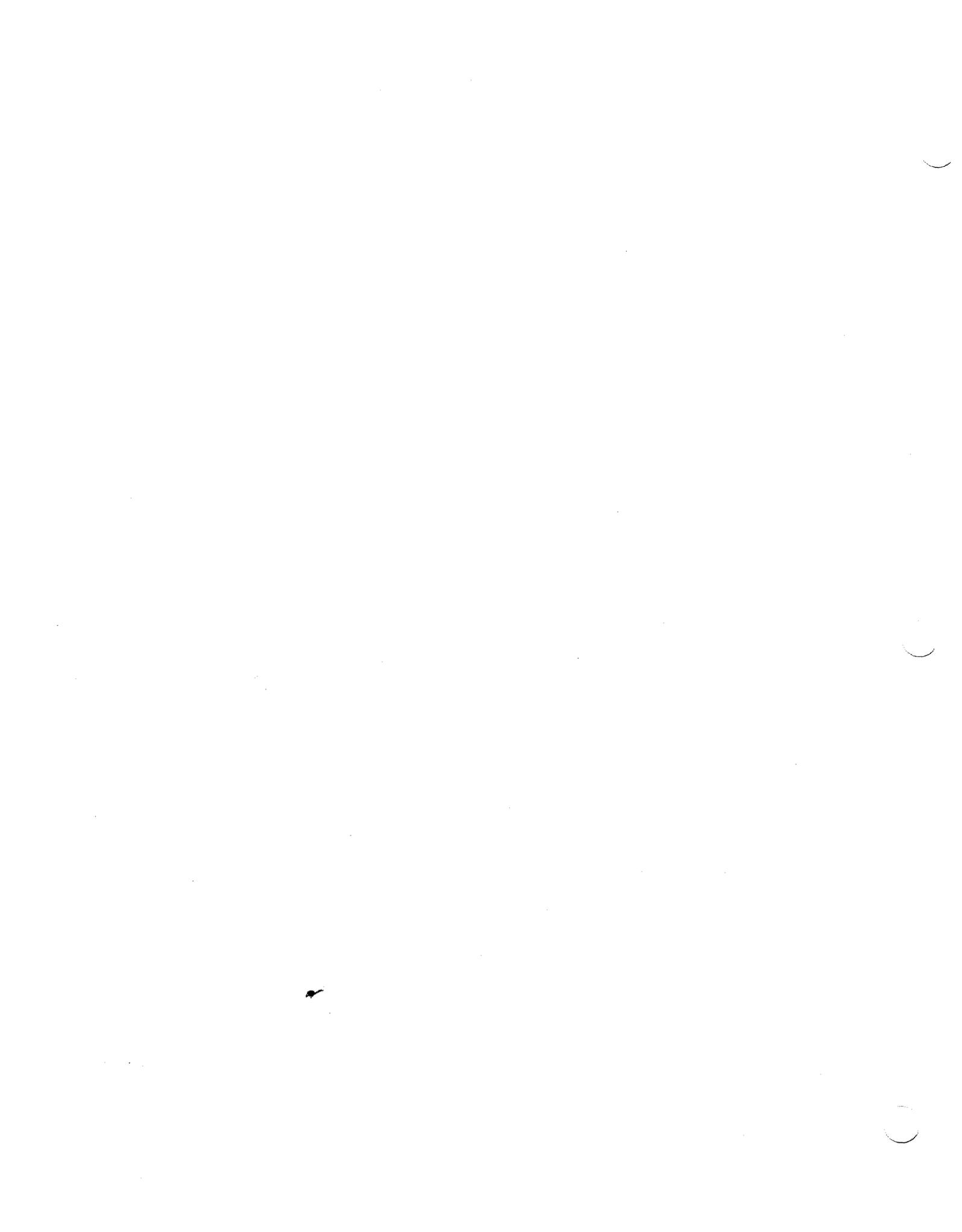


STATE IMPLEMENTATION PLAN
for the
CONTROL OF LEAD AIR POLLUTION

RSR Corporation,
Dallas County

1984



PREFACE

In response to the promulgation by the Environmental Protection Agency (EPA) of a new National Ambient Air Quality Standard (NAAQS) for lead on October 5, 1978, the Texas Air Control Board (TACB) adopted a proposed State Implementation Plan (SIP) for the Control of Lead Air Pollution on March 21, 1980. The plan was subsequently submitted by the Governor of Texas to EPA on June 12, 1980. On January 4, 1983, EPA proposed approval of the SIP for all areas of Texas except Dallas and El Paso.

Since 1980 the TACB has been involved with implementing the provisions of the plan, conducting special purpose monitoring and sponsoring air quality studies to identify areas and/or facilities where lead air pollution is a continuing problem. Within that time frame, the facilities initially evaluated for inclusion in the plan have effected numerous changes, and the TACB has accumulated considerable additional air quality data.

