,000
CUSTOM PLASMA STANDARD-M	356618	2	WWT	Nitric acid	7697-37-2	= 2	2	=	0
				Nitric acid Total					**8,000**
TITRATING SOLUTION 61	226455	26	'aint Dept.	ride (gas only)	7647-01-0	= 0.37	0	D	-
DEOXIDINE A-500	357053	2,105	'aint Dept.	ride (gas only)	7647-01-0	000 - 40.000	35	R	737
				Hydrogen chloride (gas only) Total					**737**
BETAGUARD 64362 SEALER	346685	15,879	mbly Floor	Vinyl acetate	108-05-4	< 1	1	<	159
				Vinyl acetate Total					**159**
CHEMTREAT BL-1558	358370	441	PH	clohexylamine	108-91-8	= 25	25	=	110
				Cyclohexylamine Total					**110**
DEOXIDINE A-500	357053	2,105	'aint Dept.	Formaldehyde	50-00-0	< 1.00	1	<	21
BUFFER SOLUTION PH 4.0	176516	2	WWT	Formaldehyde	50-00-0	= 0.05	0	D	-
				Formaldehyde Total					**21**
2605 Krylon H2O Latex Aerosol Pa	1187734	9	rch Paints	Ammonia	7664-41-7	< 1	0	D	-
2618 Krylon H2O Latex Aerosol Pa	1188009	5	rch Paints	Ammonia	7664-41-7	< 1	0	D	-
B66R300 Sher-Cryl HPA High Perf	350965	71	rch Paints	Ammonia	7664-41-7	< 1	0	D	-
				Ammonia Total					**-**
REAGENT SOLUTION 46	309358	1	'aint Dept.	(Conc.> 52%)	7722-84-1	000 - 40.000	28	R	0
				Hydrogen peroxide (Conc.> 52%) Total					0
5 TO 100 PPM HYDROGEN SULF	343999	459	Gases	drogen sulfide	7783-06-4	0.0005 - 0.01	0	D	-
5 TO 100 PPM HYDROGEN SULF	343999	459	WFG	drogen sulfide	7783-06-4	0.0005 - 0.01	0	D	-
				Hydrogen sulfide Total					**-**
NUTS OFF 17	176167	25	'aint Dept.	Phenol	108-95-2	= 0.7	0	D	-
				Phenol Total					**-**
SULFUR DIOXIDE IN NITROGEN	345537	459	Gases	Sulfur dioxide	7446-09-5	< 1	0	D	-
SULFUR DIOXIDE IN NITROGEN	345537	459	WFG	Sulfur dioxide	7446-09-5	< 1	0	D	-
				Sulfur dioxide Total					**-**

Appendix D

Support Documentation

Haas TCM - Wilmington Plant

Environmental Usage Report from JAN08 to DEC08

WILMINGTON

	2008	JAN 08	FEB 08	MAR 08	APR 08	MAY 08	JUN 08	JUL 08	AUG 08	SEP 08	OCT 08	NOV 08	DEC 08
BODY SHOP													
Industrial Gases													
13,4696 OXYGEN (SMALL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING Liquid CO2	65468.43	4838.71	5281.35	5712.67	11367.65	7001.38	9583.90	2613.79	9583.90	7485.06	0.00	0.00	2000.00
PENDING FREIGHT	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,000.00	0.00	0.00
PENDING MON LP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING MON LQ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,8348 ARGON LIQUID	298237.68	9,098.42	63,610.09	32,963.92	36,937.54	31820.40	30208.07	16,175.21	19,336.07	16999.54	11,378.33	7,852.50	21857.58
SU# 13,8348 ARGON LIQUID	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13, 8348 AR LC180-230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4681 90ARGON/10CO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4681 AR STAR14-T	4089.00	143.00	0.00	858.00	0.00	143.00	143.00	286.00	0.00	0.00	371.00	2145.00	0.00
SU# 13,4681 AR STAR14-TP1	15000.00	0.00	3000.00	3000.00	0.00	6000.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4681 AR STAR14-TP1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4681 AR STAR9-T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4698 AR TP18	40000.00	10000.00	10000.00	5000.00	0.00	5000.00	5000.00	0.00	5000.00	0.00	0.00	0.00	0.00
SU# 13,4698 ARGON - AR S	608.00	0.00	304.00	152.00	76.00	0.00	0.00	0.00	0.00	0.00	76.00	0.00	0.00
SU# 13,4698 ARGON - AR T	23166.00	3861.00	2002.00	3718.00	2288.00	1287.00	2717.00	5005.00	0.00	0.00	143.00	2145.00	0.00
SU#13,8348 AR LC 160-350	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lubricants													
004941 MOS 2 GREASE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2,3633 SUPER SLICK DR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solvents													
SU# 02,4587 P3 HI-LITE 24	122.50	0.00	0.00	0.00	73.50	0.00	49.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2242 BRAKLEEN BRAKE P	0.00	0.00	14.26	0.00	14.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2,1307 VM&P NAPTHA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 4201 SIMPLE GREEN CLN	170.18	85.09	0.00	0.00	0.00	0.00	0.00	0.00	85.09	0.00	0.00	0.00	0.00
GEN ASSY													
Lubricants													
SU#14,1299 MLLD TRIBOL LU	70.67	28.99	12.68	9.97	9.97	0.00	0.00	0.00	0.00	0.00	4.53	0.00	4.53
PAINT													
Air Tox													
003985 CARBON MONOXIDE -	1835.90	0.00	0.00	0.00	0.00	458.98	0.00	458.98	0.00	0.00	917.95	0.00	0.00
01-01-543-A HYDROGEN	1001.00	0.00	572.00	0.00	0.00	429.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01023411 PROPANE 31.4 PPM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01023411 PROPANE 7.6 PPM	144.00	0.00	0.00	0.00	96.00	0.00	0.00	0.00	0.00	0.00	48.00	0.00	0.00
PENDING 10 TO 15 NOX/NITR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 10% TO 15% O2/NIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 12% TO 15% CO2/NI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 2.5 TO 3.5 PROPAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 20 TO 25 NOX/NITR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 20% TO 25% O2/NIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 250 TO 350 PROPAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 3 PPM PROPANE/AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 4.5 TO 5.5 PROPA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING 5 PPM PROPANE, AI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Haas TCM - Wilmington Plant

Environmental Usage Report from JAN08 to DEC08

WILMINGTON

	2008	JAN 08	FEB 08	MAR 08	APR 08	MAY 08	JUN 08	JUL 08	AUG 08	SEP 08	OCT 08	NOV 08	DEC 08
Purge													
SU# 2,3987 PARCOSOL 130	7688.56	7688.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#5084 CN31925 Purge Solvent	11562.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11,562.25
Parcosol 302 (237250)	202794.21	42,532.74	45,432.36	18,672.20	35,613.67	46297.77	14245.47	0.00	0.00	0.00	0.00	0.00	0.00
SU#5043 Parcosol 402 C	106173.24	0.00	0.00	3,539.11	0.00	0.00	3539.11	35,391.08	28,312.86	21234.65	10,617.32	0.00	3539.11
Fire Retardants													
PENDING FUEL SURCHARGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Gases													
004695 LIQ NIT IND 240L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING LIQ NITROGEN - DE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING LIQ NITROGEN - HA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#13,4695 LIQUID NITROGE	10254.66	0.00	3.92	2,428.00	5.00	7.00	3.34	8.40	6.96	10.99	2,556.82	0.00	5224.24
Lubricants													
PENDING MLLD SHC100CART L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 14,1096 CHEVRON SRI G	11.38	0.00	0.00	0.00	0.00	0.88	1.75	0.88	1.75	0.00	1.75	0.00	4.38
SU# 14,1096 HPS-RK240-SHC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 14,1299D CASTROL 860/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#4,5069 Tribol 1100/680 Gear Oil	415.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	415.00	0.00	0.00	0.00	0.00
SU# 14,2042 CASTROL 882	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 14,2043 CASTROL 713 A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU #3044 AUTOMATIC TRANSM	787.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 14,4526 CLIMAX 650 LU	0.00	0.00	0.00	0.00	787.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2,4247 HEAVY DUTY CHA	109.50	0.00	27.00	27.75	0.00	8.25	11.25	9.00	8.25	12.00	6.00	0.00	0.00
PENDING 70902-AP20 DEXRON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3, 1318 NUTS OFF PENE	24.77	0.00	0.00	0.00	0.00	0.00	24.77	0.00	0.00	0.00	0.00	0.00	0.00
SU#14,2232 ROBOT GREASE L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Misc Crib Chemicals													
001339 PERMATEX #2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2,4599 Weld-On for PVC Plastic Pipe	35.21	0.00	0.00	0.00	0.00	11.74	0.00	0.00	0.00	0.00	11.74	11.74	0.00
SU#14,3135 Multan PL 101	35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
SU# 4970 EVERSPUN PRE-MOI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 5,1912 MINUTE-BOND AD	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00
Strippers													
SU# 3,4913 AEI JUPITER	2475.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2475.00	0.00	0.00
SU# 3,4924 AEI HYPERSTRIP	11080.00	0.00	2770.00	0.00	0.00	0.00	0.00	2770.00	0.00	2770.00	2770.00	0.00	0.00
Water Treatment													
SU# 13,3591 OMNIKOOL 2602	4000.00	0.00	0.00	0.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 16,2283 SOLAR SALT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 16,3589 OMNISPERSE 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 16,3612 OMNIKOOL 3000	5409.60	5409.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 17,4447 CWT 8954	460.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 18, 4364 HALOGENE T-3	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.17
SU# 3,4533 FILMEX	361.55	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	50.00	50.00	0.00	50.00
PH								0.00	0.00	0.00	0.00	361.55	0.00
Analytical Reagents													
004852 PHENOLPHTHALEIN IN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU # 4784 R-0725K ACID ST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU #4786 SULFURIC ACID SO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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SU# 3,4155 ARMORSEAL HARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4185 WB DF EGSHEL W	263.78	105.51	158.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4204 STRIPE-PLEX SA	179.18	107.51	0.00	71.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4227 DIPPING GRAY (	98.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.92	59.91	0.00	0.00
SU# 3,4259 ARMORSEAL CLEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,5034 Armorseal Expresspatch	191.00	0.00	0.00	0.00	47.00	144.00	0.00	0.00	44.57	0.00	0.00	0.00	0.00
SU# 3,4262 PREP RITE PRIM	44.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4297 SPACKLING	18.86	18.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4338 DTM ACRYLIC GL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4380 PRO-CRYL ACRYL	108.31	108.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4496 STRIPE PLEX WH	532.96	145.35	96.90	145.35	0.00	0.00	48.45	0.00	96.90	92.82	0.00	0.00	0.00
SU# 3,4522 SATIN WHITE PA	417.87	139.22	92.82	0.00	0.00	0.00	0.00	0.00	92.82	0.00	0.00	0.00	0.00
SU# 3,4540 SEMI-GLOSS WHI	214.42	85.77	42.88	0.00	0.00	0.00	0.00	0.00	85.77	45.40	90.80	0.00	0.00
SU# 3,4603 SW STRIPE PLEX	862.56	272.39	226.99	0.00	0.00	136.19	90.80	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4608 SHER CRYL - BL	70.47	0.00	0.00	70.47	0.00	0.00	0.00	0.00	0.00	35.52	0.00	0.00	0.00
SU# 3,4609 SHER-CRYL SAFE	106.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.03	0.00	0.00	0.00	0.00
SU# 3,4798 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4799 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4802 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4803 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4804 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4805 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4807 BLEND-A-COLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4204 DTM ACR GLS SA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4261 DTM ACRY SEMI-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,4340 DTM ACRY GL EX WHI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#4801Blend-A-Color Toner, Red Oxide	17.21	17.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#2,4575Superacrylic Controls Rust Spray	18.00	4.50	0.00	0.00	4.50	0.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00
SU# 3,4879 AS 1K WB URE C	17.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.18	0.00	0.00	0.00
SU# 4,2875 LATEX CAULKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 4806 DTM ACR GLS UDEE	68.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.12	34.12	0.00	0.00
SU# 4627 HYDROSTRIP 502	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 6,4244 DAP 33 GLAZING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 6,4264 STEEL-PLEX 936	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 6,4327 MINWAX POLACRY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 6,4644 AS-75 GRAY FLO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 6,4833 YELLOW AISIE M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#3,4461 PM200 LTX GL EX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#3,4942 DTM ACR GLS DP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#3,4945 CEILCOTE 680 PR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect													
SU# 3,1678 DIESEL FUEL	8216.75	0.00	4154.77	0.00	0.00	0.00	0.00	0.00	4061.98	0.00	0.00	0.00	0.00
Industrial Gases													
008349 AC 3.5	87.86	0.00	54.91	10.98	5.49	0.00	10.98	0.00	5.49	0.00	0.00	0.00	0.00
008349 AC 5	7951.31	0.00	1890.00	1512.00	756.00	567.00	1323.00	567.00	0.00	567.00	202.31	567.00	0.00
008349 AC B	11.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.72	0.00	0.00	0.00
008349 AC MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
008349 ACETYLENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 ppm Sulfur Dioxide in Nitrogen	917.96	0.00	0.00	0.00	0.00	458.98	0.00	458.98	0.00	0.00	0.00	0.00	0.00
SU# 14,1314 Air, compressed	48.78	0.00	0.00	0.00	48.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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SU# 16,4548 WOOD FILLER S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation													
003298 TENNANT 658	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003710 SPARTAN SPRAYBUFF	298.37	298.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11,4954 SC-200 SOLVENT BA	566.08	0.00	353.80	0.00	0.00	0.00	0.00	0.00	212.28	0.00	0.00	0.00	0.00
4949,3 BRASSO POLISH	64.57	0.00	0.00	0.00	0.00	0.00	0.00	64.57	0.00	0.00	0.00	0.00	0.00
SU# 11,4402 SNO SAN GREEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 11,4508 KAIBLOOEY	65.23	65.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 11,4923 AEI CYCLONE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 12,4105 EZ PAC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,1215 AMMONIA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,1472 3M TROUBLESHO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,2327 VACO EXTRACTI	142.45	0.00	35.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,2362 BLEACH	396.00	0.00	0.00	36.00	36.00	72.00	72.00	36.00	106.84	0.00	0.00	0.00	0.00
SU# 13,4100 SAFE MATE	76.00	0.00	0.00	0.00	0.00	0.00	0.00	76.00	72.00	0.00	0.00	0.00	72.00
SU# 13,4398 1050 ALL CLEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 13,4403 CENTURIAM NON	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 16,4399 NO RINSE NEUT	1457.10	529.86	0.00	198.70	0.00	198.70	165.58	0.00	132.46	99.35	0.00	0.00	132.48
SU# 16,4953 DMQ NEUTRAL-L	2163.46	266.27	332.84	0.00	199.70	199.70	199.70	249.63	199.70	249.63	133.14	0.00	133.14
SU# 11,5027 Shinetine Baseboard Stripper	54.00	0.00	0.00	0.00	54.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2,4952 CONCENTRATED W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,1523 TEN-FOUR	390.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	390.00	0.00
SU# 3,1552 KEROSENE	390.00	0.00	0.00	390.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 3,4583 ORLANDO	520.90	0.00	0.00	520.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 4,2512 VINEGAR	33.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 9,4955 FOAMY Q & A	2793.56	290.24	362.80	0.00	435.36	435.36	217.68	272.10	489.78	0.00	145.12	0.00	145.12
SU#16,4976 SPARTAN CONSUM	1597.63	266.27	0.00	0.00	399.41	199.70	199.70	0.00	199.70	199.70	133.14	0.00	0.00
SU#16,4977 SPARTAN FRESH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#16,3811 Terra Glaze	359.61	0.00	0.00	0.00	0.00	0.00	102.74		256.87				
SU#16,4980 KUTOL FOAMING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#2,4978 OZIUM 9000 SHUT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#2,4978 OZIUM TIMEMIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck Repair													
004230 SHELL ALVANIA EP2	35.00	0.00	0.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00	0.00	0.00	0.00
SU #3044 AUTOMATIC TRANSM	1574.32	1574.32	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#4,5058 Non Detergent 30	22.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.16	0.00	0.00	0.00
SU# 2,4235 CONTACT CLEANE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 2242 BRAKLEEN BRAKE P	14.26	0.00	14.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU#4,5073 Tribol 1100/100 Gear Oil	37.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SU# 4, 4722 CASTROL 1100/	415.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.00				
SU# 4,4642 CASTROL HYPURO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	415.00	0.00	0.00	0.00	0.00	0.00
WWT								0.00	0.00	0.00	0.00	0.00	0.00
Analytical Reagents													
SU# 16, 3144 NICKEL STAND	3.30	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	2.20	0.00	0.00
SU# 16,3145 ZINC STANDARD	3.30	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	2.20	0.00	0.00
Biocide													
PENDING SODIUM HYPOCHLOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PENDING SODIUM HYPOCHLOR	38339.02	2391.26	7573.64	2547.00	4405.55	1761.20	2873.50	3948.87	3522.55	1762.00	4,953.45	1000.00	1600.00

General Motors Wilmington Assembly Center
Henkel Usage 2008

	lbs	January	February	March	April	May	June	July	August	September	October	November	December	Total
Parco Precleen 2960 (SUI #13,2636)		2552	6236	4952	3710	7858	1622	1014	7081	4064	1639	0	599	41327
Parco Cleaner 1523R (SUI #134060)		13036	9351	17665	24146	19426	10051	13456	23903	11567	11054	0	1551	155208
Parco Cleaner 1523-s (su#13,4059		646	1293	647	1293	1939	1940	1293	1930	647	1293	0	1293	14214
Pixodine Z8 (999-4415)		1008	378	902	484	126	378	1134	1260	252	1386	0	378	6678
Bonderite Replenisher 958 (SUI #11,3873)		2376	6512	8899	11363	6116	5522	4059	4873	4444	5289	0	2464	61897
Bonderite MU 958 (SUI #11,3870)		0	0	0	0	0	0	0		0	0	0	0	0
Deoxidine 20 (SUI #11,3872)		0	0	0	0	0	0	0	80019	0	0	0	0	80019
P3 E-Coat Cleaner 2250UF (SUI #11,3867)		0	0	0	0	0	0	0	1645	235	0	0	0	1880
Ridoline 422E (SUI #13,3755)		0	0	0	335	0	0	167	0	0	0	168	0	670
Parco Additive 22 (SUI #11,4146)		4500	2000	0	0	4000	0	1000	3000	0	0	0	4000	18500
Accelerator 131 (SUI #11,3865)		1285	3019	4154	3443	4304	4453	2720	2582	4304	3443	0	574	34281
Primer 40 (SUI #13,1537)		550	0	0	275	0	275	0	0	0	275	0	0	1375
Parcolene 90A (SUI #16,3681)		0	0	0	0	0	0	0	0	0	0	0	0	0
Parcolene 91 (SUI #16,4836)		450	1350	1350	1350	1350	1350	900	900	900	450	0	900	11250
Plastic Cleaner 2595 (SUI #11,3851)		469	5161	5630	4129	5020	4926	2815	2815	2815	4223	0	469	38472
P3 Paint Line Cleaner 213EC (SUI#3,4350)		0	0	0	5532	3621	1707	0	0	0	0	0	0	10860
P3 Paint Line Cleaner 200 (SUI#10,5051)		0	0	0	0	0	4854	1608	6917	0	783	3479	0	17441
Additive 301(SUI #11)		0	0	0	0	0	0	0	0	0	0	0	0	0
Additive 302 (SUI #11)		0	0	0	0	0	0	0	0	0	0	0	0	0
Additive 319 (SUI #11,3850)		0	0	0	0	0	0	0	0	0	0	0	0	0
Parcosol 302 (SUI#2,5038)	GAL	4240	5570	6720	6130	5760	2490	0	0	0	0	0	0	30910
Parcosol 402C (SUI#2,5043)	GAL					535	2530	3520	4075	3400	2750	0	825	17635
Parcosol 130 (SUI #2,3987)	GAL	1800	0	0	0	0	0	0	0	0	0	0	0	1800

