RMT INC.
RMT, Inc.
Suite 124
1406 East Washington Ave.
Madison, WI 53703-3009
Phone: 608-255-2134

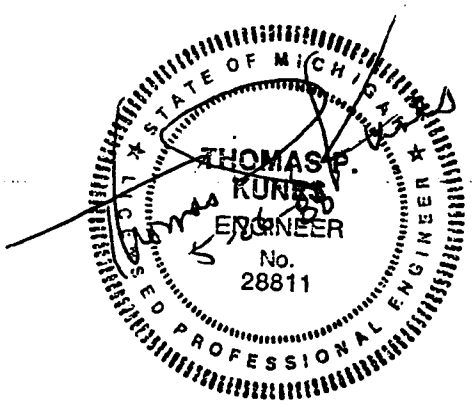
Great Lakes Office
325 S. Clinton Street
P.O. Box 447
Grand Ledge, MI 48837-0447
Phone: 517-627-4044

ADDENDUM TO CLOSURE PLAN FOR INTERIM STATUS PAINT STORAGE BUILDING DRUM STORAGE AREA

FOR

SAGINAW NODULAR IRON CASTING PLANT
GENERAL MOTORS CORPORATION
CENTRAL FOUNDRY DIVISION
SAGINAW, MICHIGAN

MAY 1988



Thomas P. Kunes, P.E.
President, Northern Region

Richard C. Krueger
Project Engineer

Thomas J. Jancek RCK
Thomas J. Jancek
Project Manager

Daniel E. Oman, P.E.
Manager of Engineering

1125.17 101:RTE:sagi0516

INTRODUCTION

This Addendum addresses items specified by the State of Michigan Department of Natural Resources (MDNR) concerning the December 1987 Closure Plan for Interim Status Paint Storage Building Drum Storage Area at the General Motors' Saginaw Nodular Iron Casting Plant in Saginaw, Michigan (MID 041793340). The items addressed in this Addendum were contained in a MDNR letter on April 28, 1988, to the SNI Plant.

The format used in the Addendum presents each comment made by the MDNR, followed by the SNI response.

Comment 1

Concrete samples should be at the entrance of the area and at the crack in the concrete. Also samples should be taken from around the outer perimeter of the storage area if unpaved.

Response 1

Upon clarification with the MDNR, the underlying soil below the concrete will be sampled rather than the concrete. Two samples will be collected of the underlying soil, and three samples will be collected of the perimeter soils in the unpaved areas.

One of the underlying soil samples will be collected near the entrance of the area, and one near the location of the crack.

The three perimeter soil samples will be collected near the mid-point of the northern edge, mid-point of the eastern edge, and mid-point of the southern edge of the concrete pad. The western edge of the pad is connected to a paved area.

The samples will be collected as described in the Closure Plan.

Comment 2

The closure plan must include a schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure.

Sample locations

Response 2

As stated in the Closure Plan, once GMC-CFD Saginaw Nodular Iron obtains MDNR approval of the Closure Plan, closure activities will be completed within 180 days or as amended by an extension. A closure schedule for the Drum Storage Area follows:

Closure Action	Time for Completion, Following Approval of Closure Plan (weeks)
1. Contract for closure work.	0-4
2. Off-site transport and disposal of remaining drums of waste.	4-6
3. Decontamination of concrete pad, and sample collection.	6-10
4. Sample analysis and data evaluation.	10-16
5. Preparation and submittal of Closure Documentation Report to MDNR.	16-26

Schedules for the other three RCRA waste management units are discussed in the individual Closure Plans.

Comment 3

The Health and Safety Plan outline on page 19 appears very thorough; however, the actual plan should be submitted prior to the start of closure activities.

Response 3

The Saginaw Nodular Iron Plant is in the process of developing a site-specific Health and Safety Plan for closure activities related to the paint storage building drum storage area. The Health and Safety

Plan will be submitted to the MDNR approximately four weeks prior to beginning on-site activities.

Comment 4

The expected analytical detection limits should be included.

Response 4

Aromatic volatile organics will be analyzed using USEPA SW-846 Method 8020. The method lists the following detection limits:

Parameter	Method Detection Limit (ug/L)
Benzene	0.2
Toluene	0.2
Xylenes	0.2

Non-halogenated volatile organics will be analyzed using USEPA SW-846 Method 8015. The method does not specify achievable detection limits. However, based on RMT experience, 100 ug/L is achievable for both methyl ethyl ketone and methyl isobutyl ketone.