This revision to the SIP includes control measures to be implemented at the RSR Corporation smelter located at 2823 North Westmoreland, Dallas, Texas. The new controls are specified in Appendix C of the attached Agreed Court Order and the emissions reductions anticipated to result from these control measures are described in the attached Appendix G which is proposed for addition to the Lead SIP. These controls demonstrate attainment of the NAAQS for lead in the area of the RSR smelter.



APPENDIX G

Demonstration of Attainment of the National Ambient Air Quality Standard (NAAQS) For Lead In Areas To Which the Public Has Access Near the Smelter Operated by Murph Metals Incorporated in Dallas, Texas

Two exceedances of the NAAQS for lead (1.5 ug/m^3 quarterly average) were detected as a result of special purpose monitoring begun on March 18, 1982 in the vicinity of the Murph Metals Incorporated (Murph Metals) smelter. (Murph Metals is owned by RSR Corporation.) The demonstration of attainment of the lead NAAQS discussed below is based on predicted concentrations at all locations around the smelter to which the public has access.

The technical approach to the problem can be summarized as follows:

- (1) A lead emissions inventory was developed for stationary lead emission sources in the area of interest.
- (2) An appropriate computer model (Texas Climatological Model-Version 2B) and typical meteorological data from the National Weather Service's Love Field weather station (1961-1973 weather data were used to define typical quarterly meteorology) were used to predict the impact on ambient air of 1982 emissions from the smelter. The receptor grid chosen for the model provided for identification of property line ground-level concentrations and model options were selected to properly simulate plume behavior.
- (3) The 1982 and future impacts of mobile source lead emissions on ambient concentrations in the vicinity of the smelter were estimated.
- (4) The results of steps (2) and (3) were used to compare modeled predictions of ambient lead concentrations during the last three quarters of 1982 with values measured at nearby monitors during those quarters (monitoring data were not available for the first quarter of 1982) to determine whether the computer model required calibration to more accurately predict 1982 and future ambient concentrations.
- (5) Estimated emissions at maximum operating rates were modeled and the emission reductions necessary to demonstrate attainment of the lead NAAQS at locations off Murph Metals' property were determined.

Step (1) involved a detailed emission inventory analysis of the Murph Metals plant, including an estimate of fugitive emissions (see Tables 1-A and 1-B). These emissions were then computer modeled using Texas Climatological Model-Version 2B to determine the ambient air impact on the area near the smelter (Step 2) for each quarter of the year.

Step (3) consisted of estimating the impact of 1982 and future mobile source-related lead emissions in the area of the smelter using sampling data from the three nearby monitors operating during 1982 (see Figure III). Using a bromine tracer technique, concentrations of mobile source-related lead for the last three quarters of 1982 were estimated for each monitor location. Two of the monitoring sites, Toronto Street (SAROAD #1310058) and Boys Club (SAROAD #1310057) are located near the heavily-traveled intersection of Westmoreland Avenue and Singleton Boulevard and, as would be expected, both had higher 1982 quarterly mobile source-related lead concentrations than the third site, Lone Star Business Park (SAROAD #1310059). To be conservative in estimating the smelter area's 1982 mobile source-related background concentration, an average value (0.3 ug/m^3) was determined using only the quarterly concentrations measured at the sites nearest to the heavily-traveled intersection. Using 0.3 ug/m^3 for the 1982 background mobile source-related concentration, the background concentrations for future years were estimated by reducing the 1982 concentration proportionally with the expected reduction in urban light and heavy-duty vehicle lead emissions (Table II).

A comparison of predicted and measured non-gasoline lead values (total lead concentration minus that attributable to mobile sources) for 1982 (Step 4) revealed that the uncalibrated model was consistently underpredicting ambient concentrations in the vicinity of the smelter (Table III), so model calibration was deemed necessary. To calibrate the model, a linear regression analysis was performed to determine the relationship (slope of the regression equation) between the predicted and measured lead concentrations at the three nearby TACB monitoring sites for each of the last three quarters of 1982. The slopes obtained for each quarter's regression equation were then averaged together to determine the slope of the calibration equation corresponding to the average lead emissions occurring over the three-quarter period. The resulting slope was 2.3. Once calibrated, the model performed adequately in predicting concentrations close to the plant. To predict total lead concentrations for a given year, the predicted mobile source-related concentration (Table II) for the year of interest must be added to the result from the calibrated model.