WILMINGTON ASSEMBLY PLANT

HMCS ID	Material Name	Container Size	Storage Location	Usage Location	Department
-	Fuel Oil No. 6	250,000-gal tank	Tank Farm	Power House/Boilers	Tank Farm
306613	Gasoline	12,000-gal tanks (2 in tank farm) 5-gal cans	Tank Farm Tire Bldg Pump House Power House Assembly: AA-02-05, AA-13-15 HH-28 UU-23 U-9-10 M-10	General Assembly	Tank Farm
341054	Off Road Diesel	500-gal tank 500-gal tank 350-gal tank 1000-gal tank 300-gal tank 350-gal tank 300-gal tanks (Pump House) 300-gal tank (Power House)	Generator - North side Bldg Generator - West side Bldg Generator - East side Bldg Generator - WWTP Generator - Paint Bldg Generator - Power House Pump House - East Water Tower Pump House - North Water Tower Pump House - South Water Tower Power House -	Emergency Generators	Exterior of Bldg
327256	Brake Fluid	330-gal totes	L-1 K-14 (near final repair area) Tire Bldg	General Assembly	General Assembly
229999	Texaco Anti-freeze Coolant	12,000-gal tank 55-gal drums	Tank Farm Power House	General Assembly	General Assembly Power House
108763	Power Steering Fluid	12,000-gal tank	Tank Farm	General Assembly	General Assembly
128462	Windshield Washer Solvent	300-gal totes	Tire Bldg Assembly: M-11 to N-11	General Assembly	General Assembly
103529	Freon 22 (R-22)	30-lb canisters	Outdoor cylinder storage area 1st floor electricians crib 2nd floor electricians crib AA-16	Plant-wide	General Assembly
302027	Freon/SUVA 134A	7500-gal tank 120-lb cylinders	Outdoor cylinder storage area: S-24	General Assembly	General Assembly
019912	VM&P Naptha	55-gal drums	Assembly: L9-10 Paint Bldg	Assembly Paint Bldg	Paint Bldg
152959	T-8139 Repair Reduction Thinner_1	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
152963	T-8498 Repair Activator Thinner_1	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
157165	Flow Control Agent_1	55-gal drums	Paint Bldg	ELPO/Bonderite	Paint Bldg
309899	T9086 (Solvent)	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
340150	White Primer Surfacer	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
343511	Clearcoat Part A	500-gal totes	Paint Bldg	Paint Bldg	Paint Bldg
346144	Clearcoat Part B	250-gal totes	Paint Bldg	Paint Bldg	Paint Bldg
347457	Parcosol 130/Parcosol 302	550-gal tote	Paint Bldg KK-28	Paint Bldg	Paint Bldg
339094	AEI Hyperstrip	55-gal drums 330-gal totes	Assembly: QQ-16-17	Paint Bldg	Paint Bldg
331494	Hasco Tahoe	55-gal drums 330-gal totes	Assembly: QQ-17 NN-18 B-QQ-24 B-QQ-16	Paint Bldg	Paint Bldg
324925	AEI Terminator 100	55-gal drums	Paint Bldg: B-SS-24 CC-28	Paint Bldg	Paint Bldg
343490	AEI MD NF	275-gal totes	QQ-16-17 (1 tote) 2-CC-28 (1 tote) (1 tote)	Booth Cleaner	Paint Bldg
356349	AEI Slimicide-AQ	55-gal drums	Paint Bldg: B-SS-24 QQ-17	Paint Bldg	Paint Bldg
357061	AEI Omnikool 3000 N	55-gal drums	B-SS-23	Paint Bldg	Paint Bldg
163085	Ethyl-3-Ehoxy Proprionate	500-gal tote	Paint Bldg	Paint Bldg	Paint Bldg
309033	Mineral Spirits	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
537496-1	Toluene	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
-	MEK	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
-	Xylene	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
-	Methanol	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg
354407	Klenzoid CWT 8954	55-gal drums	QQ-17	Paint Bldg	Paint Bldg
347018	Microklen-7287	55-gal drums	QQ-15-16 Paint Bldg	Paint Bldg	Paint Bldg
227995	AEI Snowhite 65	55-gal drums	DD-28 - 2 drums each 2-AA-22 - 2 drums each	Paint Bldg	Paint Bldg
356347	Halogen T-30	55-gal drums	Paint Bldg: B-SS-24	Paint Bldg	Paint Bldg

WILMINGTON ASSEMBLY PLANT

HMCS ID	Material Name	Container Size	Storage Location	Usage Location	Department
-	Solvent Based Paints	500-gal totes 55-gal drums cans	Paint BldgBldg EE-29 X-17	Paint Bldg	Paint Bldg
-	Water Based Paints	500-gal totes 55-gal drums	Paint BldgBldg 2-DD-22 LL-26	Paint Bldg	Paint Bldg
356339	AEI Omnicool 2602	55-gal drums	QQ-15 Paint Bldg: B-SS-25-26 Phosphate/ELPO: CC-28	Paint Bldg Phosphate/ELPO	Paint Bldg Phosphate/ELPO
356344	Omnisperse 2702	55-gal drums	QQ-15 (3 drums) Phosphate/ELPO: CC-28 (3 drums)	Paint Bldg Phosphate/ELPO	Paint Bldg Phosphate/ELPO
148404	Parco Additive 22	55-gal drums	2GG-28, FF-28, GG-28 LL-28	Phosphate/ELPO	Phosphate/ELPO
204481	Deoxidine 20/Parco Purge 20	55-gal drums	Phosphate/ELPO: KK-28 Paint Bldg	Phosphate/ELPO	Phosphate/ELPO
324927	AEI Shark 2001	4500-gal tank 275-gal totes	B-SS-24 (tank) CC-28 (2 totes) B-SS-25 275-gal (2 totes)	Phosphate/ELPO	Phosphate/ELPO
336727	Spectrus NX114 Biocide	35-gal totes	Tire Bldg	Phosphate/ELPO	Phosphate/ELPO
150169	Primer 40	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
310394	Ridoline 422E (234223)	55-gal drums	Phosphate/ELPO: FF-29 GG-28	Phosphate/ELPO	Phosphate/ELPO
1180767	Hasco FC 313	55-gal drum	Phosphate/ELPO	Phosphate/ELPO	Phosphate/ELPO
061969	Accelator 131 Parker-Amchem	330-gal totes	Phosphate/ELPO: FF-28-29 GG-28	Phosphate/ELPO	Phosphate/ELPO
356840	Haas Slimicide MBC-215	55-gal drums	QQ-24 and QQ-15 Phosphate/ELPO: CC-28DD-28 Paint Bldg: B-SS-26 W-11 KK-11	Phosphate/ELPO	Phosphate/ELPO
130495	Fixodine Z-8	5-gal pails	Phosphate/ELPO: FF-29 EE-30	Phosphate/ELPO	Phosphate/ELPO
304215	Polyprep Cleaner 2595	330-gal totes	Phosphate/ELPO: FF-29	2nd Floor - body washer	Phosphate/ELPO
536724-1	Acticide LA	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
-	P3 E-Coat Cleaner 2250 UF	55-gal drums	Phosphate/ELPO: FF-29 GG-28, LL-23, LL-28, LL-27	Phosphate/ELPO	Phosphate/ELPO
-	Parco 1523R Cleaner	6000-gal tank	Phosphate/ELPO: FF-28-29, LL-30	Phosphate/ELPO	Phosphate/ELPO
-	Parco 1523S Cleaner	330-gal totes	Phosphate/ELPO: FF-28-29 JJ-29	Phosphate/ELPO	Phosphate/ELPO
-	Parco Pre-Clean 2960	6000-gal tank 330-gal tote	Phosphate/ELPO: FF-29 HH-28, LL-30	Phosphate/ELPO	Phosphate/ELPO
-	Parcolene 91	55-gal drums	LL-28, MM-29	Phosphate/ELPO	Phosphate/ELPO
-	Bonderite 958 Make-Up	55-gal totes	Phosphate/ELPO: FF-29, JJ-20, LL-30	Phosphate/ELPO	Phosphate/ELPO
-	Bonderite 958 Replenisher	6000-gal tank 550-gal totes	Phosphate/ELPO: FF-28-29 JJ-20 LL-30	Phosphate/ELPO	Phosphate/ELPO
-	Additive 301	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
-	Additive 319	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
-	Parcolene 6	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
357053	Deoxidine A-500	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
261778	Argon, Refrigerated Liquid (Cryogenic)	120-lb cylinders	Outdoor cylinder storage area	Plant-wide	Plant-wide
043771	98.0% Acetylene Gas	120-lb cylinders	Outdoor cylinder storage area: BB-12	Plant-wide	Plant-wide
116079	99.9995% Hydrogen Gas	120-lb cylinders	Outdoor cylinder storage area	Plant-wide	Plant-wide
324142	99.5% Oxygen Gas	120-lb cylinders	Outdoor cylinder storage area:BB-12	Plant-wide	Plant-wide
356768	Nitrogen Gas	120-lb cylinders	Outdoor cylinder storage area	Plant-wide	Plant-wide
103204	Isopropyl Alcohol 99% UN1219	55-gal drums	Paint Bldg	Plant-wide	Plant-wide
	Acetone	55-gal drums	Assembly: L9-10	Plant-wide	Plant-wide
	Acetic Acid 85%	55-gal drums	Phosphate/ELPO: FF-29	Phosphate/ELPO	Phosphate/ELPO
-	Automotive Sealers	55-gal drums	Tire Bldg FF-27 L-5 K-19	Plant-wide	Plant-wide
-	Oils and Lubes	55-gal drums 1 to 5-gal bottles	Power House Truck Repair Area L-9	Plant-wide	Plant-wide
-	Lead Acid Batteries		B-31 to F-32 (near truck repair center)	Plant-wide	Plant-wide
357048	Filmex	55-gal drums	QQ-17 B-RR-24	Power House	Power House
347664	ChemTreat BL-122	55-gal drums	Power House (2 drums max)	Power House	Power House
356565	ChemTreat CL-2112	55-gal drums	Power House	Power House	Power House

WILMINGTON ASSEMBLY PLANT

HMCS ID	Material Name	Container Size	Storage Location	Usage Location	Department
327067	ChemTreat CL-2871	55-gal drums	Power House	Power House	Power House
351250	ChemTreat CL-49 Liquid Bromine	55-gal drums	Power House	Power House	Power House
358370	Chemtreat BL-1558	55-gal drums	Power House	Power House	Power House
358371	ChemTreat BL-1106	55-gal drums	Power House	Power House	Power House
327403	AEI Barracuda 100/Sodium Hydroxide	55-gal drums 650-gal tank (WWTP) 165-gal tank (Power House)	B-SS-24-25 CC-28 WWTP Power House	WWTP Power House	WWTP Power House
324095	Ferric Chloride Solution 38-40%	55-gal drums	WWTP	WWTP	WWTP
073680	Sulfuric Acid 93%	2000-gal tank	WWTP	WWTP	WWTP
117342	Sodium Hypochlorite 15% Solution	550-gal tank	WWTP	WWTP	WWTP
-	Hasco Assassin 650	55-gal drums	WWTP B-RR-23	WWTP	WWTP
354477	Hasco Assassin 800	55-gal drums	DD-28 B-RR-23	WWTP	WWTP
358372	Quadrasperse CL-4846	165-gal tank	Weld Water Bldg Power House	Weld Water Bldg	Weld Water Bldg
-	Hasco Cyclone	55-gal drums	Paint Bldg: B-RR-24	Paint Bldg	Paint Bldg
-	Jupiter	330-gal totes	QQ-16 2-CC-28	Paint Bldg	Paint Bldg
DISCONTINUED					
-	Henkel P3 Tire Lube 41	55-gal drum plastic	Tire Bldg	Tire Bldg	Tire Bldg
-	Carbon Monoxide Compressed	Std-size cylinder	BB-12 outside	Paint Bldg	Paint Bldg
	Pro-Seal	55-gal drums	Paint Bldg	Paint Bldg	Paint Bldg

No Significant Changes in 2008

Henkel Product	Container	Average in 2007	
Parco Preclean 2960 (SUI #13,2636)	6000 gal tank (8.45 lbs/gal) fiberglass + 330-gal tote (2500 lbs/ea)	3000 gallons in tank 300-gal tote	Phosphate area (stored and used)
Parco Cleaner 1523R (SUI #134060)	6000 gal tank fiberglass (11.66 lbs/gallon)	3500 gallons	Phosphate area (stored and used)
Parco Cleaner 1523-S (su#13,4059	330-gal tote (2586 lbs ea)	2 totes	Phosphate area (stored and used)
Fixodine Z8 (998-4415)	5-gallon pails (126 lbs ea)	18 pails	Phosphate area (stored and used)
Bonderite Replenisher 958 (SUI #11,3	6000-gal tank (11.00 lbs/gallon)	3500 gallons	Phosphate area (stored and used)
Bonderite MU 958 (SUI #11,3870)	55-gal drums	0	Phosphate area (stored and used)
Parco Purge 20 (SUI #11,3872)	Tanker -- 1 to 2 times per year (4000 gallons = 40000 lbs per event) --> neautralized w/ 24 hours and then sent to waste treatment 55-gal drums (to clean out one of smaller stages)	4000 gallons 4 drums	Phosphate area (stored and used)
P3 E-Coat Cleaner 2250UF (SUI #11,3	55-gal drums (470 lbs ea)	4 drums	Phosphate area (stored and used)
Ridoline 422E (SUI #13,3755)	Tanker -- 1 to 2 times per year (4000 gallons = 40000 lbs per event) --> neautralized w/ 24-48 hours and then sent to waste treatment 55-gal drums (to clean out one of smaller stages) (675 lbs ea)	9 drums	Phosphate area (stored and used)
Parco Additive 22 (SUI #11,4146)	55-gal drums (500 lbs ea)	4 drums	Phosphate area (stored and used)
Accelerator 131 (SUI #11,3865)	330-gal totes (3443 lbs ea)	2 totes	Phosphate area (stored and used)
Primer 40 (SUI #13,1537)	55-gal drums (550 lbs ea)	4 drums	Phosphate area (stored and used)
Parcolene 90A (SUI #16,3681)	0	0	Replaced Parcolene 90A
Parcolene 91 (SUI #16,4836)	55-gal drums (450 lbs ea)	9 drums	Phosphate area (stored and used)
Plastic Cleaner 2595 (SUI #11,3851)	330-gal totes (2815 lbs ea)	2 totes	Phosphate area/used in 2nd floor body washer
Additive 301(SUI #11)	55-gal drums (700 lbs ea)	0	Phosphate area (stored and used)
Additive 302 (SUI #11)	55-gal drums (700 lbs ea)	0	Phosphate area (stored and used)
Additive 319 (SUI #11,3850)	55-gal drums (680 lbs ea)	0	Phosphate area (stored and used)
Parcosol 302 (SUI#2,5038	550-gal tote steel (4108 lbs ea)	5 totes	Paint Mix Room
Parcosol 130 (SUI #2,3987)	550-gal tote steel (4108 lbs ea)	5 totes	Paint Mix Room (Jan-Oct 2007)

Per Michael Winnington, Henkel
Telephone call: 2/14/08 10:30 AM

Annual SARA 312 Report Checklist

Customer: GENERAL MOTORS		Report Preparer:	B. CHANG
Facility: GM WILMINGTON ASSEMBLY PLANT		Report Reviewer:	Scott Locke
Project Number:		Date Submitted for Review:	2/20/2009
		Date Review Completed:	2/24/2009

Preparer Completed	Criteria	Data Reference/Source
	Data Collection/Verification	
X	• Plant Name, Address, County, and Mailing Address (If different) Verified	Plant Environmental Engineer, J. Peronti, Site Walkthrough on 2-9-09
X	• Parent Company or Public Entity Identification -Name, and Address Verified	No changes from previous year
X	• Operating Division Name Verified (Ohio)	No changes from previous year
X	• Signatory Name, Title and Phone Number Verified (Plant Manager or other)	Plant Environmental Engineer, J. Peronti, Site Walkthrough on 2-9-09
X	• Technical Contact Name and Phone Number Verified	Plant Environmental Engineer, J. Peronti, Site Walkthrough on 2-9-09
X	• NAICS Code Verified	Yes
N/	• Facility ID # Verified (Michigan)	N/A
X	• Dun and Bradstreet (D&B) Number Verified	No changes from previous year
X	• RCRA ID Number Verified (Ohio)	No changes from previous year
X	• NPDES Permit Number Verified (Ohio)	No changes from previous year
X	• State Wastewater Facility Verified (Ohio)	No changes from previous year
X	• Pretreatment Identification No. Verified (Ohio)	No changes from previous year
X	• Air Permit Facility Number Verified (Ohio)	No changes from previous year
^	• Latitude and Longitude of Facility Verified (Michigan & Ohio)	No changes from previous year
X	• No. of Employees Verified (Ohio)	Plant Environmental Engineer provided updated number of employees during 2-9-09 visit
X	• Verified Whether Stand alone facility or Part of a Complex	Yes
X	• Material Usage Data Collected	Yes
X	• Storage Locations, Container Types, and Storage Conditions (Temperature and Pressure) Verified	Yes
X	• Chemical Hazard Codes Verified	Yes
X	• 24 hour Emergency and Alternate Contacts and Phone Numbers Verified	Plant Environmental Engineer, J. Peronti, Site Walkthrough on 2-9-09
X	• Site Location Maps Identifying Storage Locations and Container Types Verified (Ohio Required) (Mich Optional)	Yes - during 2-9-09 visit
X	• LEPC and Fire Department Verified	Yes - https://apps.dnrec.state.de.us/tier2/submit/T2_Menu.asp
X	• Verified Software is updated and allowed by state	Yes - https://apps.dnrec.state.de.us/tier2/submit/T2_Menu.asp
X	• Confirmed Submittal Method for State (Online database required for Michigan)	Yes - http://www.serc.delaware.gov/services/312/sec312.shtml
X	• Confirmed Submittal Method for LEPC & Fire (Hardcopy, Electronic or Online)	Yes - http://www.serc.delaware.gov/services/312/sec312.shtml