The detection limits for the organics listed above are appropriate for compounds in reagent water, and may vary due to sample matrix interferences. Matrices may have the following practical quantitation limit factors:

Ground water	10
Low Level Soil	10
Water Miscible Liquid Waste	500
High Level Soil and Sludge	1250
Non Water Miscible Waste	1250

Soil samples will be digested using USEPA SW-846 Method 3050, and analyzed using the following methods:

Parameter	SW-846 Method	Instrument Detection Limit (ug/L)
Arsenic	7060	4
Barium	6010	2
Cadmium	6010	4
Chromium	6010	7
Copper	6010	6
Lead	6010	42
Mercury	7471	0.2
Selenium	7740	3
Silver	6010	7
Zinc	6010	2

Again, the detection limits are sample dependent, and may vary due to sample matrix interferences.

Comment 5

A statistical comparison for cleanup of potential organic contamination is inappropriate. Solvents are not naturally occurring, and should be removed to non-detectable levels not 1.5 times the background concentration.

Response 5

The soil sample statistical comparison and "clean closure" performance standards will include the following:

- Background soil samples will not be analyzed for organic solvents, because solvents are not naturally occurring.
- Background soil samples will be analyzed for total metal concentration (dry weight basis) using the list of metals presented in Response 4.
- Soil samples collected near the drum storage area will be analyzed for the metals listed in response 4, and statistically compared to background. Based on MDNR guidance, the comparison will use mean background values with an upper limit for delineating significant concentrations of "mean plus three standard deviations", rather than the originally proposed 99 percent confidence limit.

Proposed statistics: mean + 3SD.

- Soil samples collected near the drum storage area will also be analyzed for the organics listed in Response 4. Soils with detectable levels of organics will be managed as described in Response 7.

- Decontamination liquids will be collected and sampled for the organic contaminants listed in Response 4. If waste constituents (listed for toxicity) are detected, the liquid will be disposed at an Act 64 (RCRA-permitted TSD) facility. If listed waste constituents are not detected, the liquid will be disposed in the GMC wastewater treatment system, as described in the closure plan.

Comment 6

The EP-Toxic list metals should be run as a "total" analysis due to the presence of the pigments and dyes in the specialty lacquers.

Response 6

The list of EP-Toxic metals will be added to the analytical plan. The metals are listed in Response 4, and will be analyzed according to USEPA SW-846 Method 3050.

Comment 7

The closure plan must discuss soil removal procedures to be used if contamination is found. This should also include resampling techniques to verify all contamination has been removed.

Response 7

The closure plan is based on achieving "clean closure" of the drum storage area. The concrete pad will be decontaminated by steam-cleaning. Soil samples will then be collected beneath and adjacent to the drum storage area. If the "clean closure" sampling and analysis lab

results (Closure Plan, Section 6) indicate that contamination is present, additional soil samples will be collected in order to determine the extent of contamination. The additional sample locations will be within a ten-foot-wide circular area surrounding the drum storage pad. A minimum of four samples will be collected for each contaminated soil sample that was found during the previous "clean closure" sampling activity. Two of the four will be surface samples and two will be from the 1- to 2-foot depth. These samples will be analyzed for those specific parameters identified to be present above the "clean closure" background concentrations.

Metals

If metal constituents are the parameters of concern during the second sampling program, the laboratory results will be compared to the MDNR "Solid Waste Designation Guidelines," to determine which of the following classifications apply:

- Inert
- Inert for site-specific disposal
- Type III
- Hazardous Waste

Type III and hazardous waste soil will be removed and disposed appropriately.

Organics

The GMC-SNI Plant is an industrial facility with many production and waste management activities. Several of the organic chemicals

present is the drum storage area are known ingredients of automotive gasoline and diesel fuel. Due to the proximity of the drum storage area to areas with vehicular traffic, GMC-SNI believes that a detectable quantity of these organics may be present in the soil, but may not have originated from the drum storage area. Therefore, GMC-SNI proposes to evaluate the laboratory data, discuss the results with the MDNR, and determine the ultimate disposition of the soil based on the constituents of concern, concentrations present, toxicity, etc.

Decontamination liquids will be collected and sampled for the organic contaminants listed in Response 4. If waste constituents (listed for toxicity) are detected, the liquid will be disposed at an Act 64 (RCRA-permitted TSD) facility. If listed waste constituents are not detected, the liquid will be disposed in the GMC wastewater treatment system, as described in the closure plan.

Comment 8

There is some question on if the designated background areas have been unaffected by plant operations.

Response 8

In an industrial area, there are few locations which will be unaffected by all the industrial activities (e.g., air emission deposition) surrounding the proposed "background" sample locations. The background sample locations were selected in order to collect samples from areas that have not been affected by drum storage area operations or by specific use of the original materials.

Samples will be collected in an attempt to obtain soil horizons and soil types similar to those in the waste management area.