Having determined appropriate values for average mobile source background concentrations, the next step (Step 5) was to use the Texas Climatological Model-Version 2B to predict the impact of smelter emissions on lead concentrations when the smelter is operating at

maximum capacity after additional controls have been implemented. Assuming different combinations of additional controls and using the model to predict the contribution from affected facilities on Murph Metals property, a set of controls was developed that demonstrated attainment with the lead NAAQS taking into consideration the expected background concentrations due to mobile source emissions. The analysis of possible controls focused on fugitive emission sources rather than stack emissions because the stacks, with the exception of the natural gas burner stacks, are already controlled with baghouses. Baghouses represent state-of-the-art particulate control technology. The natural gas burner stacks have negligible lead emissions and an insignificant ambient impact. Table IV lists the controls determined to be necessary to demonstrate attainment of the lead NAAQS in all areas outside Murph Metals property. Table V presents estimated emissions of the Murph Metals plant at maximum capacity before and after additional controls are implemented (see Table I-B for basis of calculations). Assuming that the controls listed in Table IV are applied, the maximum predicted total lead concentration in public access areas after June 1984 is 1.27 ug/m^3 , of which 1.06 ug/m^3 is from the smelter and an estimated 0.21 ug/m^3 is from mobile source-related lead emissions. Table VI lists, for each quarter, the maximum predicted ambient concentration and its location, assuming the controls listed in Table IV are applied.

In addition to routine plant emissions, the Murph Metals plant also has a past record of upset conditions. The TACB staff has reviewed recent upset records and has concluded that a major furnace upset occurs in the plant's smelter building on an average of less than once per quarter. One such upset occurred May 29, 1982 when monitoring data were being collected. The downwind monitors on that day were the Boys Club site and the Toronto Street site, with the Boys Club site impacted the most. Including the sample taken at the Boys Club for the upset day in the quarterly lead average, the average lead concentration for the second quarter of 1982 was 0.7 ug/m^3 higher than it would be if that day were excluded. The new controls including the significant reduction in building openings during normal operation and the closing of all smelter building openings during upset episodes (when negative pressure fails) will reduce the upset emissions, and therefore, their subsequent ambient air impact, by at least 99% due to virtually complete elimination of natural air flow through the smelter building. Assuming that a major upset would contribute 0.7 ug/m^3 to the quarterly average concentration based upon controls in effect during 1982 it can be concluded that future major upsets would increase the quarterly average, at most, by only 0.01 ug/m^3 at any location off the smelter property. Therefore, future plant upsets are not expected to have a significant effect on attainment of the lead standard.

In summary, review by the TACB staff revealed that additional controls applied to the Murph Metals smelter and expected reductions in mobile-source lead emissions should provide for attainment of the lead NAAQS after June, 1984. Because the reduction in ambient lead concentrations is expected to result from improved control of smelter fugitive lead emissions which are very difficult to accurately quantify, continued ambient monitoring for lead concentrations in the Dallas area will be valuable for some time after the required measures are implemented to verify attainment of the NAAQS.

TABLE I-A

ESTIMATED 1982 MURPH METALS LEAD EMISSIONS

<u>Source Description</u>	<u>Applicable Emission Point Number</u>	<u>1982 Lead Emissions (tons/year)</u>
Stacks and Vents:		
Main Stack	1	17.651
Baghouse Stack for Batch House	7	0.020
Baghouse Stack for Batch House	8	0.020
Baghouse Stack for Battery Wrecker Building Drying Kiln	38	0.013
Baghouse Stack for Hard Lead Refinery	46	0.004
Baghouse Stack for Blast Furnace Enclosure	47	0.124
Baghouse Stack for Reverberatory Furnace II Charging/Tapping Enclosures	48	0.400
Natural Gas Burner Vents at the Smelter Building	14 through 18	0.013 (total) (0.0025 each)
Natural Gas Burner Vent at the Smelter Building	19	0.013
Natural Gas Burner Vents at the Rolling Mill Building	26 and 27	<< 0.001 (total) (0.00005 each)
Natural Gas Burner Vents at the Fabrication Building	28 through 37	0.001 (total) (0.00005 each)
Natural Gas Burner Vent at the Lead Shot Building	45	<< 0.001
Fugitive Sources:		
Smelter Building Fugitives		0.664
Batch House Fugitives		0.106
Battery Wrecker Building Fugitives		0.410

TABLE I-A
 ESTIMATED 1982 MURPH METALS LEAD EMISSIONS
 Page 2

<u>Source Description</u>	<u>Applicable Emission Point Number</u>	<u>1982 Lead Emissions (tons/year)</u>
Fugitive Sources (Continued):		
Fabrication Building Fugitives		0.025
Rolling Mill Building Fugitives		0.009
Lead Shot Building Fugitives		0.0115
Plant Grounds Fugitives:		
(a) Storage Pile South of Battery Wrecker Building (Area A in Figure I)		0.094
(b) Unpaved/Construction Material Area South of Battery Wrecker Building (Area B in Figure I)		0.077
(c) Storage Pile East of Battery Wrecker Building (Area C in Figure I)		0.276
(d) Unpaved/Construction Material and Vehicle Area North of Batch House (Site 1-A in Figure II)		0.047
(e) Unpaved Embankment at Mill Pond		0.030
(f) Railroad Spur South of Smelter Building		0.012
(g) Paved Roads		0.087
(h) Main Paved Parking Lot		0.022
(i) Paved Fabrication Area Parking Lot		<u>0.007</u>
PLANT TOTAL		19.369