Annual SARA 312 Report Checklist

Preparer Completed	Criteria	Reviewer Verified	Review Comments	Comments Incorporated	Response To Review Comments (If NOT Incorporated, Provide Basis)
	Report Text		Note: SARA 312 report text template available on M:\ drive		
	• Report text states customer assumptions and methodologies	X			
X	• Reporting Summary verified against threshold determination	X			
X	• Text reflects actual calculation methods & data sources utilized	X			
X	• Filepath and filename indicated for report text	X	NA		

Preparer Completed	Criteria	Reviewer Verified	Review Comments	Comments Incorporated	Response To Review Comments (If NOT Incorporated, Provide Basis)
	Threshold Determination				
X	• Usage exemptions documented	X	Yes		
X	• Max amount on-site calculated for non-exempt products/chemicals	X	OK		
X	• CAS #s, Weight %, & threshold levels indicated for each EHS chemical	X	Yes - see Excel workbook.		
X	• Max amount on-site for each product/chemical compared against the applicable threshold	X	See Notes		
X	• Lead acid batteries are reported separately from liquid sulfuric acid	X	Yes		
X	• Storage amounts for equipment resevoirs have been estimated	X	Ok		
X	• Diluted concentrates have been included in the threshold determination	X	Yes		
X	• Annual comparison of max and avg amount on-site completed for each reportable product/chemical	X	Yes		
X	• Equations, assumptions and references included and appropriate for all supporting calculations	X	Yes		
	• Filepath, revision date, preparer's name and preparer's company included for all applicable documentation	X	NA		

Preparer Completed	Criteria	Reviewer Verified	Review Comments	Comments Incorporated	Response To Review Comments (If NOT Incorporated, Provide Basis)
	Supporting Documentation				
X	• Calculations required to support max and avg. amounts are included in report (battery acids, etc)	X	See Notes		
X	• Equations, assumptions and references included and appropriate for all supporting calculations	X	Yes		
X	• Source of information for all customer supplied data clearly indicated	X	See Notes		
X	• Supporting documentation is either included in report or cited	X	See Notes		

Preparer Completed	Criteria	Reviewer Verified	Review Comments	Comments Incorporated	Response To Review Comments (If NOT Incorporated, Provide Basis)
	Completed Forms				
X	• If product tradename is not indicative of the material the common name has been included as part of the reportable material name.	X	Ok		
X	• Report passed SARA 312 software verification check (if applicable)	X	Assume to be true		
X	• Data entry for Max and avg amounts on-site and storage information verified against supporting documentation	X	See Notes		
X	• Facility and contact information verified for all forms	X	See Notes		
X	• Appropriate cover letter has been included with the report	X	Assume to be true		

Annual SARA 312 Report Checklist

Preparer Completed	Criteria	Reviewer Verified	Review Comments	Comments Incorporated	Response To Review Comments (If NOT Incorporated, Provide Basis)
	Submittal				
☐	• A Transmittal Letter has been included in the submittal package				
☐	• A documented customer review of the draft report, including comments as applicable, has been obtained and maintained (electronic and hard copy)				
☐	• Electronic documentation has been stored on the project directory along with appropriate QA/QC documents. A hard copy of the report has been retained				

CLEANTECH

Clean Tech, Inc.
Environmental Consultants

Suite 202
225 Corporate Blvd.
P.O. Box 4694
Newark, DE 19715
302-368-7961
Fax 302-368-7962

August 24, 1992

Ernest R. Bosetti
Sr. Engineer - Environmental
General Motors Corporation
P.O. Box 1512
Boxwood Road
Wilmington DE 19899

Re: Dye Trace of Storm Sewer.

Dear Ernie,

The following is a brief summary of the events and findings which occurred during the dye tracing of GM's Storm sewer:

DAY ONE

1) Verified that the restrooms in the Foam and Tile Storage Building were not connected to the storm sewer.

2) Verified that the mislabeled manhole [labeled process waste] was actually a storm sewer manhole.

3) Discovered that the pipes flowing into GM's storm sewers along the railroad fence were not plugged as stated by Chessie Systems.

4) Discovered that the pipe in the East Lot [135' from the wall of the main assembly building] is a sanitary sewer line, not a storm sewer as shown in the blueprints.

5) Discovered that sampling point 28, which is located in MH#16, only has one drain attached to it, and only drains the rail yard lot at Anchor.

6) Verified visually and with dye that the restrooms and sinks in the UAW classroom are not leaking nor connected to the storm sewer.

7) Verified that MH#'s 13, 12, 11, and 10 are connected. This was accomplished by flushing a couple of thousand gallons of water and dye through MH# 13.

DAY TWO

1) Proceeded to Anchor Motor Freight to investigate oily, gray water flowing into MH#12. After an initial visual inspection of the main building, a storm sewer was discovered with water having the same color characteristics and oily film as that water flowing into MH#12. After unclogging this line and sending through some dye, it was discovered that this line is connected to GM's storm sewer, not the sanitary sewer as previously believed.

2) The restroom connections were also checked in the trailer next to Anchor's infirmary. A loose connection was discovered. We were able to verify that these restrooms are connected to the sanitary sewer, because the majority of the manholes were paved over.

DAY THREE

1) Proceeded to trace the water test booths in the Main Assembly Building. All the water from these booths is recycled. Any spill over enters the sanitary system.

2) The Hi Liter Body Shop also recycles the water used in the water booths. There is no apparent connection to the storm sewer.

3) The restrooms at Anchor Freight are not connected to the Storm sewer.

DAY FOUR

1) The toilets in Mod 4 were traced. They are not connected to the storm sewer.

2) The Sanitary lift station was tested. There was no visible connection to the Storm sewer present. The remaining dye was left with Jeff Holmes so that he could try to trace any other possibilities that may arise.

SUMMARY OF SIGNIFICANT DISCOVERIES

1) The manhole labeled "X" is actually a storm sewer manhole.

2) Chessie System did not plug all of the storm lines draining into GM's storm system.

3) The pipe which is 135' from the Main Assembly Building is a Sanitary line, not a Storm line.

4) The shop manhole in which grease and other waste is dumped at Anchor is not connected to the Sanitary line, but instead it is connected to the Storm line.

5) A possibility of Fecal Contamination may be due to the rinsing of the portable restrooms near open Storm Drains.

6) The Sanitary lift station tends to overflow periodically without any alarms being sounded. Approximately 50 feet away from the lift station there is a Storm drain. It was observed that during one of these overflows, the sanitary waste does flow towards this Storm drain. It is believed that when this lift station overflows without anyone's knowledge, it drains into the Storm drain. An alarm should be installed at this lift station.

Enclosed for your reference are two vials with samples from the Anchor shop manhole. These vials are representative of the type of waste entering the Storm sewer.

If you should have any questions regarding this information, please feel free to call either Deborah or myself at the above number.

Sincerely,

Christopher J. Candela
Environmental Scientist
CLEAN TECH

Deborah A. Buniski, P.E.
President

gmmem.doc

File → GM-DYE TRACE

MEMORANDUM

TO: D. Buniski
E. Bosetti

FROM: C. Candela -- May 14, 1992 CC

RE: GM- Boxwood Rd Plant Dye Trace

The following is a brief summary of the events and findings after two days of dye testing:

DAY ONE

1) Verified that the restrooms in the Foam and Tire Storage Building were not connected to the storm sewer.

2) Verified that the mislabeled manhole [labeled process waste] was actually a storm sewer manhole.

3) Discovered that the pipes flowing into GM's storm sewers along the railroad fence were not plugged as stated by Chessie Systems.

4) Discovered that the pipe in the East Lot [135' from the wall of the main assembly building] is a sanitary sewer line, not a storm sewer as shown in the blueprints.

5) Discovered that sampling point 28, which is located in MH#16, only has one drain attached to it, and only drains the rail yard lot at Anchor.

6) Verified visually and with dye that the restrooms and sinks in the UAW classroom are not leaking nor connected to the storm sewer.

7) Verified that MH#'s 13, 12, 11, and 10 are connected. This was accomplished by flushing a couple of thousand gallons of water and dye through MH# 13.

DAY TWO

1) Went to Anchor Motor Freight to investigate oily, gray water flowing into MH# 12. After an initial visual inspection of the main building, a storm sewer was discovered with water having the same color characteristics and oily film as that water flowing into MH#12. After unclogging this line and sending through some dye, it was discovered that this line is connected to GM's storm sewer, not the sanitary sewer as previously believed.

2) The restroom connections were also checked in the trailer next to Anchor's infirmary. A loose connection was discovered. We were unable to verify if these restrooms are connected to the sanitary sewer, because the majority of manholes were paved over.

3) Due to severe weather conditions, dye testing was stopped at 1400 hours.

The following areas still need to be addressed:

a) Water test in Main Assembly Building
b) Hi liter body shop
c) Anchor Motor Freight restrooms
d) The MH's near the water tower [near MH# 10].

I intend to finish these areas during the next wet weather event.

gmmem



SPILL PREVENTION CONTROL

AND

COUNTERMEASURE PLAN

General Motors Corporation
Wilmington Assembly Plant
P.O. Box 1512
Boxwood and Dodson Roads
Wilmington, DE 19899
(302) 428-3911
(302) 428-7911 (24 hour telephone)

Latitude: 39 Degrees, 43 Minutes, 41 Seconds
Longitude: 75 Degrees, 36 Minutes, 39 Seconds

Revision Date: April 25, 2005

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ATTACHMENTS

A	Global Reporting and Incident Tracking (GRIT)
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C	Federal Chemical List and Reporting Quantities
D	State of Delaware Chemical List and Reporting Quantities
E	Listing of Extremely Hazardous Substances and Reporting Quantities
F	GM Wilmington Assembly Plant Material Spill Reporting Requirements
G	Sample - GM Spill Reporting Form
H	Sample - Agency Spill Reporting Form
I	Sample - Tank Inspection Form Inspection Form - Solvent Piping and (2) 6,000 Gallon solvent Recovery Tanks Inventory and Inspection Form - (2) 6,000 Gallon solvent Recovery Tanks
J	Sample - Tank Truck Loading Procedure
K	Sample - Tank Truck Unloading Procedure
L	Toxic Organic Management (TOM) Plan
M	Copy of SPCC Regulations (40 CFR 112)

SECTION 1.0 - SPCC CROSS-REFERENCE TABLE

Compliance with 40 CFR 112 **[SPCC only]**

The following tables outline the specific items required for conformance with 40 CFR 112 for SPCC Plan requirements. These tables do not address Facility Response Plan requirements listed under 40 CFR 112.20.

40 CFR Section	Requirement	Where information is found, e.g., section and/or page no. in Plan.
112.1	General Applicability	No Plan elements required.
112.2	Definitions	No Plan elements required.
112.3	Requirements for preparation and implementation of SPCC Plans. Applicability, timing of initial Plan development, portable facilities, maintain copy, PE certification requirement, extensions of time.	Section 2.0
112.4	Facility and owner information. Plan amendment requirements by Regional Administrator. Two reportable spills trigger Plan submittal with additional information required.	Not Applicable
112.5	Three year review requirement and PE certification. Plan amendment requirements by owner. Change in facility design and/or capability to discharge.	Section 2.0
112.6	Civil Penalties	No Plan elements required.

The following table outlines the specific items required for conformance with 40 CFR 112.7. Regulation states that Plan must follow this sequence under 112.7. Thus far, EPA has allowed reference table to satisfy this requirement.

40 CFR Section	Requirement	Where information is found, e.g., section and/or page no. in Plan.
112.7	Management approval and implementation schedule of items to be installed.	Section 3.0
112.7 (a)	Written description of historical spills, corrective action taken and prevention.	Section 10.0

40 CFR Section	Requirement	Where information is found, e.g., section and/or page no. in Plan.
112.7 (b)	Prediction of flow direction, rate, and quantity of oil spilled resulting from equipment failure.	Section 6.0
112.7 (c)	Containment - dikes, culverting, weirs, diversion ponds, detention ponds, sorbents, collection systems	Section 7.0
112.7 (d)	If lacking containment, then demonstrate impracticability and develop contingency plan (emergency response procedures). Provide a written committment of manpower and resources to handle a spill.	Not Applicable
112.7 (e)(1)(i)	Facility Drainage - undiked & diked areas, use of valves, diversion systems.	Section 6.0
112.7 (e)(1)(ii)	Dike Drainage - valve types used; inspect accumulated storm water	Not Applicable
112.7 (e)(2)(i)	Bulk Tanks Compatibility - storage tank construction with material stored.	Section 8.0
112.7(e)(2)(ii)	Containment for bulk storage tanks with sufficient freeboard for precipitation. Sufficiently impervious.	Section 8.0
112.7(e)(2)(iii)	Dike Drainage - valves normally closed, inspect storm water, drainage records.	Not Applicable
112.7(e)(2)(iv)	Underground Tanks - cathodic protection and pressure testing.	Not Applicable
112.7(e)(2)(v)	Partially buried tanks	Not Applicable
112.7(e)(2)(vi)	Aboveground tank testing and inspections	Section 7.0
112.7(e)(2)(vii)	Control leakage through heating coils.	Not Applicable
112.7(e)(2)(viii)	Fail-safe engineering - alarms and sensing devices on tank installations.	Section 8.0

40 CFR Section	Requirement	Where information is found, e.g., section and/or page no. in Plan.
112.7(e)(2)(ix)	Plant effluent discharge inspections	Section 7.0
112.7(e)(2)(x)	Repair visible oil leaks.	Section 7.0
112.7(e)(2)(xi)	Portable storage tanks location and use of secondary containment.	Section 7.0
112.7(e)(3)(i)	Facility transfer operations - Buried Pipes	Section 7.0
112.7(e)(3)(ii)	Pipelines out of service	Section 8.0
112.7(e)(3)(iii)	Pipe Supports	Section 7.0
112.7(e)(3)(iv)	Valve and pipe inspections	Section 7.0
112.7(e)(3)(v)	Vehicular traffic	Section 7.0
112.7(e)(4)(i)	Loading/Unloading Procedures meet Minimum DOT requirements	Section 7.0
112.7(e)(4)(ii)	Load/Unload drainage	Section 7.0 & 8.0
112.7(e)(4)(iii)	Warning Signs and physical barrier systems - premature departure	Section 7.0
112.7(e)(4)(iv)	Vehicle valve(s) inspected for leakage prior to filling and departure.	Section 7.0
112.7(e)(5)	Oil production facilities	N/A
112.7(e)(6)	Oil production facility drainage	N/A
112.7(e)(7)	Oil drilling and workover facilities	N/A

40 CFR Section	Requirement	Where information is found, e.g., section and/or page no. in Plan.
112.7(e)(8)	Inspection and Records	Section 7.0
112.7(e)(9)(i)	Security - fenced site and access gates guarded	Section 7.0
112.7(e)(9)(ii)	Flow and drain valve position	Not Applicable
112.7(e)(9)(iii)	Starter control for pumps locked or located at site whereby access is limited to authorized personnel.	Section 7.0
112.7(e)(9)(iv)	Loading/Unloading connections and pipelines to be capped when not in service.	Section 7.0
112.7(e)(9)(v)	Facility lighting	Section 7.0
112.7(e)(10)(i)	Training to prevent discharge - specifically on operation of equipment and regulations.	Section 7.0
112.7(e)(10)(ii)	Person responsible for spill prevention	Section 4.0
112.7(e)(10)(iii)	Spill prevention training and SPCC plan review.	Section 2.0 & 7.0

Other items to include in SPCC Plans

112.20 Appendix C	Certification of the Applicability of the Substantial Harm Criteria	Section 2.0
SPCC Annual Checklist	Checklist requiring annual review of plan's accuracy.	Section 2.0

WPC 2002-02
ATTACHMENT B

OIL STORAGE CAPACITY WORKSHEET[1]

1. Bulk oil Storage		
Tanks	726055	gallons
Drums	5980	gallons
Totes	1920	gallons
Other	1000	gallons
SUBTOTAL 1:	734955	GALLONS
2. **Waste Water Treatment Facility**		
Skim oil Tanks	2000	gallons
Other Tanks (Regulated under SPCC)	314	gallons
SUBTOTAL 2:	2314	GALLONS
3. **Coolant Transfer Systems**		
In-Plant Process Operations	50	gallons
In-Plant Piping	N/A	gallons
SUBTOTAL 3:	50	GALLONS
Preliminary Threshold Determinations		
SUBTOTAL 1, 2 and 3:	737319	GALLONS
*If **under 500,000 gallons,** enter total at bottom of page in category (A), no need to do step 4.		
4. **Machinery/Hydraulic Systems**		
Equipment Reservoirs	1746	gallons
Transformers	500	gallons
Other Significant Equipment / Systems	N/A	gallons
SUBTOTAL 4:	2246	GALLONS
Enter subtotals 4 at bottom in category (B)		
Total oil Storage Capacity:		
A) TOTAL OF SUBTOTALS 1, 2 & 3:	737319	GALLONS
B) TOTAL OF ITEM 4:	2246	GALLONS
C) TOTAL OF SUBTOTALS 1, 2, 3, & 4:	739565	GALLONS

[1] Please attach all reference data and any capacity tables (e.g., material inventory tables found in SPCC Plans) used in the oil storage calculations to show how the summation was derived.

Aboveground Storage Tanks:

			Gallons	
#6 Fuel Oil				
	South Tank		250,000	
	North Tank		250,000	
Gasoline				
	Vertical Tank		40,000	
	Convault #1		12,000	
	Convault #2		12,000	
Horizontal Tanks				
	6 Empty with 12,000 gal cap.		72,000	
	Power Steering Fluid		12,000	
	Glycol		12,000	
Diesel Fuel Tank			60,900	
Emergency Generators				
	East Side		300	
	North Side		450	
	West Side		450	
	Powerhouse		300	
	WWTP		1,000	
	Mod Paint (in tank farm West pumphouse)		275	
Diesel Fire Pump Fuel Tanks				
	East Side Pumphouse		275	
	#2 Pumphouse	North	275	
		South	275	
	Under Water Tower		275	
	Powerhouse Basement		280	
Grit Building oil tank			1,000	Not used s
			726,055 Subtotal	

Drums		Number	Capacity		
	Powerhouse				
		5	30	150	
		2	55	110	
	WWTP				
		4	55	220	
	Other Potential Plant Areas				
		100	55	5,500	
				5,980 Subtotal	
Totes					
	Powerhouse	2	300	600	
	Brake Fluid	2	330	660	
	Windshield washer	2	330	660	
				1,920 Subtotal	
Other					
	5 gal pails Est. throughout the plant	200	5	1000 Subtotal	

TOTAL 734,955 Gallons

Wastewater Tanks % Oil * Capacity

Capacity:		
	Grit Separator North	5,000
	Grit Separator South	5,000
	Influent Wet Well	25,000
	Holding Tank #1	600,000
	Holding Tank #2	600,000
	Holding Tank #3	1,000,000
	Blend Tank	13,500
	Flash Mix Tank	2,700
	Clarifier 1A	230,000
	Clarifier 1B	230,000
	Sandfilter	5,000
	Sandfilter	5,000
	Sludge Thickener	100,000
	Sludge Conditioner Tank	6,000
	Final Effluent Tank	3,000
Stormwater System		
	Holding Tank (East)	100,000
	Holding Tank (West)	100,000
	Holding Tank (Middle)	100,000
	Oil/Water Separator	5,000
	Skimmer Decanter Tank West	30
	Skimmer Decanter Tank East	30
		3,135,260
	Estimated worse case 100 ppm oil	0.0001
		314 Gallons

Miscellaneaous 50

Equipment Reservoirs				Gallons
Machinery/Hydraulic Systems				
Elevators				
	Office Services			250
	Body	Freight Elevator L17 (Cable)		15
		Freight Elevator H24		15
	Basic Paint	Freight Elevator FF26 (Cable)		15
	EDS	Freight Elevator Computer room		165
	Mod Paint			
		Freight Elevator		330
		Lowerator Lift A		165
		Lowerator Lift B		165
Dock Levelers				
	West Side			
			2W	5
			3W	3
			4W	5
			5W	3
			6W	3
			7W	5
	East Side			
			1	5
			2	5
			3	5
			4	5
			5	5
			6	5
			7	5
			8	5
	North			
		East of	1	3
		Truck	2	3
		Repair	3	3
			4	3
			5	3
			6	3
			7	3
			8	3
			10	5
			11	5
			12	3
			13	5
			14	5
		West of B1		3
		Truck B2		3
		Repair B3		5
		B4		5
	Tire Building			
			15	3
			16	3
	Mod Paint			
		South (East) Side		
			North	5
			South	5
Trash Packer (South)				50
Trash Packer (North)				100
Powerhouse				
	Compressors			
		#1		15
		#2		20
		#3		20
		#4		30
		#5		30
		#6		20
WWTP				
	Holding Tank #1 Mixer			16.5
	Holding Tank #2 Mixer			16.5
	Holding Tank #1 Mixer			21.5
	Blend Tank Mixer			2.5
	Flash Mix Tank Mixer			1.25
	Clarifier #1A Turbine Mixer			2.5
	Clarifier #1 Rake Drive			
		Upper Housing Worm Gear		5.2
		Lower Housing Worm Gear		2.25
	Clarifier #2A Turbine Mixer			2.5
	Clarifier #2 Rake Drive			
		Upper Housing Worm Gear		5.2
		Lower Housing Worm Gear		2.25
	Filter Press #1			60
	Filter Press #1			60
		TOTAL		**1746 Gallons**

Transformers

Estimated Miscellaneous Small	500

SECTION 2.0 - SPCC CERTIFICATION/CHECKLIST

CERTIFICATION STATEMENT

I have reviewed the Spill Prevention Control and Countermeasure Plan for the General Motors Corporation (NAO) Wilmington Assembly Plant. The facility has been examined and being familiar with the provisions of Title 40 - Protection of the Environment, Chapter 1 - Environmental Protection Agency, Subchapter D, - Water Programs, Part 112 - Oil Pollution Prevention, as first published in 38 FR 34165, December 11, 1973 and amended in 57 FR 52704, November 4, 1992, I certify that to the best of my knowledge the SPCC plan has been prepared in accordance with good engineering practices.

John Hudak Jr. — Name

4-25-05 — Date

Delaware Registration No. 5337

SPCC CHECKLIST

Yes	No	
☐	☑	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☐	☑	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
☑	☐	Have you inspected/inventoried spill response equipment as listed in the Spill Response section of this plan?
☑	☐	Do you have a current contract with an emergency response contractor who can remediate a worst case spill from your facility?
☑	☐	Have you reviewed this plan in detail prior to your signature on this page?
☐	☑	Has your facility experienced a reportable spill within the last twelve months?
☐	☐ N/A	If yes, was your spill plan utilized and effective? If you answer no to this question state what changes were made to eliminate the deficiency.
☐	☑	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐ N/A	If yes, did you submit your SPCC Plan within 60 days?
☑	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

Signature	Title	Date
[signature]	Sr. Env. Eng.	3/5/07

SPCC CHECKLIST

Yes	No	
☐	☑	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☑	☐	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
☑	☐	Have you inspected/inventoried spill response equipment as listed in the Spill Response section of this plan?
☑	☐	Do you have a current contract with an emergency response contractor who can remediate a worst case spill from your facility?
☑	☐	Have you reviewed this plan in detail prior to your signature on this page?
☐	☑	Has your facility experienced a reportable spill within the last twelve months?
☐	☐ N/A	If yes, was your spill plan utilized and effective? If you answer no to this question state what changes were made to eliminate the deficiency.
☐	☑	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐ N/A	If yes, did you submit your SPCC Plan within 60 days?
☑	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

Signature	Title	Date
[signature]	Sr, Env, Eng.	4/7/06

SPCC CHECKLIST

Yes	No	
☐	☑	Has there been any change (e.g., design, construction/demolition, operation, material type, material volume) that affects your facility's potential to discharge oil or other polluting substance into the waters of the United States during the previous twelve months? *[If yes, plan needs to be amended and recertified.]*
☑	☐	Has there been a change in personnel and/or phone numbers listed on the internal notification list? *[If yes, plan needs to be updated.]*
☑	☐	Have you inspected/inventoried spill response equipment as listed in the Spill Response section of this plan?
☑	☐	Do you have a current contract with an emergency response contractor who can remediate a worst case spill from your facility?
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☐	☑	Has your facility had two reportable spill events within a twelve month period or one spill of 1000 gallons or more of oil into navigable waters?
☐	☐ N/A	If yes, did you submit your SPCC Plan within 60 days?
☑	☐	Does your plan conform to the content and format of the current version of the GM Standard Environmental Practice for SPCC Plans?

Comments:

Signature	Title	Date
[signature]	Sr. ENV. ENG.	4/25/05

WPC 2002-02
ATTACHMENT A

Certification of Applicability of the Substantial Harm Criteria

Facility Name General Motors Wilmington Assembly Plant

Facility Addresses Boxwood & Dodson Rds., Wilmington, DE 19804

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   Yes _____ No __X__

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitations within any aboveground oil storage tank area?

   Yes _____ No __X__

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   Yes _____ No __X__

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

   Yes _____ No __X__

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes _____ No __X__

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name Dennis G. Dougherty Title Plant Manager
owner/operator

Signature: Dennis G. Dougherty Date 10/27/05

SECTION 3.0 - MANAGEMENT APPROVAL

MANAGEMENT APPROVAL

I have reviewed the Spill Prevention Control and Countermeasure Plan for General Motors Corporation (NAO) Wilmington Assembly Plant. The plan is approved and supported by the management team of this facility. The plan will be implemented and followed as herein described. The facility personnel identified as emergency coordinator(s) have the authority to commit resources as may be required to protect public health and safety and/or the environment.

Dennis G. Dougherty
Plant Manager

6/17/2005
Date

SECTION 4.0 - NOTIFICATION REQUIREMENTS/RESPONSE PROCEDURES

4.1 - INTRODUCTION

The Spill Prevention Control and Countermeasure plan is composed of the following: practices devoted to the prevention of oil spills and practices for the containment, removal and disposal of materials associated with an oil, fuel and other hazardous material spill.

An accidental discharge caused by operator error, equipment failure, sanitary pipeline clogging and unloading bulk shipments of hazardous materials could occur to the plant's sanitary sewer or to the storm water collection system which flows to Little Mill Creek. Some of the materials with the potential to spill include: fuel oil, gasoline, antifreeze, hydraulic fluids, paint, thinners, caustics and acids.

This plan has been prepared to establish the procedures for the prevention of spills from sanitary pipeline clogging, storage and use areas, manufacturing processes, treatment systems and areas receiving bulk shipments and to provide prompt containment, clean-up and disposal of materials if a spill should occur.

4.2 - SPILL RESPONSE PROCEDURES

4.2.a – Internal Releases

4.2.a.1 - Notification

1. Determine location and description of spill. In the event that GM personnel receive notification of a spill or containment problem from any source external to the plant, the following information is to be requested: location of spill, nature of material, time of first observance and whether still occurring and name of caller if her or she wishes to be identified and contacted later with results of investigation.

2. Call Plant Security on the telephone (3911) or radio and give as much critical information as possible such as plant column number, people involved, approximate gallons spilled, etc. Plant Security will utilize Attachment A, Global Reporting and Investigations Tool (GRIT) to record necessary information regarding the spill.

3. Plant Security will determine and contact the appropriate response personnel. This may include: Security, Safety, Maintenance and Environmental Departments within the plant and/or the New Castle County Fireboard outside the plant by dialing "911". The Environmental Department will contact the DNREC or the National Response Center and complete the GM Spill Reporting Form (attachment G) if necessary.

4.2.a.2 - General Spill Guidelines

1. Utilize the nearest stock of appropriate spill control materials.

2. When working with a spill, always work from the outside in to prevent materials from spreading. Exercise caution and do not step into the spill.

3. All spills must be completely and efficiently cleaned-up. After initial clean up, the area should be checked for residual material and recleaned if necessary.

4. All equipment used should be decontaminated and inspected for damage. Replace any damaged or non-reusable items.

5. Compatibility of spilled material and personal protective equipment(PPE).

TABLE ONE - Compatibility Table for PPE (Including Gloves)

Material	Condition	PPE
Acid or Caustic	Static	Rubber gloves, Goggles
	Spraying	Rubber gloves, Chem suit, Goggles, Acid hood
	Pumping	Rubber gloves, Chem suit, Chem face shield
Oil	Static	Rubber gloves, Goggles
Solvents	Spraying	Rubber gloves, Chem face shield, Goggles, Lab coat
	Pumping	Rubber gloves, Goggles

TABLE TWO - Rubber Glove Compatibility Chart

Chemical	PVC	Neoprene	NBR	PVA
Chrome Acid	G	(NR)	F	NR
Phosphoric Acid	G	E	E	NR
Sodium Nitrite	-	-	-	-
Nitric Acid	G	E	E	NR
Citric Acid	E	E	E	F
Lime	-	-	-	-
Trichloroethylene	-	NR	NR	E
R11,12,22,500,113,123,134	-	NR	F	G

NOTES: E=Excellent, G=Good, F=Fair, P=Poor, NR=Not Recommended, (NR)=No Test Data

If material is not specified in the above rubber glove compatibility chart, use the following:

Acid Materials	Neoprene
Alkaline Materials	Neoprene/NBR
Organic Solvents	NBR
Oils	Neoprene/NBR

4.2.a.3 - Spill Containment

A. Flammable and Combustible Wastes and Solvent Based Adhesives

1. An organic vapor respirator, face shield with chemical goggles, neoprene gloves and chemical resistant coveralls (or rubber apron and rubber boots) must be worn.

2. Remove all ignition sources - NO SMOKING.

3. If the area is confined, follow confined space entry procedures including but not limited to testing the air and ventilating if needed.

4. Contain the spill with oil dry, rags, or oil booms. Place around the perimeter of the spill.

5. Squeegee the material into a small area. Absorb the liquid with oil dry or rags. Continually squeegee and absorb the material until the area is cleaned.

6. NO chlorinated cleaners shall be used for clean up.

7. Use a plastic shovel to pick up rags and/or oil dry. Place all materials in an approved waste drum. Seal the drum and label appropriately. Remove the drum to the drum accumulation area.

8. Vacuums and transfer containers must be grounded during the cleanup activity.

9. Clean and/or replace all spill response equipment used. Discard disposable respirators.

B. "ELPO" Wastes

1. Contain the material to as small an area as possible with rags, booms or "pigs".

2. Wear safety glasses with side shields and neoprene gloves.

3. Use a drum vacuum unit or shovel to place the material into a drum. Seal the drum and label as appropriately. Remove drum-to-drum accumulation area.

4. Clean and/or replace all spill equipment used.

C. Corrosives

1. An organic vapor/acid mist respirator, face shield with chemical goggles, neoprene gloves and chemical resistant coveralls must be worn.

2. Contain the spill with oil dry around the perimeter of the material. Ventilate the area if needed.

3. If the spill is an acid, spread soda ash throughout the material for neutralization. If the spill is a caustic (base), pour vinegar throughout the material for neutralization.

4. Use a plastic shovel to place the neutralized material into a drum. Label this drum appropriately and move it to the drum accumulation area.

5. Clean and/or replace all spill equipment as necessary.

D. Procedure for Redundant System

1. Under normal conditions the gates at the redundant system are left in the open position to allow for the flow of stormwater and groundwater (pumped out near Mod Paint). Upon notification of a spill with the possibility of reaching the storm drain, the Environmental Engineer, Facility Area Manager or other designated personnel will close these gates and start collecting the spilled material in any combination of the facility's three 100,000 gallon holding tanks.

2. The groundwater pumps near Mod Paint may be shut down to reduce the flow through the collection system. Paint Maintenance personnel must be consulted prior to shut down of these pumps and approve to confirm no present groundwater problems dictate constant pumping and also to confirm reactivation of these pumps after the spill incident.

3. The collected material will be tested to determine whether the material requires treatment or may be discharged.

4.2.a.4 - Emergency Response Coordinators

Hazardous Materials and Primary Emergency Coordinator:

John Peronti, Sr. Environmental Engineer
13 Holly Hill Drive
Wilmington, DE 19809
Home Phone: (302) 798-6936
Work Phone: (302) 428-7422
Cell Phone: (302) 463-7934

Additional Emergency Coordinators:

Robert Cunningham
Security Chief
501 Center Rd.
Magnolia, DE 19962
Home Phone: (302) 697-3137

Work Phone: (302) 428-7912
Cell Phone: (302) 632-7362
Page: (800) 657-8775

Additional Emergency Coordinators:

Chuck Stirk
Fire Chief
230 Basset Avenue
New Castle, DE 19720
Home Phone: (302) 328-8843
Work Phone: (302) 428-7914
Cell Phone: (302) 547-5046

Plant Security Sergeant on Duty:
Work Phone: (302) 428-3911
(302) 428-7911

Jeff Holmes, Sr. Environmental Engineer
(Accountable for Oil spill prevention)
2274 Warner Road
Lansdale, PA 19446
Home Phone: (610) 584-6814
Work Phone: (302) 428-7421, Cell Phone: (302) 463-7935,

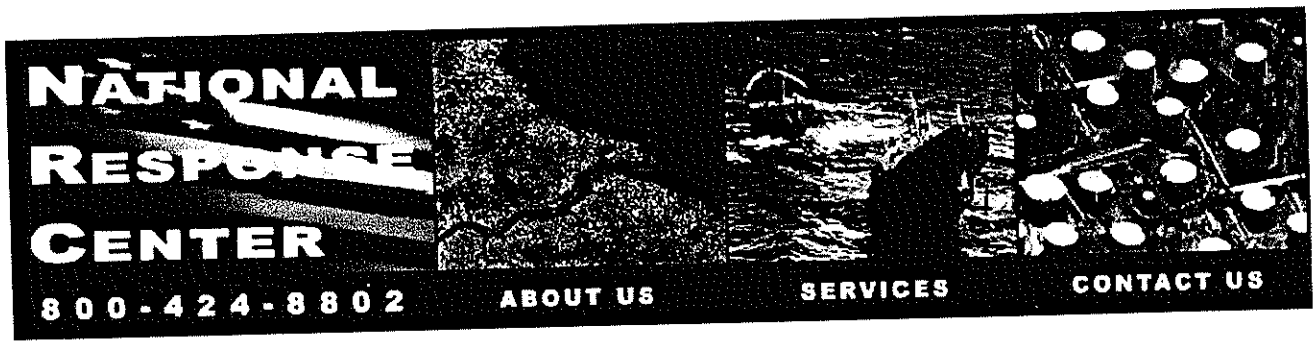
Diane Graham, Safety Supervisor
135 Berry Drive
Wilmington, DE 19808
Home Phone: (302) 368-0059
Work Phone: (302) 428-7994, Contact by radio safety channel

See Attachment B for Notification Flowchart.

See Attachments C and D for Federal and State Chemical Lists and Reporting Quantities.

See Attachment E for Extremely Hazardous Substance Listing and Reporting Quantity.

See Attachment F for Sample GM Spill Reporting Quantity Determination for Various Products Used at General Motors Facilities.



:: ADDRESS ::

NATIONAL RESPONSE CENTER
c/o United States Coast Guard (CG-3RPF-2) - Room 2111-B
2100 2nd Street, SW
Washington, DC 20593-0001

Toll Free:	800-424-8802
Direct:	202-267-2180
FAX:	202-267-1322
E-Mail:	lst-nrcinfo@comdt.uscg.mil
TDD:	202-267-4477 (Telecommunications Device for the Deaf)

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4.2.b – External Releases

4.2.b.1 - Notification of Agencies

A. Waterway

In the event of an accidental discharge or spill to a waterway, the Environmental Engineer will notify the appropriate local, state and/or federal authorities. If not in the plant, the Environmental Engineer will be notified by other means such as telephone, pager or radio. Timely notification is important. If a Reportable Quantity (RQ) (See RQ table - Attachments C & D) is potentially exceeded, notification of the National Response Center must be done **immediately.** The following agencies and GM staff will be notified as required:

Duty Officer, National Response Center (NRC)
U. S. Coast Guard
Commandant G-TGC-2
Second St., S.W.
Washington, D. C. 20593
Phone: 800-424-8802 (Toll Free, 24-hours)

State Department of Natural Resources & Env. Control
Phone: 800-662-8802 (Toll Free, 24-hours)

GM Legal Staff Env. & Energy Practice Area
MC 482-C24-D24
300 Renaissance Center
Detroit, MI 48243
(313) 665-4870

Mr. John Takle
General Motors Corp.
(248) 753-5655

B. Sanitary Sewer

In the event of spillage of contaminants to the sanitary sewer in sufficient quantity to potentially cause an upset in the municipal treatment plant, the Environmental Engineer will notify the following:

New Castle County Department of Special Services
Daytime: (302) 395-5728 or (302) 395-5700
Nights: (302) 395-5700

Mr. John Takle
General Motors Corporation
(248) 753-5655

4.3 - Spill Information To Be Reported

1. Name of person reporting.
2. Name and address of facility.
3. Substance spilled. Indicate whether the chemical is an extremely hazardous substance as defined under the SARA Section 302 (EHS) list or Table I of the Delaware Regulation for the Management of Extremely Hazardous Substances. See Attachment E.
4. Estimated quantity.
5. Possible hazards to human health or the environment outside the facility boundaries.
6. Time spill occurred and duration.
7. Name of waterway receiving spillage.
8. Person to contact and phone number at reporting facility.
9. Answer any question asked by agency to the best of your ability.
10. An indication of whether or not this is a complete report. Incomplete reports must be completed when the information is available but in no case more than 24 hours later than the initial contact.
11. See Attachment G for sample GM report form.