TABLE 1-B

SUMMARY OF THE BASIS FOR THE LEAD EMISSIONS
INVENTORY FOR MURPH METALS INCORPORATED

To calculate 1982 emissions (Table 1-A) and emissions at maximum operating capacity (Table V) the following assumptions were made:

1. The 1980 and 1982 hourly (short-term) production rates for each smelting furnace were assumed to be the same whenever a furnace was operating. Hourly production schedules were determined from the 1980 Emissions Inventory Questionnaire (EIQ) submitted to the TACB by Murph Metals representatives. Average annual production rates for these furnaces for 1982 were calculated based on the actual number of hours of operation as a percent of the number of hours of operation during 1980. Maximum annual furnace production rates were obtained from data presented in the 1980 EIQ. (Murph Metals has requested that production data be held confidential).
2. The production rates for other plant processes were assumed to be directly proportional to the amount of the crude lead produced by the smelting furnaces.
3. The highest value of the range of worker exposure lead concentrations (as provided by Murph Metals representatives) for each plant building was assumed to be representative of the average lead concentration inside the building whenever the building was in operation.

Stack and Vent Emissions

Stack and vent emissions of lead were derived from the best available information. Stack emission estimates for 1982 were based on worker exposure lead concentrations inside buildings and particulate emission factors published in the following documents.

1. Compilation of Air Pollutant Emission Factors (including Supplements 1-13), EPA publication AP-42, and
2. Emissions and Emission Controls at a Secondary Lead Smelter, prepared by Radian Corporation for the EPA, Radian document 81-201-010-13 (EPA Contract 68-03-2807), January 1981.

Although the modeling analysis using estimated 1982 emissions showed that fugitive emissions occurring near ground level were the primary contributors to lead concentrations around the smelter, it was decided to establish emission limitations on the stacks to ensure that they continued to make only a minor contribution to ambient lead concentrations. In the absence of stack sampling results, except for a single 1979 stack sampling report for the main stack, emission limitations were set at values that (1) were at the higher end of the range of

values that could be expected with existing control equipment, and (2) were low enough to ensure a very low ambient impact. The resulting enforceable limitations are, therefore, higher than the best estimate of what the stack emissions actually were in 1982. The grain loadings used were derived from the following:

1. Stack test data for particulate and lead emissions for the same or similar processes at other plants.
2. New Source Performance Standards for particulate emissions adjusted for weight percent lead in baghouse dust.

Fugitive Emissions

Fugitive lead emissions from plant grounds were derived from particulate emission factors and control efficiencies published in the following documents:

1. Iron and Steel Plant Open Source Fugitive Emission Evaluation, EPA document EPA-600-2-79-103, 1979, and
2. Workbook on Estimation of Emissions and Dispersion Modeling for Fugitive Particulate Sources, prepared by Environmental Research and Technology, Inc. (ERT) document P-A857, September 1981.

After total particulate emissions were calculated for the plant grounds, lead emissions from these sources were estimated based on the lead content of dust samples taken by the TACB at the specific emission source or at a source very similar in nature. Unvegetated, unpaved areas were treated as low-profile storage piles with respect to wind erosion and/or vehicular activity. Emissions from paved areas were calculated by first determining the emissions for an unpaved trafficway and then applying control efficiencies as appropriate to include the effect of paving; water sprinkling, and vehicle washing.

Fugitive emissions from building openings were calculated using worker exposure lead concentrations and a published technique for estimating the natural air flow rate through buildings (1977 Fundamentals Handbook, American Society of Heating, Refrigeration, and Air-Conditioning Engineers).

TABLE II
 VEHICLE LEAD EMISSIONS AND
 PREDICTED CONCENTRATIONS
 NEAR THE MURPH METALS SMELTER

<u>Year</u>	Dallas Area Urban Light and Heavy-duty Vehicle <u>Lead Emissions (Tons)</u>	Mobile Source-Related Lead Concentrations Near Murph Metals <u>(ug/m³)</u>
1982	348.5	0.30 (M)
1983	288.2	0.25 (E)
1984	242.0	0.21 (E)
1985	213.3	0.18 (E)

- (M) - Measured average value using the bromine tracer technique.
- (E) - Estimated value assuming ambient mobile source-related lead concentrations are proportional to estimated Dallas area urban light and heavy-duty vehicle lead emissions using 1982 as the base year.