4.4 - Emergency Contractors

Vacuum Tank Trucks

Auchter Industrial Vac Service, Inc.
Pluto Drive
Sewell NJ 08080
(856) 256-9622 Phone
(856) 256-9623 Fax
EPA ID No. NJD 980772768

A-1 Sanitation (Sanitary (Sewage) Issues Only)
718 Grantham Lane
New Castle, DE 19720
(302) 322-1074

Allstate Power Vac, Inc.
#10 Industrial Hwy.
Bldg. J-M/S9
Lester, PA 19113
1-800-876-9690 24-hr. Service
EPA ID No. NJD 003812047

Clean Harbors - Environmental Services, Inc.
2301 Pennsylvania Avenue
Deptford, NJ 08096
800-645-8265 24 hr. Phone
EPA ID No. NJD 000547364

Construction Equipment

Corrado American
Marsh Lane
New Castle, DE 19720
655-6501
Delaware Solid Waste Transporter No. DE-SW-126D

Talley Brothers
P. O. Box 5548
Wilmington, DE 19804
655-5548

4.5 - Spill Response Equipment

The following is a list of communication devices, equipment and materials for use in control and clean-up operations:

1. In-plant two-way radios, pager and telephone system.

2. Spill response cart (commonly referred to as the "Haz Mat Truck") located near column D-2. The ignition key is kept at Security and Safety. This cart is inspected after each use and replacement material ordered as needed. The equipment on the cart is capable of being used for the cleanup of spills of any hazardous waste typically generated at the facility along with other materials of approximately 100 gallons or less. This cart contains items including safety equipment (rope, extension cord, crowbar, survive airs, blower, Scott air pack, body harnesses, lanyard, drop lights), soda ash, rags, oil dry, spill guns for acid, caustic or solvents, drum repair kit, pH paper and tool box.

3. Spill containment equipment cabinets located in the Powerhouse, Weldwater Bldg., Grit Separator Building, Wastewater Treatment and Paint MM 21 1/2. These cabinets contain plastic shovels, rakes, gloves, face shields, oil absorbent socks, tyvek coveralls, absorbent material, rags and squeegees. These cabinets are inspected periodically to ensure they are stocked with sufficient material to respond to a spill.

Portable fire extinguishers are located on columns throughout the plant. The total number of fire extinguishers are categorized as follows:

452 - 2 1/2 gallon AFFF
750 - Assorted sizes CO2
85 - Assorted sizes of Dry Chemical
52 - Assorted sizes of Halon
6 - 125 lbs. Purple K
8 - Class D
6 - Class K

Decals are affixed to each fire extinguisher specifying the type of fire it is designed to extinguish. The location of each fire extinguisher is listed on the Plant Security monthly checklist.

2 1/2" Standpipes (fire hydrant equivalents) are located throughout the plant as follows:

K-7	S-17 1/2	TTUU-25
H-29	2-E-19	UU-25 Basement
N-9	2-DD-25	
L-18	2-FF-24	
AA-17	RR-10	
EE-29	WW-10	

Within the plant are numerous 1 1/2" fire hose reels. The location of this equipment is also listed on the Plant Security monthly checklist.

Two In-Plant Fire Trucks. Trucks are located outside Plant Security at D-2.

1. One truck having 200 feet of 1 1/2 inch hose and 2 CO2 fire extinguishers and one SCBA (self-contained breathing apparatus) Scott Air Packs.

2. One truck having 300 feet of 2 ½ inch hose, 100 feet of 1 ½ inch hose and various types of fire extinguishers.

Additional fire protection includes:
Paint Stores, Mix and Solvent Recovery area are protected by a high-density sprinkler system and a 24-ton Cardox unit (Low pressure CO2).

Robotics Spray Booths in Modules 1 through 7 are protected by high-density sprinklers. Each of the spray booths has a deluge sprinkler system.

Smoke release vents are installed throughout the manufacturing areas at the facility and are operated manually.

Smoke detectors have been installed in the computer rooms, paint control room, UPS room and in all electrical substations.

IR detectors have been installed in the 14 Robotic spray zones in Modular Paint and Prime Booth.

Prime booth also has high pressure CO2 system inside spray equipment.

Ultraviolet fire detection in flammable liquids pumphouse.

Automatic foam deluge system (heat detector activated) in gasoline loading and storage area.

Fire Loop System has a total of six pumps in the system which provide pressure and water when needed and include:

2 Jockey Pumps	50 gpm & 100 gpm pumps
Electric Fire Pump	1,500 gpm pump
#1 Pumphouse Diesel Fire Pump	1,000 gpm pump
#2 Pumphouse North Diesel Fire Pump	2,500 gpm pump
#2 Pumphouse South Diesel Fire Pump	2,500 gpm pump
#3 Pumphouse	2,500 gpm pump

The plant also maintains 675,000 gallons of water in one gravity and two ground tanks for fire fighting operations.

Cold Foam Generator Locations include:

Powerhouse	300 gallon
Outside and West of Column B31	325 gallon

4.6 - Emergency Power

Emergency diesel back-up generator units are located throughout the facility to supply emergency power to critical operations including, but not limited to: wastewater treatment pumps, emergency lighting, security fire system computer, and powerhouse boiler controls. Fail-safe engineering installations for diesel fuel generators include the use of double walled tanks and/or secondary containment tanks. Additionally, weirs and booms are located prior to the site's outfall point.

4.7 - Suppliers and Distributors of Spill Equipment

1. New Pig Corporation
   One Pork Avenue
   Tipton, PA 16684-0304
   (800) 468-4647 (1-800-HOTHOGS) Phone
   (800) 621-7447 24-hr. Fax

2. Direct Safety Company
   111 Lake Drive
   Newark, DE 19702
   (800) 528-7405
   (800) 760-2975 24-hr. Fax

3. Bodman Industries
   P.O. Box 2221
   Aston, PA 19014
   (800) 241-8774 Phone
   (610) 459-8036 Fax

4. Lab Safety Supply
   P.O. Box 1368
   Janesville, WI 53547-1368
   (800) 356-0783 Phone
   (800) 543-9910 Fax

5. Labelmaster
   5724 N. Pulaski RD.
   Chicago, IL 60646-6797
   (800) 621-5808 Phone
   (800) 723-4327 24 hr. Fax

4.8 – Spill Notification – Written Reporting Requirements

After verbal notification, a written report shall be submitted within five (5) days to the control authority(ies). Also, copies of all such correspondence shall be submitted to the following General Motors corporate staff:

GM Legal Staff Env. & Energy Practice Area
MC 482-C24-D24
300 Renaissance Center
Detroit, MI 48243
(313) 665-4870

Mr. John Takle
General Motors Corp.
(248) 753-5655

See Attachment G for sample GM spill reporting form, the content of which would also be used as the basis for agency correspondence.

See Attachment H for sample Agency spill reporting form. Minimum information required includes the following:

- Name and address of the facility
- Name and phone number of emergency contact person
- Location within the facility where spill occurred
- Date of spill
- Organizations notified including name, date and time of notification
- Chemical name and CAS number of material spilled
- Verification whether the chemical is an Extremely Hazardous Substance
- Verification of whether spill is reportable under CERCLA and/or State of Delaware
- Spill incident details: start time, approximate duration and estimated quantity released
- Reason for the spill
- Listing of agencies notified about the spill
- Summary of action taken to contain and clean up the spilled material
- Known or anticipated health effects related to the spill
- Notation of medical treatment for exposure to spilled material

4.9 - Disposal of Materials Procedures

- Collected material will be placed in containers, tanks or tankers and properly characterized as hazardous or non-hazardous waste. This waste characterization is coordinated by the environmental engineer.

- A solid waste may be considered as a hazardous waste if it meets one of the following conditions:
  - Waste is specifically listed as a hazardous waste in Federal regulations.
  - Waste meets one of the four hazardous waste characteristics - ignitable, corrosive, reactive or toxic.
  - Waste is specified as a hazardous waste by the generator based on generator knowledge.

- Any question as to whether the collected spill material is a hazardous waste should initiate waste sampling and testing for hazardous vs. non-hazardous waste determination.

- Any waste that is characterized as a hazardous waste must be manifested and sent to a GM corporate approved Treatment Storage and/or Disposal (TSD) facility. Since GM is classified as a generator, the facility must follow manifest requirements for the disposal of hazardous waste including maintaining records for a period of three years and exception reporting. Exception reporting requirements include contacting the hazardous waste transporter or TSD facility for the status of the hazardous waste shipment if a signed manifest is not received by the generator within 35 days of the date that the waste was accepted by the transporter. If GM does not receive the signed manifest within 45 days of the date accepted by the transporter, the lost shipment must be reported to the state.

- **Sanitary Sewer Line Clog Prevention/Response**

  In an effort to prevent the sanitary sewer line from clogging, a contractor is brought in at least once a quarter to clean the manholes on each side of the flow meter in the East (haul away) lot by the weather station. Additionally, a sign has been installed at this location to inform anyone in the area to call plant security if any material is ever seen flowing up and out of a manhole. The yard personnel have been trained to call plant security with any notice of overflow. Also, a new sanitary flow monitoring log has been instituted and the wastewater treatment plant operators directed to notify appropriate personnel if the flow has dropped by at least 30% on any one day. These preventative measures should prevent overflow problems. However, should an overflow occur, the sluice gates at the stormwater system must immediately be closed, the groundwater pump on the East side of the Mod Paint building must be shut off and the contractor called in to remove the clog and contain any material.

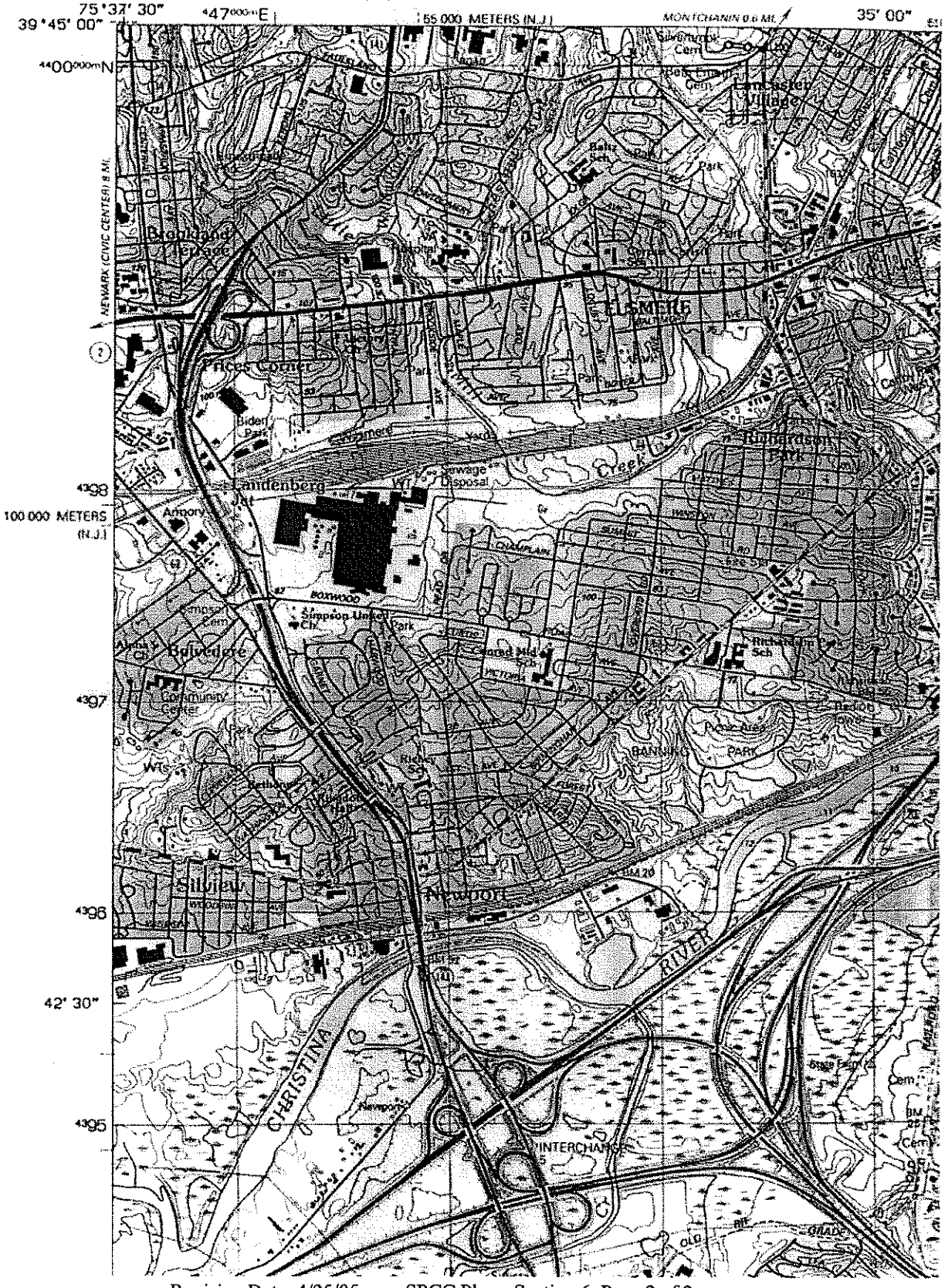
SECTION 5.0 - SITE DESCRIPTION

The General Motors Corporation, Wilmington Assembly Plant is located on Boxwood and Dodson Roads in the Wilmington, Delaware metropolitan area. The site consists of approximately 142 acres. The plant assembles passenger vehicles during two assembly shifts. The manufacturing operation at the General Motors Wilmington Assembly Plant is divided into three major production departments: Body Shop, Paint Shop, and General Assembly. Within each department, the main conveyor line is supported by subassembly lines where components needed for the total assembly processes are assembled. In addition, several major support departments supplement the main assembly operations. The assembled vehicles are then shipped via railway or truck carrier to General Motors automobile dealerships.

Major Receiving Stream - Little Mill Creek
Municipal Sewer - New Castle County Sanitary Sewer System

SECTION 6.0 – FACILITY MAP

A site map of the General Motors Corporation, Wilmington Assembly Plant can be found in the side pocket of the cover binder. See next page for Facility Topographical Map


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
75°37' 30"
39°45' 00"
4400000mN
4398
100 000 METERS (N.J.)
4397
4396
42' 30"
4395
447000mE
55 000 METERS (N.J.)
35' 00"
NEWARK (CIVIC CENTER) 8 MI.
MONTCHANIN 8.6 MI.
Brookland Cemetery
Lancaster Village
Price's Corner
Elsmere
Richardson Park
Landenberg Jct.
Armory
Sewage Disposal
Simpson United Ch.
Belvidere
Community Center
Richardson Sch
Banning Park
Silliby
Newport
CHRISTINA
RIVER
INTERCHANGE
BM 20

SECTION 7.0 - SPILL PREVENTION

7.1 – SECONDARY CONTAINMENT

The following installations are protected by pits, dikes, retaining walls, or a redundant water system:

1. Oil Storage
2. Gasoline Storage
3. Anti-freeze Storage
4. Hydraulic Fluid Storage
5. Process Tanks
6. Transfer and Unloading Sites
7. Paint, Thinner and Oil Drum Storage
8. Other Hazardous Material Storage

- The hazardous material and hazardous waste storage areas are protected by concrete secondary containment. The sump area dimensions are 7' x 4' x 20'. The drains in the sump areas are piped directly to the facility's on-site wastewater treatment plant, but the pump has to be actuated manually.
- Drainage of most secondary containment areas would involve pumping material to a holding tank for treatment or removal from the plant site.
- Some oils and oil related products for production and maintenance are received in 55 gallon drums and 300 gallon totes. The Receiving Department dock area does not have secondary containment capacity, however, the dock area is in close proximity to spill containment response equipment. Additionally, prior to the main stormwater discharge, there are a couple of sluice gates that can be closed to assist in diverting any spilled material to three 100,000 gallon holding tanks if needed. After materials are received, the drums and totes are moved to storage areas that have a concrete berm as the method of secondary containment.
- Bulk material transfers occur at specific tank sites. Secondary containment present for the tank itself would also be applicable to bulk material loading/unloading.
- Load/unload areas are currently active at the site. If the decision would be made to take an area out of service, the load unload connection would be capped or blind flanged.

7.2 – INSPECTIONS/MAINTENANCE

- Routine visual observations of tanks are conducted on a daily basis by security and powerhouse personnel and on a production day basis many times by yard laborers, environmental engineers, and maintenance and wastewater treatment personnel. Formal records of daily inspections are kept for the inspections of the hazardous waste storage areas and purge solvent tanks (Mod Paint area). Inspection records are signed by a supervisor and maintained with the plan for a minimum 3 year time periodt. Tank inspection record form samples are included as Attachment I.

- Inspection of storm water accumulating in containment areas at the tank farm is conducted on an as needed basis. However, typically this is soon after precipitation so that uncontaminated storm water can be drained and the maximum containment volume can be available for any problems that may arise.
- Visual inspection of the stormwater outfall is normally conducted every production day by one of the plant's Environmental Engineers. Upon any indication of a spill the spill gates are closed. An investigation is begun as to the source and any needed corrective measures are implemented. If needed, the spilled material is pumped to any combination of the three 100,000 gallon holding tanks next to the outfall for treatment or haul-away.
- Leaks from tanks and piping are repaired on an as-needed basis.
- Maintenance and/or repair on pipe supports are on an as-needed basis.
- Pressure testing on pipelines and/or valves is on an as-needed basis.
- The two bulk storage ASTs used to store #6 fuel are not equipped with internal heating coils. However the #6 fuel oil is circulated through a heat exchange system in the Powerhouse to keep the material free flowing. The level in each tank is checked daily and the visible piping is checked regularly.
- There are no buried or partially buried tanks at the facility.
- The piping from the ASTs is not equipped with cathodic protection.
- Diked areas at the load/unload area at the south tank farm area (in front of the process fluid pumphouse) are drained after inspection to the process wastewater treatment system to assure treatment for any minor pollutants that may be present. Positive means to prevent a spill or other excessive leakage of oil into the drainage system or in-plant effluent treatment system include the requirement for attendance during loading and unloading, so any problems can be addressed immediately along with relative proximity to spill response equipment.
- Valves used to drain the bulk tank farm area are only opened after inspection of contained fluid in the containment areas.

7.3 – SAFETY/SECURITY/TRAINING

- Overhead piping is present in the traffic area between the powerhouse building and main plant building. The vertical clearance is sufficient to safely accommodate vehicular traffic. There are no general warning signs present in this area. However, a natural gas pipeline at this location has been painted the designated warning color - yellow.
- The facility is entirely enclosed by fences and gates. Access to the facility buildings is restricted by security procedures. Security personnel patrol the facility on a routine basis.
- Adequate lighting is present at the tank farm, loading/unloading docks, material storage area, material transfer locations and access gates.
- Pump controls are not secured. Access is restricted to only authorized personnel. Records or logs identifying personnel accessing pump controls are not formally kept.

- The plant engineering department has the management responsibility of assuring the appropriate personnel are trained as frequently as needed or required by regulation and as detailed as needed according to their job responsibilities. Training may be in the form of individualized direction, meetings, training sessions, videos, in-plant broadcasts, safety talks and/or written information, handouts and/or posters.

7.4 – HOUSEKEEPING PRACTICES

Good housekeeping practices are designed to maintain a clean and orderly work environment. An effective step towards preventing pollution in stormwater from industrial sites simply involves using common sense to improve the facility's basic housekeeping methods.

General Motors employs the following good housekeeping practices:

- Regular trash pickup.
- Maintaining dry and clean floors and surfaces by sweeping and cleaning around machines.
- Facility personnel are instructed in basic cleaning procedures (i.e. sweeping work areas, etc.).
- Routine inspections for leaks or conditions that could lead to chemical discharges or contact of stormwater with raw materials, etc.
- Materials are properly stored.
- Employees are routinely reminded of good housekeeping procedures.

7.5 - TANK TRUCK LOADING/UNLOADING PROCEDURES

7.5.a - Tank Truck Loading Procedure -- See Attachment J

7.5.b – Tank Truck Unloading Procedure - See Attachment K

SECTION 8.0 - LISTING OF SIGNIFICANT MATERIALS STORAGE AREAS

8.1 - Tank Farm Area (all above ground outside storage tanks)

#6 Fuel Oil(Bunker "C") Storage Tanks
#1 (North). Capacity - 250,000 gallons.
#2 (South) - Capacity - 250,000 gallons.
Both normally kept at between 25% and 75% full
Fill and withdraw up to 35,000 gallons per day-

Unleaded Gasoline Storage Tank
Capacity - 40,000 gallons.
Normally kept between 20% and 75% full
Fill with 8,000 - gallon tankers and use up to 2,000 gallons/day.

Light (Diesel) Fuel Tank
Capacity - 60,900 gallons.
Normally kept between 10% and 50% full
Minimal use – being phased out.

Purge Thinner Tank
Capacity - 39,000 gallons.
Emptied prior to 6/95, no plans to refill

Water Tanks
North and South
Capacities - 250,000 gallons each.
Used for Fire Protection.
Normally kept full.

Bulk Productive Fluids Tanks (Horizontal "Bullet" Tanks)
Capacity - All 12,000 gallons. Note: 4 on north side empty.
Note: 2 south most tanks in south side empty.
Normally operated between 20% and 90% full.
All filled from tankers of 5000 to 6000 gallons.
All within concrete containment wall.
Typical Production Daily Use:
Glycol (Antifreeze) - 100 to 250 gallons.
Power Steering Fluid - 50 to 100 gallons.

Convault (double walled concrete encased) tanks
Capacity – both 12,000 gallons. Presently empty.
Two to be used for gasoline – presently never filled yet.

8.2 - Mod Paint Area (all aboveground inside storage tanks)

Waste Purge Solvent Tanks - by Column PP21
North Tank - Capacity 6,000 gallons.
South Tank - Capacity 6,000 gallons.
Typically fills 200 to 350 gallons per day.
Load a vacuum tanker at least once every 90 days with 3000 to 5500 gallons.
Tanks connected with over flow pipe 2' down from top.
Concrete containment area surrounding tanks.

Sludge Pit Chemical Tanks - Basement of Mod Paint

"Barracuda l00" (50% Caustic) Tank - Capacity 4,000 gallons.
Fiberglass tank normally kept 25% to 75% full
Filled from full tankers that unload a portion of the tanker at about 1000 to 2500 gallon increments.
Fitted with ultrasonic level indicators.
Used at a rate of less than 150 gallons a day.

8.3 - Elpo Area (all inside, above ground, concrete contained tanks)

Process Tanks
Elpo Dip Process Tank (Column LL25)
Capacity - 115,000 gallons
Normal operating range - 90,000 gallons
Filled with DI water and resin by operator.
Up to 1500 gallons a day filled and removed.
Level indicator in control room.

Storage Tanks
Elpo Resin Storage Tank (Column LL27)
Capacity - 15,000 gallons.
Normal operating range - 5,000 to 11,000 gallons.
Normal use - up to 1500 gallons a day.
Receive 5,000 gallon bulk deliveries.
Level checked with dipstick.

8.4 - Phosphate Area (all inside, above ground, concrete contained tanks)

Process Tanks

Stage 1 (Column KK29)
Capacity - 16,170 gallons
Contains Alkaline Soapy Water
pH 10.2 to 11.5
Normal drag in and out

Stage 2 (Column GG29)
Capacity - 84,000 gallons
Contains Alkaline Soapy Water
pH range 10.2 to 11 .5
Minimal drag in and out

Stage 3 (A & B) (Column FF29)
Capacity – 8,170 gallons each
Flow Through City Water Rinse

Stage 4 (Column FF30)
Capacity – 37,200 gallons
Contains Conditioner
pH range 8.5 to 9.5
Minimal drag in and out

Stage 5 (Column HH30)
Capacity - 87,700 gallons
Contains Phosphate Solution (Acidic)
Normally operated 98% to 100% full
Minimal drag in and out
No level indicator, overflow Pipe to drain

Stage 6 (Column KK30)
Capacity - 37,200 gallons each
Flow Through City Water Rinse

Stage 7 (Column MM29)
Capacity - 8170 gallons
Contains Post Rinse Conditioner
pH range 4.2 to 4.8

Stage 8 (A & B) (Column MM28)
Capacity – 6,700 gallons each
Flow Through DI Water Rinse

Storage Tanks
Pre-cleaner Bulk Storage Tank (Column MM30)
Capacity - 6,000 gallons
Normal use - up to 200 gallons/day
Fill from tanker of 4,000 gallons
Ultrasonic level indicator

Cleaner Bulk Storage Tank (Column LL30)
Capacity - 6,000 gallons
Normally empty. Stage 5 pumped into this tank for
a day or so while the stage 5 process tank is cleaned.

Replenisher Bulk Storage Tank (Column LL30)
Capacity – 6,000 gallons
Normal use - up to 200 gallons/day
Fill from tanker of 4,000 gallons
Ultrasonic level indicator
pH range of 3.0 to 3.5

8.5 - Wastewater Treatment Related Tanks

Holding Tanks (Aboveground, Concrete Contained)
Elpo Rinse Wastewater Holding Tank
Outside back of plant near column EE30.
Capacity - 100,000 gallons.
Normal operating range - 40,000 to 85,000 gallons.
Filled via lift station at LL28 throughout the day.
Filled at about 15,000 gallons a day.
Pumped manually to wastewater treatment daily.
Level indicator/alarm at wastewater treatment

Wastewater Treatment Holding Tanks #1 and #2 (Outside)
Capacity - 600,000 gallons each
Normal operating range - 60,000 to 520,000 gallons
Filled in sequence with #3 Holding Tank 500,000 gals/day
Processed through system at up to 700,000 gal/day
Level indicator/alarm in control room

Wastewater Treatment Holding Tank #3 (Outside)
Capacity - 1,200,000 gallons
Normal operating range - 100,000 to 1,100,000 gallons
Filled in sequence with other holding tanks
Processed through system at up to 700,000 gals/day
Level indicator/alarm in control room

Sludge Thickener Tank (Outside)
Capacity - 76,700 gallons
Normally left empty
Level indicator in control room

Sludge Conditioning Tank (Inside)
Capacity - 5,750 gallons
Filled intermittently with sludge from clarifiers
Emptied to filter presses
Normal operating range - 1,000 to 4,000 gallons
Level indicator/alarm in control room

Sulfuric Acid Holding Tank (Inside)
Capacity - 2,000 gallons
Normal operating range - 200 to 1800 gallons
Filled from bulk tanker
Emptied by pump (20 gpm) intermittently to Holding tanks
Level indicator/alarm in control room and unloading station

Bulk Lime Slurry Storage Tank (Inside)
Capacity - 16,000 gallons
Emptied prior to 1990 and no longer used

Day Lime Slurry Storage Tank (Inside)
Capacity - 2,500 gallons
Emptied prior to 1990 and no longer used
Overflow protected by pipe at 2,500 gallon level

Sodium Hypochlorite Tank (Inside)
Capacity – 540 gallons
Normal Operating Range – 150 to 400 gallons
Filled from bulk tanker
Emptied intermittently to sandfilters
Level indication on side of opaque tank

Sodium Hydroxide Tank (Inside)
Capacity – 500 gallons
Normal Operating Range – 150 to 500 gallons
Filled from bulk tanker
Emptied by metering pump into process while processing.

Process Tanks (flow through, aboveground, concrete contained)
Grit Separators (2)(Inside Grit Separator Bldg.)
Capacity - 15,000 gallons each
24-hr. flow through, always full
Overflow protected with overflow pipe to process waste line

Blend Tank (Inside WWTP Building)
Capacity - 13,000 gallons
Always full (outfall two feet below top)
Only flowing during wastewater processing

Flash Mix Tank (Inside WWTP Building)
Capacity - 2700 gallons
Always full (outfall two feet below top)
Only flowing during wastewater processing

Clarifiers IA and IB (Outside WWTP Building)
Capacity - 230,000 gallons each
Always full (outfall two feet below top)
Only flowing during wastewater processing

Sandfilters (Inside WWTP Building)
Capacity - about 6,000 gallons each
Normally run at about 4,500 gallon level
Only flowing during wastewater processing

SECTION 9.0 - LISTING OF SIGNIFICANT MATERIALS STORAGE AREAS AND SECONDARY CONTIANMENT INFORMATION

9.1 - Tank Farm Area

Tank	Capacity (gallons)	Tank Material	Material Stored	Type Secondary Containment	Containment Capacity (gallons)	Impervious Containment Material
North Fuel Oil Tank	250,000	Steel	No. 6 Fuel Oil	Containment Wall w/ Clay/Stone Base	250,000 gallon (minimum)	Clay
South Fuel Oil Tank	250,000	Steel	No. 6 Fuel Oil	"	"	"
Gasoline Storage Tank	40,000	Steel	Unleaded Gasoline	"	40,000 (min)	"
Light Fuel Tank	60,900	Steel	Diesel Fuel	"	60,900 (min)	"
Purge Thinner Tank	39,000	Steel	Tank Empty since 6/95	"	39,000 (min)	"
North Water Tank	250,000	Steel	Water	N/A	N/A	N/A
South Water Tank	250,000	Steel	Water	N/A	N/A	N/A
Gasoline Storage Tank	12,000	Steel	Unleaded Gasoline	Double Walled	12,000 (min)	Concrete
Gasoline Storage Tank	12,000	Steel	Unleaded Gasoline	Double Walled	12,000 (min)	Concrete
Bulk Productive Fluids Tank	12,000	Steel	Glycol	Concrete Wall /Clay Stone Base	12,000 (min)	Concrete Wall /Clay Stone Base
Bulk Productive Fluids Tank	12,000	Steel	Power Steering Fluid	"	"	"
Bulk Productive Fluids Tanks	12,000	Steel	Empty (6 tanks)	"	"	"

Note: Empty tanks currently not in service have not been capped or blind flanged.

9.2 - Mod Paint Area

Tank	Capacity (gallons)	Tank Material	Material Stored	Type Secondary Containment	Containment Capacity	Impervious Containment Material
North Waste Purge Tank	6,000	Steel	Waste Solvent	Concrete Containment Wall	6,000 gallons (minimum)	Yes
South Waste Purge Tank	6,000	Steel	Waste Solvent	Concrete Containment Wall	"	Yes

9.3 – ELPO Area

Tank	Capacity (gallons)	Tank Material	Material Stored	Type Secondary Containment	Containment Capacity	Impervious Containment Material
Elpo Dip Process Tank	115,600	Steel	Deionized Water	Concrete Containment Wall	116,000 gallons (minimum)	Yes
Elpo Resin Storage Tank	10,000	Fiberglass	Resin	Concrete Containment Wall	"	Yes
Elpo Bath Storage Tank	115,000	Steel	Normally Empty	Concrete Containment Wall	"	Yes
Elpo Bath Storage Tank	26,600	Steel	Normally Empty	Concrete Containment Wall	"	Yes

9.4 - Phosphate Area

Tank	Capacity (gallons)	Tank Material	Material Stored	Type Secondary Containment	Containment Capacity	Impervious Containment Material
Stage 1 Tank	16,170	Steel	Alkaline Soapy Water	Concrete Containment Wall	88,000 gallons (minimum)	Yes
Stage 2 Tank	84,000	Steel	Alkaline Soapy Water	"	"	"
Stage 3A Tank	8,170	Steel	Water Rinse	"	"	"
Stage 3B Tank	8,170	Steel	Water Rinse	"	"	"
Stage 4 Tank	37,200	Steel	Conditioner Solution	"	"	"
Stage 5 Tank	87,700	Steel	Phosphate (Acidic) Solution	"	"	"
Stage 6 Tank	37,200	Steel	Water Rinse	"	"	"
Stage 7 Tank	4,800	Steel	Conditioner	"	"	"
Stage 8A Tank	9,000	Steel	Deionized Water Rinse	"	"	"
Stage 8B Tank	9,000	Steel	Deionized Water Rinse	"	"	"
Pre-Cleaner Bulk Tank	6,000	Fiberglass	Alkaline Solution	"	"	"
Cleaner Bulk Storage Tank	6,000	Fiberglass	Alkaline Solution	"	"	"
Replenisher Bulk Storage Tank	6,200	Fiberglass	Acidic Solution	"	"	"

Note: Empty tanks currently not in service have not been capped or blind flanged.

9.5 - Wastewater Treatment Related Tanks

Tank	Capacity (gallons)	Tank Material	Material Stored	Type Secondary Containment	Containment Capacity	Impervious Containment Material
Elpo Rinse Holding Tank	100,000	Steel	Elpo Rinse Wastewater	Concrete Containment Wall	1,200,000 gallons (min.)	Yes
Wastewater Treatment Holding Tank #1	600,000	Steel	Process Wastewater	"	"	"
Wastewater Treatment Holding Tank #2	600,000	Steel	Process Wastewater	"	"	"
Wastewater Treatment Holding Tank #3	1,200,000	Steel	Process Wastewater	"	"	"
Sludge Thickener (Normally Empty)	76,700	Steel	Sludge Slurry	"	"	"
Sludge Conditioning	5,750	Steel	Sludge	Concrete	"	"
Sulfuric Acid Holding Tank	2,000	Steel	Sulfuric Acid	Coated Concrete	2,000 gallons	"
Lime Slurry Storage Tank	16,000	Steel	Empty No Longer Used	N/A	N/A	N/A
Day Lime Slurry Storage Tank	2,500	Steel	Empty No Longer Used	N/A	N/A	N/A
Caustic Tank	750	Polyethylene	Caustic	Polyethylene	750 gallons	Yes
Sodium Hypochlorite Tank	540	Polyethylene	Sodium Hypochlorite	Concrete	>540 gallons	Yes
Grit Separator	15,000	Steel	Process Wastewater	Concrete	>15,000 gallons	Yes
Grit Separator	15,000	Steel	Process Wastewater	Concrete	>15,000 gallons	"
Blend Tank	13,000	Steel	Process Wastewater	Concrete	>13,000 gallons	"
Flash Mix Tank	2,700	Steel	Process Wastewater	Concrete	>2,700 gallons	"
Clarifier IA	230,000	Steel	Process Wastewater	Concrete	>230,000 gallons	"
Clarifier IB	230,000	Steel	Process Wastewater	Concrete	>230,000 gallons	"
Sandfilters	6,000(Each)	Steel	Treated Wastewater	Concrete	>6,000 gallons	"

Notes:

- Empty tanks currently not in service have not been capped or blind flanged.
- High level alarms are installed on most wastewater treatment related tanks. Level indicators/alarms are located in wastewater treatment plant control room. Secondary containment also includes concrete containment walls.

SECTION 10.0 - WORST CASE SCENARIOS

There are a number of possible worst-case scenarios for spills at the General Motors Wilmington Assembly plant. Three situations are presented below:

1 Release of #6 fuel oil from the two 250,000 gallon bulk storage tanks located at the tank farm. The tank farm area is protected by a 4' high stone covered clay dike. The material would be contained within the tank farm area which would then be pumped out to holding tanks. The tank farm base would be sampled to confirm that spilled material has not permeated underlying soils.

2 Release of 2,000 gallons of sulfuric acid from tank located in the Wastewater Treatment Plant. The area is enclosed by a 3' high concrete epoxy protected containment wall.

3 Release of 1,200,000 gallons of process waste from the holding tank located in the Wastewater Treatment Plant. Secondary containment has been provided in the surrounding area.

Prediction of Direction, Rate, and Amount of Oil That Could Potentially be Released

The possibility of a release of oil from this facility is very minute. The major oil tanks have secondary containment to hold any overflow or leak. Additionally, should any leak or spill occur and reach the storm drain, it would flow towards the northeast corner of the plant (Direction) where two sluice gates can be easily closed to prevent release. Additionally, a baffle and two oil skimmers operate on a continuous basis prior to the discharge to Little Mill Creek.

Upon catastrophic failure of the largest tank of fuel oil and the containment system (if the tank was full), during the warmer months, oil could potentially flow at the rate of about 500 gallons a minute (Rate) into the storm system. Considering the volume of the storm system, the baffle and oil skimmers, it is estimated at worst case (during a heavy downpour) that about 50,000 gallons (Amount) of oil could potentially be released to Little Mill Creek.

Again, this is in the very highly unlikely situation when all the following items happen concurrently: Tank is full, tank fails, containment fails, heavy rainfall, no one notices what is happening and sluice gates are not closed.