TABLE III
 PREDICTED AND MONITORED NON-GASOLINE
 LEAD CONCENTRATIONS FOR 1982

<u>Quarter</u>	<u>Monitor</u>	<u>Predicted Impact of Non-Gasoline Sources (ug/m³)</u>	<u>Monitored Non-Gasolin Concentration (ug/m³)</u>
2nd Quarter	Boys Club	0.80	2.65
	Toronto Street	0.44	1.26
	Lone Star	0.08	0.80
3rd Quarter	Boys Club	0.85	1.55
	Toronto Street	0.46	0.86
	Lone Star	0.05	0.13
4th Quarter	Boys Club	0.68	0.86
	Toronto Street	0.41	0.72
	Lone Star	0.20	0.09

TABLE IV

ADDITIONAL CONTROL AND EMISSION LIMITATIONS REQUIRED AT THE
MURPH METALS INCORPORATED SMELTER TO DEMONSTRATE ATTAINMENT OF
THE LEAD NAAQS IN ALL PUBLIC ACCESS AREAS

1. Increase the stack height for the referenced stacks to the following heights:

<u>Emission Point</u>	<u>Description</u>	<u>Stack Height (feet)</u>
7	Batch House Baghouse	100
8	Batch House Baghouse	100
38	Battery Wrecker Kiln Baghouse	65

These stacks are already well controlled through use of baghouses, but higher stacks will reduce the impact of their emissions in the vicinity of the smelter, particularly if a bag tears in the baghouse.

2. Limitation of lead emissions from stacks at the smelter to values at the higher end of the range of values that could be expected for existing baghouse exhausts. These values are low enough to ensure very low ambient impacts. Limitations will be as follows:

<u>Emission Point</u>	<u>Description</u>	<u>Emission Limit (lb/hr)</u>	<u>Allowable Grain Loading (Gr/dscf)</u>
1	All Sanitary Baghouses for Smelter Building	0.8	0.015*
	Reverberatory Furnace No. 1	5.2	
	Reverberatory Furnace No. 2	5.2	
	Blast Furnace	2.5	
7	Batch House Baghouse	0.26	0.001
8	Batch House Baghouse	0.26	0.001
38	Battery Wrecker Kiln Baghouse	0.21	0.005

*For any combination of processes ducting their exhaust to the main stack (emission point 1).

3. Ducting of all smelter building baghouse emissions to the 300-foot main stack. Emitting these baghouse exhausts at a much higher point will reduce the impact of their emissions in the vicinity of the smelter.
4. Ducting of process offgases from the agglomeration furnace to a baghouse and then to the main stack.

5. Construction and maintenance of truck wheel washes to be used on each vehicle that leaves the smelter building, batch house, or battery wrecker building so as to remove lead-bearing materials from vehicle wheels. Such washing will not be required during periods of freezing weather. The location of these wheel washes is shown on Figure IV. This control measure will reduce fugitive emissions from paved areas by 0.062 tons per year.
6. Prohibition of outdoor storage of lead bearing materials, except for the following:
 - a. lead and lead alloys in ingot form
 - b. fabricated lead and lead alloy materials
 - c. lead shot
 - d. lead-bearing material in enclosed containers
 - e. whole unbroken batteries.

This control measure will be implemented in conjunction with the control measures described in paragraph 7 below.

7. Covering of areas designated in Figure I as Areas A, B, and C with pavement, three inches of crushed aggregate, or vegetation. This measure will reduce fugitive emissions from these unpaved areas by 0.694 tons per year.
8. Covering of the area designated as Site I-A in Figure II with pavement or three inches of crushed aggregate. This control measure will reduce fugitive emissions from this unpaved area by 0.075 tons per year.

Covering of the areas designated in Figure I (control measure 7) and Figure II (control measure 8) will reduce fugitive emissions from paved areas by 0.021 tons per year due to reduced loading of paved areas with lead particulate matter.

9. Covering of all transport vehicles, other than those carrying non lead-bearing materials or those carrying materials listed in paragraph 6 above, with tarpaulins at all times except when loading or unloading. In lieu of covering such transport vehicles when not in use, such vehicles may have their cargo compartments washed down prior to storage so that lead-bearing materials will be removed and recycled. Transportation of lead-bearing feed stocks in closed compartments or containers will not be subject to these requirements. This control measure will reduce fugitive emissions from paved areas by 0.031 tons per year due to reduced spillage of lead-bearing particulate matter on paved areas and reduced emissions during transport.