SECTION 11.0 - SPILL HISTORY

Records of reportable spills occurring at General Motors Wilmington Assembly facility are maintained in a separate file in the Environmental Department.

SECTION 12.0 - PLAN DISTRIBUTION

The SPCC plan has been sent to the following:

Name	Location	No. Copies	SPCC Plan Copy No.
Jeff Holmes	Plant Engineering	1	1 (Original)
Plant Security	Security Office	1	2
Paint Dept.	Paint Mix Office	1	3

SECTION 13.0 – TOXIC ORGANIC MANAGEMENT PLAN (TOM)

This plant has chosen to sample for TTO's in leui of a Toxics Organics Management (TOM) Plan.

SECTION 14.0 – PCB ADDENDUM

Currently, there are no known transformers at the facility that contain oil with PCB's. The plant head electrical engineer keeps records of transformers and their location in the Engineering Department.

Any required documentation regarding PCBs is kept in the files of the Environmental Engineer on site.

SECTION 16.0 – COPY OF SPCC REGULATIONS

A copy of the SPCC Regulations (40 CFR 112) can be found in Attachment M.

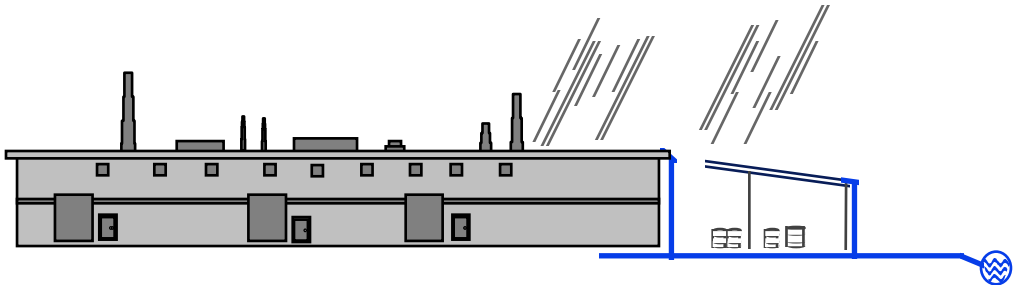
GM Wilmington Assembly Plant

MATERIAL
SPILL REPORTING REQUIREMENTS

WILM #	TRADE NAME	INGREDIENTS	CAS.NO	PERCENT (BWT)	40 CFR 403.2 REPORTABLE QUANTITY (LBs)	MATERIAL DENSITY	MATERIAL LBS./ GAL.	THEORETICAL REPORTABLE RELEASE (GALS.)	MATERIAL FLASH POINT	POTENTIAL IGNITABLE HAZ. WASTE (< 140 F)
2926	Unleaded Gasoline				Sheen	0.74	6.17	1.6	-40	YES
		Gasoline	8006619	>95						
		Benzene	71432	1-5						
1678	Diesel Fuel	Diesel Fuel	68334305	99-100	sheen	0.83	6.92	<1	125	YES
4410	Windshield Washer Fluid				5000	0.793	6.62	756	73	YES
		Methanol	67561	80						
		Water	7732185	19						
		2-Aminoethanol Dye	141435	0.5						
		Nonionic Surfactant	N/A	0.5						
1347	Power Steering Fluid				Sheen	.8735	7.28	<1	345	NO
		Petroleum Distillates	64742650	50-65						
		Petroleum Distillates	64742536	20-35						
		Petroleum Distillates	64742547	10-20						
		"Esters"	68516847	1-3						
		Fatty Estrers	27924998	1-3						
3538	Antifreeze				5000	1.12	9.34	535	225	NO
		Ethylene Glycol	107211	80-95						
		Diethylene Glycol	111466	0-8						
		Water	7732185	1-5						
1168	Fuel Oil #6				Sheen	0.95	7.92	<1	150	NO
		Vacuum Residuum	64741566							
		Vacuum Residuum	64741453							
		Heavy Distillate	64741613							
		Light Distillate	64741599							

GENERAL MOTORS CORPORATION

STORM WATER POLLUTION PREVENTION PLAN



Facility Name: **GM Wilmington Assembly Plant**	Original Date of Signed Plan: **12/21/98**
Facility Address: **801Boxwood Road**	Date of Last Revision: **Updated 5/14/08**
Wilmington, DE 19804	
	Emergency Contact: **Plant Security**
	Phone No.: **(302) 428-7911** In-Plant: **3911**
Facility Owner: **General Motors Corporation**	
Renaissance Center	Environmental Contact: **Jeffrey A. Holmes**
Detroit, MI. 48202	Phone No.: **(302) 428-7421** Fax No.: **7246**
Type of Manufacturing: **Automobile Assembly**	Plant Manager: **Robert F. Dolan**
	Phone No.: **(302) 428-7010**
SIC: **3711**	No. of Outfalls: **1**
EPA ID No.: **DED002369205**	
	Name(s) of Receiving Water(s): **Little Mill Creek**
Area of Impervious Surface: **122 acres**	
Area of Pervious Surface: **5 acres**	
NPDES Permit No.: **DE0000523**	
Existing Permit Date: **09/15/03**	Permit Expiration Date: **9/30/08**

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C. Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations.	
A. Name & Official Title (type or print) **Robert F. Dolan, Plant Manager (On behalf of General Motors)**	B. Area Code and Telephone No. **(302) 428-7010**
C. Signature	D. Date Signed

D. Storm Water Pollution Prevention Team

Introduction - The General Motors Wilmington Assembly Plant located at Boxwood and Dodson Roads in Wilmington, Delaware consists of approximately 142 acres. Approximately 127 acres of this encompasses the main operating facility (of which about 5 acres are pervious) and approximately 15 acres is an unutilized wooded area that is pervious and does not affect the storm water discharge that this plan is associated with. This facility produces automotive passenger vehicles. These vehicles are assembled from various components shipped to the facility from other supplier facilities. The assembled vehicles are then shipped via railway or truck carrier to General Motors automobile dealerships throughout the world. Precipitation falling on the site (along with groundwater from two dewatering sumps) is handled through the stormwater collection system and directed to a concrete lined ditch in the northeast corner of the property. At this location, oil skimmers and booms capture traces of oil and grease and solids are settled on the bottom prior to flow measurement and discharge into the Little Mill Creek. This point source (outfall 001) has an NPDES permit associated with it to limit the amount of pollutants that may be discharged. In January of 1998, this permit was renewed and included a requirement for a Storm Water Pollution Prevention Plan. In September 2003 this permit was renewed again.

A Storm Water Pollution Prevention Plan was previously developed in January 1995. This was the starting point for this plan, which has been revised to follow the GM Standard Environmental Practice template for Storm Water Pollution Prevention Plans.

The Storm Water Pollution Prevention Team is responsible for developing the Storm Water Pollution Prevention Plan (SWPPP) and assisting General Motors in its implementation, maintenance and revision. The responsibilities of each team member are summarized in Worksheet #1.

STORM WATER POLLUTION PREVENTION TEAM MEMBER ROSTER	**WORKSHEET #1**
	Facility Name: GM Wilmington Assembly Plnt.
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

Leader: Jeffrey A. Holmes Title: Sr. Environmental Engineer
Beeper No.: (302) 428-7243, 406 Office Phone: (302) 428-7421 Fax: (302) 428-7246
Cell Phone (302) 463-7935 Home Phone: (610) 584-6814
Responsibilities:
Coordinate all stages of plan development and implementation, coordinate employee training programs, keep all records and ensure reports are submitted. Perform wet and dry weather inspections.

Members:
(1) Dan Hughes Title: Environmental Manager Southeastern Region
Cell Phone No.: (770) 318-4611 Office Phone: (914) 486-6467
Fax Phone: (914) 486-7459
Responsibilities:
Coordinate the Environmental Engineering activities within the Southeastern Region of the General Motors Worldwide Facility Group Environmental Services group. Communicate with corporate Worldwide Facilities Environmental Engineers on relevant matters of the South East Coast Plants and facilitate the transfer of information from corporate Worldwide Facilities to the plant level.

(2) Wayne Fox Title: Director of Plant Engineering
Cell Phone No.: (302) 250-7042 Office Phone: (302) 428-7477 Fax: (302) 428-7246

Responsibilities:
Coordinate Engineering activities and personnel and direct and approve expenditures as needed.

(3) John Peronti Title: Sr. Environmental Engineer
Cell Phone No.: (302) 463-7934 Office Phone: (302) 428-7422 Fax: (302) 428-7246
Home Phone: (302) 798-6936
Responsibilities:
Screen requests for new chemicals, help conduct inspections, coordinate spill response activities and address air issues.

(4) Chuck Stirk Title: Fire Chief
Cell phone No.: (302) 547-5046 Office Phone: (302) 428-7914 Fax: (302) 428-7246
Home Phone: (302) 328-8843
Responsibilities:
Coordinate fire response, fire system testing and maintenance and assist in spill response.

(5) Chris Riofski Title: Facility Area Manager
Cell Phone No.: (302) 293-5824 Office Phone: (302) 428-7186 Fax: (302) 428-7246
Responsibilities:
Coordinate facility personnel & maintenance activities and approve expenditures as needed.

E. Site Maps

Included in this plan are three maps. The first is the USGS topographic map (Wilmington South, DE - N.J. quadrangle) showing the location of the plant in relation to schools, hospitals, bodies of water, roads and railroads, etc. An 8 ½" by 11" copy of this map is on the next page. Please note, the indication of "Sewage Disposal" near our wastewater treatment facility is an error. The Delaware Geological Survey was notified of this error on December 14, 1998. They have sent a letter to Ms. Sally Brady of the U.S. Geological survey Mapping Application Center in Reston Virginia, dated 12/15/98, requesting this indication be removed before the next reprint of the map. As of 1/30/06, this map has not been updated to exclude that indication.

The second and third maps show all of the buildings at the facility, surface waters that receive storm water discharges (1) from the facility, major storm water piping, drainage and discharge structures, containment areas, areas of significant materials storage handled or used in processes, and drainage areas and associated ground cover, etc. Both maps are located in the front or back inside covers of this plan's three ring binder.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
75°37' 30"
39°45' 00"
4400000mN
4398
4397
4396
42' 30"
4395
100 000 METERS (N.J.)
55 000 METERS (N.J.)
MONTCHANIN 0.6 MI.
35' 00"
NEWARK (CIVIC CENTER) 8 MI.
Brookland Terrace
Prices Corner
ELSMERE
Lancaster Village
Richardson Park
Landenberg Jct
Belvedere
Silview
Newport
Simpson Cem.
Community Center
Picnic Area
BANNING PARK
Richardson Park Sch
Conrad Mid Sch
Baltz Sch
Corpus Christi Sch
Victory Ch
Simpson United Ch
Kingdom Hall
Richey Sch
Sewage Disposal
Amory
Biden Park
Radio Tower
CHRISTINA
RIVER
INTERCHANGE 5
BM 20
BM 56
BM 59
BM 25
Cem.
RR
OLD GRADE

F. Potential Pollutant Sources

Potential pollutant sources are listed in worksheet #2. These sources and activities are listed showing location, annual quantity used, range of typical quantities stored, exposure to rainfall, method of exposure or potential exposure, presence of containment and affected outfall. All tanks and the drum handling pad at this facility have some kind of secondary containment. Additionally, the whole plant is protected by a set of sluice gates about 200 feet prior to the outfall and three associated 100,000 gallon holding tanks that may be utilized upon discovery of any spills into the storm water collection system.

With over 500 people employed at this facility and the types of equipment needed to ship the product and supply the plant with parts, there is potential for vehicle leaks throughout the facility. The haul-away contractor is responsible for timely response to leaks associated with his equipment. Leaks from employee vehicles, vehicles that supply the plant with parts and material handling equipment are responded to as needed. Contractors are notified to remove any leaky equipment from the site or repair the equipment that is found to be leaking.

Worksheet #2A lists all identified storm water pollutant sources identified in Worksheet #2 and describes existing management practices that address those sources. Additionally, any new Best Management Practices (BMP's) that can be incorporated into the plan to address remaining levels of pollutants are listed in the third column of Worksheet #2A.

STORM WATER POLLUTION PREVENTION PLAN

MATERIAL INVENTORY
(Potential Pollutant Sources)

WORKSHEET #2

Facility Name: GM Wilmington Assembly Plant
Completed By: Jeffrey A. Holmes
Title: Sr. Environmental Engineer
Date of Last Revision: 5/14/08

MATERIAL / ACTIVITY	LOCATION	QUANTITY (UNITS) USED	QUANTITY (UNITS) STORED	QUANTITY (UNITS) PRODUCED	EXPOSED Y / N / P	METHOD OF EXPOSURE	CONTAIN -MENT Y / N	AFFECTED OUTFALL
1)Chemicals/Unloading	Receiving Docks	Over 100,000 Gallons/Yr.	N/A	N/A	N	Leaks	Y	001
2)Drummed Wastes	Drum Handling Pad	Over 200 Drums/Yr.	10 to 350 Drums	N/A	Y	Leaks	Y	001
3)Bulk Productive Fluids (Antifreeze, Gasoline, Power Steering Fluid)	Tank Farm	Over 50,000 Gallons/Yr.	10,000 to 136,000 Gallons	N/A	P	Spillage/Leaks	Y	001
4)Fuel Oil	Tank Farm	0 to 500,000 Gallons/Yr.	20,000 to 200,000 Gallons	N/A	P	Spillage/Leaks	Y	001
5)Elpo Wastewater	Outside FF31	Over 1,000,000 Gallons/Yr.	0 to 90,000 Gallons	N/A	Y	Leaks	Y	001
6)Paint Sludge	Behind Grit Building	Over 100 Tons/Yr.	0 to 130 Tons	N/A	P	Spillage/Leaks	Y	001
7)Scrap Metal	North of Plant	Over 250 Tons/Yr.	0 to 20 Tons	N/A	P	Direct Contact	Y	001
8)Car Carriers	Haul-Away Yard (East Lot)	Over 100 Trucks/Yr.	0 to 50 Trucks	N/A	Y	Spillage/Leaks	N	001
9)Material Storage Racks	North of Plant	Over 500 Racks/Yr.	0-500 Racks	N/A	Y	Direct Contact	N	001
10)Pipe/Angle Iron	Tank Farm	Over 5,000 Ft./Yr.	0 to 5,000 Ft.	N/A	Y	Direct Contact	N	001
11)Sanitary Sewer	East of Plant	Over 100,000 Gallons/Wk.	N/A	N/A	N	Spillage/Leaks	Y	001
12)Trash Containers	North of Plant	Over 250 Tubs/Yr.	0 to 10 Tubs	N/A	Y	Direct Contact	N	001
13)Concrete & Dirt	North of Plant	Over 10 Tons/Yr.	0 to 40 Tons	N/A	P	Direct Contact	N	001
14)Recyclable Material	North of Tire Bldg.	Over 10 Tons/Yr.	0 to 80 Tons	N/A	P	Direct Contact	N	001

STORM WATER POLLUTION PREVENTION PLAN POLLUTANT SOURCE IDENTIFICATION **Material Inventory - BMP**	**WORKSHEET #2A**
	Facility Name: GM Wilmington Assembly Plant
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

INSTRUCTIONS: List all identified storm water pollutant sources as identified in WORKSHEET #2 and describe existing management practices that address those sources. In the third column, list BMP options that can be incorporated into the plan to address remaining levels of pollutants.

Storm Water Pollutant Sources - Material / Activity	Existing Management Systems	Description of New BMP Options
1)Chemicals/Unloading	**Only trained material handlers unload chemicals. Spill equipment is maintained in area.**	**No new BMP options.**
2) Drummed Wastes	**Only trained material handlers handle drums. Spill equipment is maintained in area. Area contained.**	**No new BMP options.**
3)Bulk Productive Fluids	**Only trained material handlers handle bulk fluids. Spill equipment is maintained in area. Sluice gates available.**	**Twice per shift inspections/part of normal rounds.**
4)Fuel Oil	**Only trained material handlers unload fuel oil. Spill equipment is maintained in area. Sluice gates available.**	**No new BMP options.**
5)Elpo Wastewater	**Level detection and indication used along with containment around tank.**	**No new BMP options.**
6)Paint Sludge	**Only trained material handlers transfer paint sludge to rolloff containers. Tarps and containment utilized.**	**No new BMP options.**
7)Scrap Metal	**Covers and containers are utilized to minimize exposure to precipitation.**	**No new BMP options.**
8)Car Carriers	**Maintenance is performed as needed to prevent leaks. Absorbent is applied when needed.**	**No new BMP options.**
9)Material Storage Racks	**Only racks that cannot be stored inside the building are stored outside.**	**No new BMP options.**
10)Pipe/Angle Iron	**Covers are utilized to minimize exposure to precipitation.**	**No new BMP options.**
11)Sanitary Sewer	**Grease Traps are pumped out in a timely manner.**	**At least quarterly cleaning of key manholes.**
12)Trash Containers	**Containers are emptied and returned to origination point in a timely manner.**	**No new BMP options.**
13)Concrete & Dirt	**Covers are utilized to prevent solids from being to drain along with drains protected with filter fabric.**	**No new BMP options.**
14)Material for Recycling	**Material is stored in containers. Many containers have lids. Material is shipped in a timely manner.**	**No new BMP options.**

G. Spill History

Worksheet #3 lists the spills that have been: of a reportable quantity; reportable to an outside agency; come in contact with storm water; or had the potential to impact the plant's discharge prior to cleaning up the spill. In this worksheet, these spills and leaks are listed by year up to the third year prior to this plan date. Information contained in this sheet includes: date of spill or leak; designation of either spill or leak; location of incident; type of material; quantity; source if known; reason or cause; amount of material recovered; if material was exposed to storm water; and preventive measures instituted to prevent recurrence of incident.

Please note: at least some of the spills that may be listed on worksheet #3 do not fit the EPA definition of "significant spill". The EPA definition of a "significant spill" is: a release within a 24-hour period of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act and Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Reportable quantities are set amounts of substances in pounds, gallons, or other units and are listed in 40 CFR Part 117 and 40 CFR Part 302. This list is attached to the SPCC plan. The term "release" also has a specific definition that should be referenced and understood. The spill(s) is/are listed (if any) on worksheet #3 because they had the **potential** to impact the plant's discharge prior to being cleaned up.

STORM WATER POLLUTION PREVENTION PLAN LIST OF SIGNIFICANT SPILLS AND LEAKS	**WORKSHEET #3** **Facility Name: GM Wilmington Assembly Plant** **Completed By: Jeffrey A. Holmes** **Title: Sr. Environmental Engineer** **Date of Last Revision: 5/14/08**

Directions: Record below all significant spills and significant leaks of toxic or hazardous pollutants which have occurred at the facility in the last three years prior to the date of last revision (this includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities).