10. Maintenance of negative pressure within the smelter building and batch house during all periods of operation except when all openings to the buildings are closed with solid doors. The negative pressure will be such that the minimum velocity of air into the buildings at any point across any opening is 100 feet per minute in the smelter building and 150 feet per minute in the batch house, as measured by a Sierra Instruments Model 440 heated probe anemometer or equivalent monitoring device. This control measure is expected to reduce fugitive emissions from the smelter building by 1.174 tons per year and fugitive emissions from the batch house by 0.185 tons per year. In addition, negative pressure on these buildings will reduce loading of paved surfaces with lead particulate matter, thereby reducing emissions from paved surfaces by an estimated 0.021 tons per year.

To enforce the requirement for negative pressure, Murph Metals will install and maintain continuous monitoring, recording, and alarm systems, acceptable to the Executive Director of the Texas Air Control Board, which will measure the flow of air into both the smelter building and batch house. The smelter building will be monitored (a) across the 17-foot by 12-foot opening located on the north side of the building which is required to be equipped with two hanging plastic curtains and (b) at any point in the southwest corner of the building between the 18-foot by 10-foot solid door and the 10-foot by 10-foot solid door, both of which are located on the south side of the building. The batch house will be monitored across the two openings located on the north side of the building, each required to be equipped with two hanging plastic curtains: (a) a 12-foot by 14-foot opening and (b) a 21-foot by 23-foot opening. These systems will include an alarm designed to alert plant personnel immediately if negative pressure drops below 150 feet per minute into the smelter building or below 200 feet per minute into the batch house.

In addition to the monitoring systems, a prohibition of visible emissions, other than water vapor condensation, from any opening on the smelter building or batch house will serve as an additional enforcement tool to ensure negative pressure.

11. Direct loading of lead paste from the drying kiln in the battery wrecker building to transport vehicles or containers which will be covered or enclosed prior to leaving the building. This control measure is expected to reduce fugitive emissions from this building by 0.134 tons per year. In addition, this measure will reduce paved surface emissions by 0.007 tons per year due to reduced loading of paved areas with lead particulate matter.

12. Wetting of the work areas within the battery wrecker building as shown in Figure V as well as wetting all piles of crushed or shredded material within the battery wrecker building at least once per day. Such wetting will not be required during periods of freezing weather or when the battery wrecker process is not operational. This control measure will reduce fugitive emissions from the building by 0.111 tons per year. In addition, wetting of work areas will reduce emissions from paved areas by 0.006 tons per year due to the reduced loading of paved areas with lead particulate matter.

13. Closure of the battery wrecker building openings such that the only wall openings allowed will be:
 - a. A vehicular door on the south side of the building with an exterior opening of not more than 250 square feet. The doorway will be covered with two hanging curtains at least 4 feet apart.
 - b. A vehicular door on the north side of the building with an exterior opening of not more than 225 square feet. The doorway will be covered with two hanging curtains at least 4 feet apart.
 - c. Doorways for ingress and egress. All such doorways will be equipped with a solid door and will be opened only for ingress and egress.
 - d. An opening along the bottom of the west side of the building limited to not more than 73 square feet in area and covered with a hanging curtain.
 - e. Openings for conveyors on the west side of the building which will total not more than 342 square feet in area and each be covered with a hanging curtain.
 - f. Three doorways for the unloading of materials on the east side of the building, consisting of one 264-square foot doorway and two 100-square foot doorways. Each such doorway will have at least one hanging curtain and a closeable solid door or tarpaulin. These doorways will be opened only for actual unloading activities and only one doorway will be opened at any one time. Trucks will be unloaded through the 264-square foot doorway only by using the mechanical truck dumper.

All curtains specified for doorways and openings in items a through f of this paragraph will consist of overlapping plastic strips at least 100 mils thick extending from the top of the opening to within 3 inches or less of the bottom of the opening to form an effective barrier to air flow. The benefit of closing the openings in this building will be to allow larger lead particles to settle out inside the building due to reduced air flow through the building. The reduction in fugitive lead emissions from the building due to building closure is estimated to be 0.292 tons per year. The reduction in fugitive emissions from paved areas due to this building's closure is estimated to be 0.017 tons per year.

TABLE V
ESTIMATED FUTURE MURPH METALS LEAD EMISSIONS AT MAXIMUM PLANT CAPACITY

<u>Source Description</u>	<u>Applicable Emission Point Number</u>	<u>Applicable Control Listed in Table IV</u>	<u>Lead Emissions Without Additional Controls (tons/year)</u>	<u>Lead Emissions With Additional Controls (tons/year)</u>
Stacks and Vents:				
Main Stack	1	2	58.120(1)	60.006(1)
Baghouse Stack for Batch House	7	1, 2	1.139(1)	1.139(1)
Baghouse Stack for Batch House	8	1, 2	1.139(1)	1.139(1)
Baghouse Stack for Battery Wrecker Building Drying Kiln	38	1, 2	0.920(1)	0.920(1)
Baghouse Stack for Hard Lead Refinery	46	3	1.164(1)	0.000(1)
Baghouse Stack for Blast Furnace Enclosure	47	3	0.330(1)	0.000(1)
Baghouse Stack for Reverberatory Furnace II Charging/Tapping Enclosures	48	3	0.392(1)	0.000(1)
Natural Gas Burner Vents for the Smelter Building	14 through 18		0.024 (total) (0.0049 each)	0.037 (total) (0.0073 each)
Natural Gas Burner Vent for the Smelter Building	19		0.019	0.028

TABLE V
 ESTIMATED FUTURE MURPH METALS LEAD EMISSIONS AT MAXIMUM PLANT CAPACITY
 Page - 2

<u>Source Description</u>	<u>Applicable Emission Point Number</u>	<u>Applicable Control Listed in Table IV</u>	<u>Lead Emissions Without Additional Controls (tons/year)</u>	<u>Lead Emissions With Additional Controls (tons/year)</u>
Natural Gas Burner Vents for the Rolling Mill Building	26 and 27		<< 0.001 (total) (0.00009 each)	<< 0.001 (total) (0.00009 each)
Natural Gas Burner Vents for the Fabrication Building	28 through 37		0.001 (total) (0.00009 each)	0.001 (total) (0.00009 each)
Natural Gas Burner Vent for the Lead Shot Building	45		<< 0.001	<< 0.001
STACKS AND VENTS SUBTOTAL			63.248	63.270
Fugitive Sources:				
Smelter Building Fugitives		10	1.175	0.001
Batch House Fugitives		10	0.187	0.002
Battery Wrecker Building Fugitives		11, 12, 13	0.737	0.200
Fabrication Building Fugitives			0.043	0.043
Rolling Mill Building Fugitives			0.016	0.016
Lead Shot Building			0.027	0.027
Plant Grounds Fugitives:				
(a) Storage Pile South of Battery Wrecker Building (Area A in Figure I)		6, 7	0.167	0.033

TABLE V
ESTIMATED FUTURE MURPH METALS LEAD EMISSIONS AT MAXIMUM PLANT CAPACITY
Page - 3

<u>Source Description</u>	<u>Applicable Emission Point Number</u>	<u>Applicable Control Listed in Table IV</u>	<u>Lead Emissions Without Additional Controls (tons/year)</u>	<u>Lead Emissions With Additional Controls (tons/year)</u>
Plant Grounds Fugitives: (continued)				
(b) Unpaved/Construction Material Area South of Battery Wrecker Building (Area B in Figure I)		7	0.136	0.014
(c) Storage Pile East of Batter Wrecker Building (Area C in Figure I)		6, 7	0.487	0.049
(d) Unpaved/Construction Material and Vehicle Area North of Batch House (Site 1-A in Figure II)		8	0.083	0.008
(e) Unpaved Embankment at Mill Pond			0.054	0.054
(f) Railroad Spur South of Smelter Building			0.021	0.021
(g) Paved Roads		5, 7 through 13	0.156	0.031
(h) Main Paved Parking Lot		5, 7 through 13	0.038	0.008
(i) Paved Fabrication Area Parking Lot		5, 7 through 13	<u>0.013</u>	<u>0.003</u>
FUGITIVE SOURCES SUBTOTAL			3.340	0.510
PLANT TOTAL			66.588	63.780

(1) Emission rates for these stacks are based on the all the short-term emission rate (lb/hr) from the Control Order

TABLE VI
 SUMMARY OF PREDICTED MAXIMUM AMBIENT AIR QUARTERLY
 LEAD CONCENTRATIONS AFTER ADDITIONAL CONTROLS ARE IMPLEMENTED

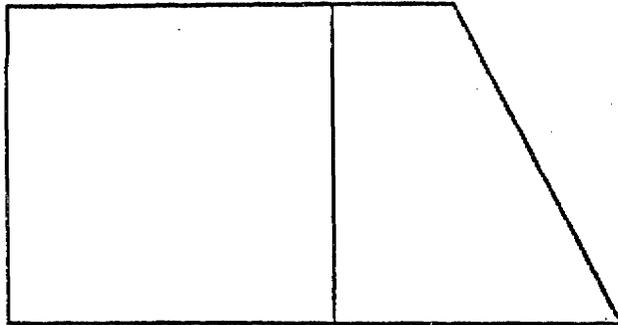
<u>Quarter</u>	<u>Smelter Contribution (ug/m³)</u>	<u>Mobile Source-Related Background Value (ug/m³)</u>	<u>Total (ug/m³)(3)</u>
1984:			
3rd	1.06	0.21(1)	1.27
4th	0.86	0.21(1)	1.07
1985 and after:			
1st	0.70	0.18(2)	0.88
2nd	1.01	0.18(2)	1.19
3rd	1.06	0.18(2)	1.24
4th	0.86	0.18(2)	1.04

(1) Using the 1984 predicted mobile source-related background value of 0.21 ug/m³.