Current Year				Description				Response Procedures	Exposed to Storm Water	Preventive Measures
Date	Spill	Leak	Location	Type of Material	Quantity	Source, if Known	Reason	Amt. Matl. Recovered	Yes /No/NA	
None										

1st Year Prior				Description				Response Procedures	Exposed to Storm Water	Preventive Measures
Date	Spill	Leak	Location	Type of Material	Quantity	Source, if Known	Reason	Amt. Matl. Recovered	Yes /No/NA	
3/20/08	X	X	West Lot	Diesel Fuel	200 Gals.	Truck fuel line	Unknown	200 Gals.	Yes	Driver Banned

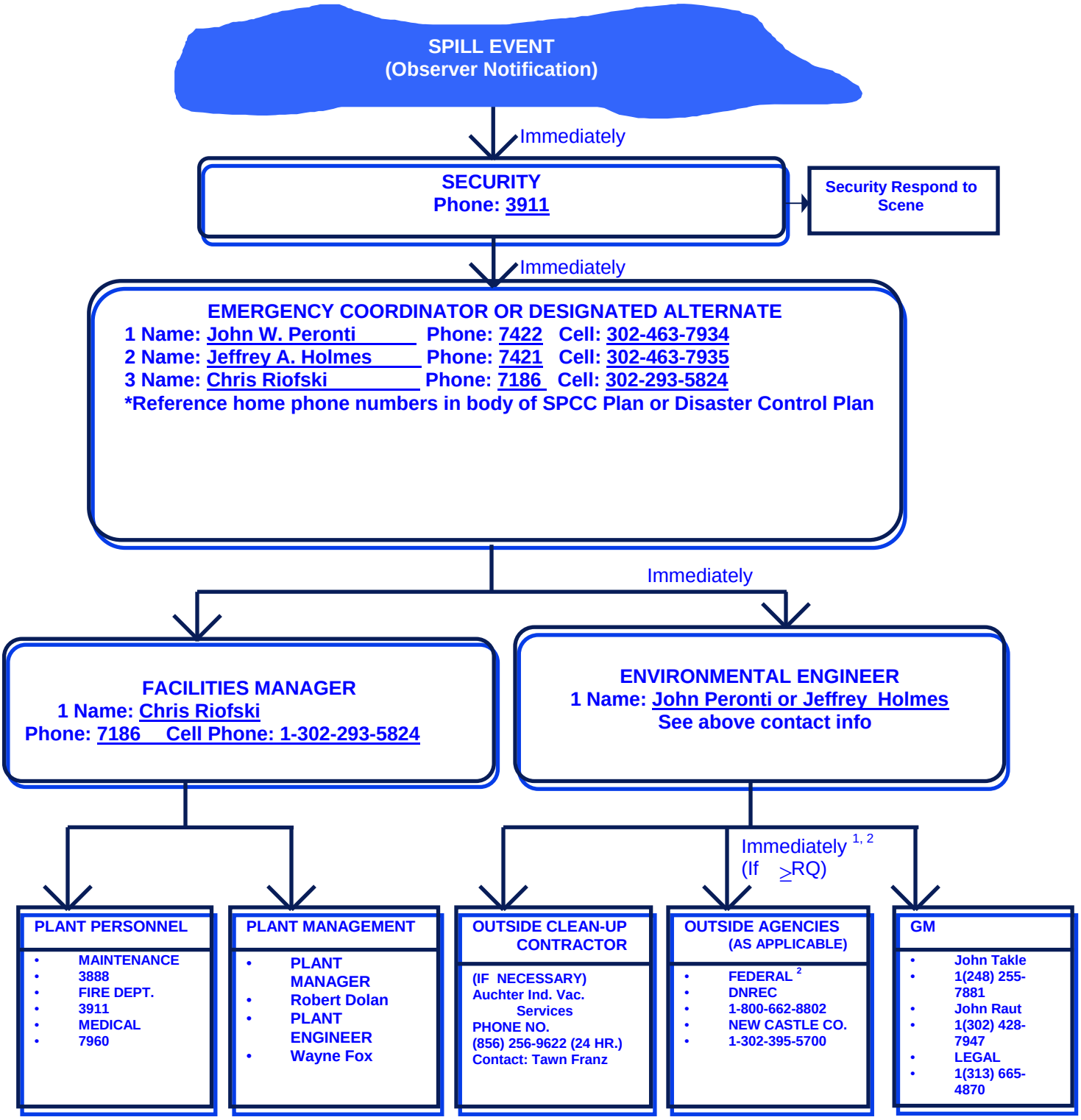
2nd & 3rd Year Prior				Description				Response Procedures	Exposed to Storm Water	Preventive Measures
Date	Spill	Leak	Location	Type of Material	Quantity	Source, if Known	Reason	Amt. Matl. Recovered	Yes /No/NA	
None										

H. Spill Notification Procedures

When a spill is identified, the first action to be taken is to call Security at 3911 and give as much information as possible about the spill such as: location, material involved, quantity of material and if anyone is hurt. Security has a copy of the plant's Spill Prevention Control and Countermeasure (SPCC) Plan which lists procedures, equipment and notification personnel in case of a spill. Within the SPCC plan is an internal notification flowchart (see next page) which lists names and phone numbers to be called in case of a spill.

The Environmental Section personnel (Environmental Engineer(s) or Manager(s)) will determine if any of the outside agencies need to be notified, and will make that notification. If Environmental Section personnel are unavailable to be contacted within 15 minutes, the Facilities Manager will determine if outside agencies need to be notified.

INTERNAL NOTIFICATION FLOWCHART



1. "Immediately" means as soon as possible but no later than 15 minutes of knowledge of spill.
2. Immediately call the National Response Center (1.800.424-8802) if potentially an RQ has been released to the environment. If the spilled material is oil or an oil mixture and reaches a navigable waterway causing discoloration or the formation of a sheen then the release must be reported **immediately** [Clean Water Act] to federal, state, and local officials.

I. Monitoring Program / Sampling Data

Routine storm water monitoring at this plant is dictated by the NPDES permit that is associated with the storm water discharge. Briefly, this consists of: continuous recording of flow; sampling and analysis once a week for pH; sampling and analysis once a month for total lead, oil & grease, BOD, hardness and Enterococcus in dry and wet weather; sampling once a quarter for zinc; and sampling and testing once every six months for toxicity in fat head minnows and water fleas.

Monthly results are submitted to the Delaware Department of Natural Resources and Environmental Control (DNREC) in the Discharge Monitoring Report (DMR). Copies of these reports are maintained in the Environmental Section of the plant engineering department. The quality of the discharge is very consistent due at least in part to the pumping of ground water out of two sumps around the Mod Paint building into the storm water system. This is done to prevent infiltration into the basement of that building.

Potential problems involved with this discharge include: Oil and Grease, which can be a potential problem with any parking lot the size of this plant's; and Enterococcus, which the source of appears to be off-site. General Motors continues to strive to improve the quality of its storm water discharge through BMP's and employee training.

J. Preventive Measures, Source Controls and Best Management Practices (BMP's)

Non-structural (procedural) and structural Best Management Practices are identified in Worksheet #4 and implementation of these are documented in Worksheet #4A. Most, if not all, of these practices are common sense practices that the plant has already implemented. Most of the implementation steps involve training, which is also mostly common sense and done as a regular part of the plant operations. Additional items include the presenting of the Storm Water Pollution Prevention Video over the plant monitors, the distribution of Water Environment Federation leaflets on nonpoint source pollution, and articles in the plant newsletter about storm water pollution prevention. These last items will make people working in the plant more aware of the consequences of their actions and their direct influence on water quality both at work and elsewhere.

Along with this plan that may be considered a response plan, the plant maintains both an SPCC plan along with a RCRA Contingency plan that address prevention and minimization of releases of oil or hazardous material into the storm water system.

Maintenance

This plant utilizes a preventive maintenance system (presently called "MAXIMO") to schedule inspections, preventive maintenance type activities and corrective actions for equipment within the plant including, but not limited to equipment that may have the potential to release pollutants to the storm water system as a result of failure or breakdown. This system identifies the qualified personnel (pipefitter, millwright, etc) to perform the work and keeps records of the work performed. Additionally, at any point in time, anyone in the plant can dial 3888 to initiate a response to a situation that needs attention from skilled trades personnel.

Although the system and general grounds are checked at least weekly, but usually daily, a schedule of inspections in order to prevent or correct any functional deficiencies of management devices or equipment used to control or prevent the transport of pollutants from the facility by storm water includes at a minimum: Monthly inspections of skimmers, booms and sluice gates.

STORM WATER POLLUTION PREVENTION PLAN BEST MANAGEMENT PRACTICES IDENTIFICATION	**WORKSHEET # 4**
	Facility Name: GM Wilmington Assembly Plant
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

Instructions: Describe the Best Management Practices you have selected to include in your plan. For each of the baseline BMP's, describe actions that will be incorporated into facility operations. Also describe any additional BMP's (activity-specific and site-specific) that you have selected. Attach additional sheets if necessary.

BMP's	**Brief Description of Activities**
Good Housekeeping	**Regular trash pick-up. Maintaining clean & dry floors & surfaces by sweeping & cleaning. Proper storage of materials. Timely response to minor spills from haul-away trucks in parking lot by haul-away contractor.**
Preventive Maintenance	**Regular inspections & maintenance of stormwater management devices. Utilization of a planned maintenance system to prevent equipment breakdown and leaks throughout the plant.**
Inspections	**The drum handling pad is inspected as required by the hazardous waste regulations. Routine inspections for conditions out of the ordinary are conducted by the security force in material storage areas including, but not limited to the wastewater treatment plant.**
Spill Prevention Response	**Spill response personnel and/or operators respond to any minor spills. Contractor's names and phone numbers are listed in the plant's SPCC plan to respond to large spills. Spill response equipment is located at key locations throughout the plant.**
Sediment and Erosion Control	**Any activities that have the potential to cause erosion or sedimentation problems are required to implement sediment and erosion control measures.**
Management of Runoff	**Runoff is directed to one concrete lined ditch where oil skimming is performed, flow is measured and samples taken prior to discharge through outfall 001.**
Additional BMP's (Activity- and Site-Specific)	

STORM WATER POLLUTION PREVENTION PLAN IMPLEMENTATION	WORKSHEET # 4A
	Facility Name: GM Wilmington Assembly Plant
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

Instructions: Develop a schedule for implementing each BMP. Provide a brief description of each BMP, the steps necessary to implement the BMP, the schedule for completing those steps, and the person(s) responsible for implementation

BMP	Description of Implementation Steps	Scheduled Completion Dates	Responsible Person	Notes
Good Housekeeping	1. Training of new employees 2. Training of current employees 3. Plant monitor showing of SWPPP video	**Ongoing** **Ongoing** **Ongoing**	**Each Department** **Each Department** **Jeffrey Holmes**	**Video shown during Winter month(s) Annually.**
Preventive Maintenance	1. Training of new employees 2. Training of current employees 3. Plant monitor showing of SWPPP video	**Ongoing** **Ongoing** **Ongoing**	**Each Department** **Each Department** **Jeffrey Holmes**	**Video shown during Winter month(s) Annually.**
Inspections	1.Training of new employees 2.Training of current employees 3. Plant monitor showing of SWPPP video	**Ongoing** **Ongoing** **Ongoing**	**Each Department** **Each Department** **Jeffrey Holmes**	**Video shown during Winter month(s) Annually.**
Spill Prevention, Response	1.Training of new employees 2.Training of current employees 3. Plant monitor showing of SWPPP video	**Ongoing** **Ongoing** **Ongoing**	**Each Department** **Each Department** **Jeffrey Holmes**	**Video shown during Winter month(s) Annually.**
Sediment and Erosion Control	1.Include requirements in bid packages 2.Verify requirements are met 3. Distribution of WEF leaflet	**Ongoing** **Ongoing** **Ongoing**	**All Engineers** **All Engineers** **Jeffrey Holmes**	**Video shown during Winter month(s) Annually.**
Management of Runoff	1.Implementation complete 2.Maintain current conditions	**Ongoing** **Ongoing**	**Civil/Environmental Engineer** **Civil/Environmental Engineer**	**SWPP Training also done with safety talks.**

STORM WATER POLLUTION PREVENTION PLAN EMPLOYEE TRAINING	**WORKSHEET # 4B**
	Facility Name: GM Wilmington Assembly Plant
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

Instructions: Describe the employee training program for your facility below. The program should, at a minimum, address spill prevention and response, good housekeeping and material management practices. Provide a schedule for the training program and list the employees who attend training sessions.

Training Topics	Brief Description of Training Program	Schedule	Attendees (Dept. Name)
Good Housekeeping	**On the job training from experienced individuals knowledgeable in the applicable area. SWPPP video shown and WEF leaflets distributed.**	**As needed and when directed by area advisor. At least annually.**	**All employees including housekeeping personnel.**
Preventive Maintenance	**On the job training from experienced individuals knowledgeable in the applicable piece of equipment.**	**As needed and when a new piece of equipment is installed.**	**All skilled trades and their supervisors.**
Inspections	**Training involves on the job direction from experienced individuals who have been formally trained or have years of applicable experience.**	**As needed when new employees are hired.**	**Wastewater treatment operators, security personnel, Env. Engrs.**
Spill Prevention Response	**Material Drivers trained as required by DOT. Employees receive hazcom training to respond to minor spills.**	**DOT training required every other year. Hazcom done as needed.**	**Material and employees using chemicals**
Sediment and Erosion Control	**Training completed as part of undergraduate work, continuing education and/or on the job training.**	**Completed. Additional training scheduled as needed.**	**Jeffrey A. Holmes**
Management of Runoff	**Training completed as part of undergraduate work and continuing education.**	**Completed. Additional training scheduled as needed.**	**Jeffrey A. Holmes**
Additional BMP's (Activity- and Site-Specific)			
Other Topics Drum Handling	**Drum Handling Procedure reviewed in Safety Talks and during hazard communication training.**	**Ongoing and part of hazard communication training.**	**All Departments as applicable**

K. Non-Storm Water Discharges

Worksheet #5 lists tests and evaluations of the storm water outfall, the methods of the evaluations and the results of the evaluations. Additionally, potential sources of non-storm water discharges are listed along with the name of the tester or evaluator.

Permissible non-storm water discharges that are combined with storm water discharges and have been identified in the permit application include the two ground water sumps near the Mod Paint building. Permissible non-storm water discharges that are combined with storm water discharges and have been identified in the NPDES permit application dated 6/27/2002) include: city water from the fire suppression system, drinking water fountains and groundwater.

The bottom of worksheet #5 is to certify that wastewater contributions to all outfalls have been evaluated and described for non-storm sources.

STORM WATER POLLUTION PREVENTION PLAN NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION	**WORKSHEET # 5**
	Facility Name: GM Wilmington Assembly Plant
	Completed By: Jeffrey A. Holmes
	Title: Sr. Environmental Engineer
	Date of Last Revision: 5/14/08

Date of Test / Evaluation	**Outfall No.**	**Test / Evaluation Method**	**Results (Describe)**	**Potential Sources**	**Name of Tester/Evaluator**
Jan. 1992	**001**	**Visual/Dye**	**Illicit connections were not found**	**Illicit connections, wash down areas.**	**Mr. Chris Candela, Clean Tech**

CERTIFICATION

I, Dennis G. Dougherty, Plant Manager, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name and Official Title (type or print) **Robert F. Dolan, Plant Manager (On Behalf of General Motors)**	B. Area Code and Telephone Number **(302) 428-7010**
C. Signature	D. Date Signed

L. SARA 313 Facilities

Section 313 of the Emergency Planning Community Right-to-Know Act (EPCRA)(Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986) requires operators of manufacturing facilities that handle toxic chemicals in amounts exceeding threshold levels (listed at 40 CFR 372.25) to report to the government on an annual basis. Since this plant exceeds threshold levels for some of these chemicals, it is subject to this regulation.

The following are additional requirements for facilities subject to SARA III Section 313 (Water Priority Chemicals):

Appropriate containment, drainage control and/or diversionary structures shall be provided in all areas where Water Priority Chemicals (WPCs) are stored, processed or otherwise handled. At a minimum, the appropriate preventive systems or its equivalent shall be used (an equivalent practice may be used if approved by the Department in writing for this purpose).

- Storage locations for Non-liquid WPCs shall have roofs, covers or other forms of appropriate protection to prevent exposure of storage piles to storm water and wind; and
- Storage locations for Liquid WPCs shall include secondary containment providing at least 110% of the entire contents of the largest single tank plus 6 inches to allow for precipitation.

Year 2007 Section 313 Reportable Chemicals (WPCs) at Wilmington Assembly:

1,2, 4-Trimethylbenzene, Benzene, Benzo (g,h,i) perylene, Ethylene Glycol, Certain Glycol Ethers, Methanol, n-Butyl Alcohol, Nitrate Compounds, Nitric Acid, Polycyclic aromatic compounds (PACs), Sodium Nitrite, Toluene, Xylene (mixed isomers), Zinc compounds.

Please note, these are all in mixtures.

Due to this plant's regulation under this part, this plan must be certified by a Registered Professional Engineer. Please see the next page for this certification.

L. (Cont'd) Registered PE Certification:

By means of this certification, the registered professional engineer, having examined the facility, attests that the Storm Water Pollution Prevention Plan has been prepared in accordance with good engineering practices. This certification shall in no way relieve the owner or operator of the facility covered by this plan of their duty to prepare and fully implement such plan.	
A. Name (Print) **Mark Sweeney, P. E.**	B. Area Code and Telephone No. **(302) 428-7414**
C. Signature	D. Date Signed

M. Salt Storage

Facilities that store salt for deicing purposes must have the pile covered to prevent contact with stormwater. Although this plant rarely maintains any significant storage of deicing salt, any salt that is stored is done so either in bags, under cover and/or inside to prevent contact with storm water. At times, contractor may utilize a temporary pile just to facilitate the transfer of salt from the incoming dump truck to the spreader truck, if or when this occurs, no pile is left on the ground overnight.

N. Plan Signature and Plan Review

Please see Section C for plan certification and signature by signatory authority.

This plan must be reviewed at least annually for updating of names and phone numbers and to ensure continued compliance with the requirements. If a spill occurs, the plan shall be updated as appropriate within 14 calendar days.

Every three years this plan must be certified by a registered Professional Engineer.

O. Plan Location / Distribution

This plan must be maintained on site and be available for review by the regulatory agency.

Since this plan is not combined with any other environmental response plan, it is not being submitted to local authorities.

The following is a list of who has this SWPPP, where it is located and the copy number assigned to it:

Original Copy #1 - Environmental Section of Plant Engineering

P. Permit

The NPDES permit that regulates this plant's storm water is located in the Environmental Section of Plant Engineering.