(2) Using the 1985 predicted mobile source-related background value of 0.18 ug/m³.

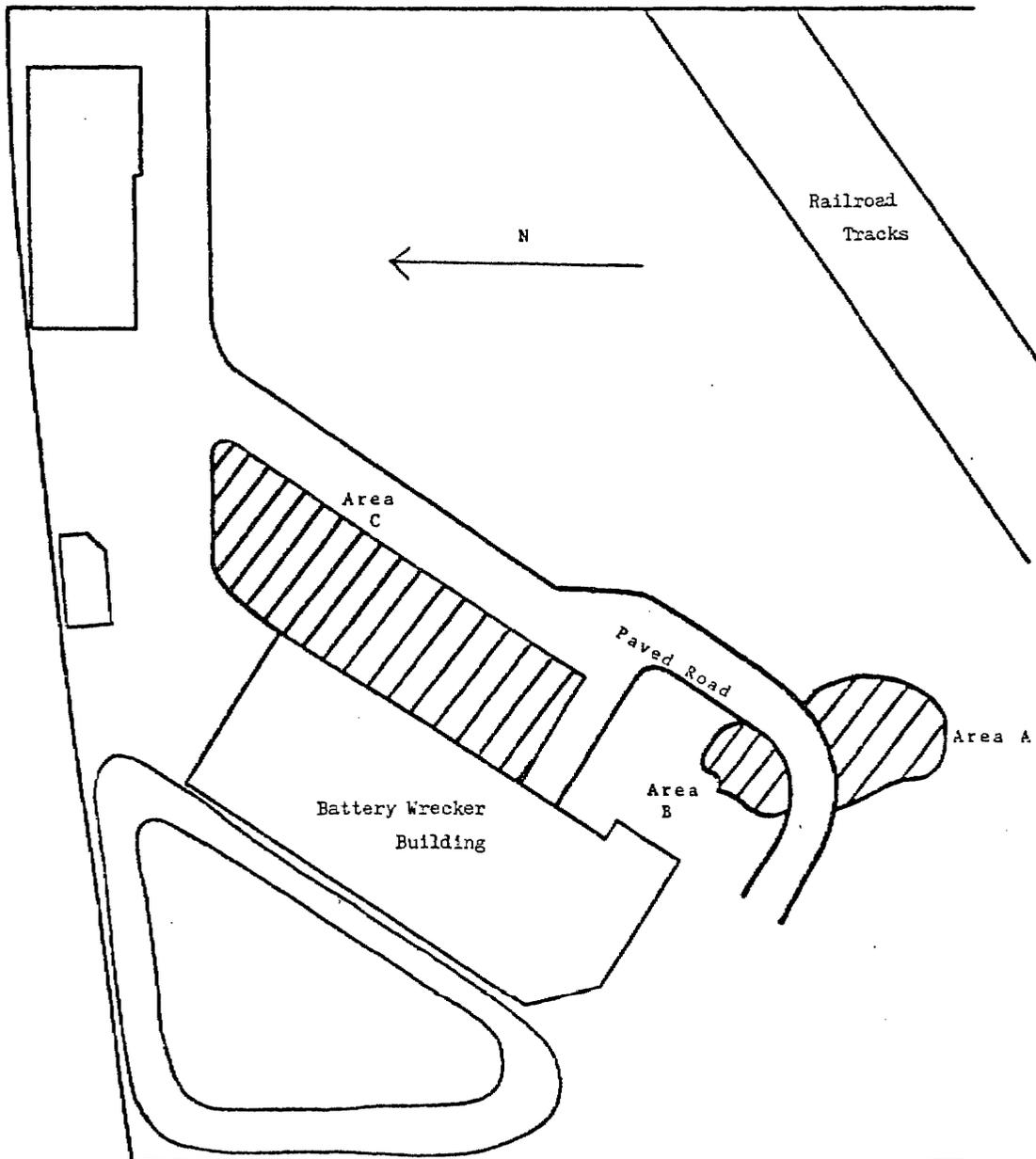
(3) The location of the maximum concentration is the same for each quarter: 0.4 km west of the main stack just north of the battery wrecker building. The main stack is emission point 1 located at UTM Coordinates 699.27E, 3628.45N.

FIGURE I
AREAS TO BE COVERED IN THE
VICINITY OF THE BATTERY WRECKER BUILDING



Note: Cross-hatched areas are unpaved, unvegetated areas which need to be paved, covered with three inches of crushed aggregate, or vegetated.

Westmoreland



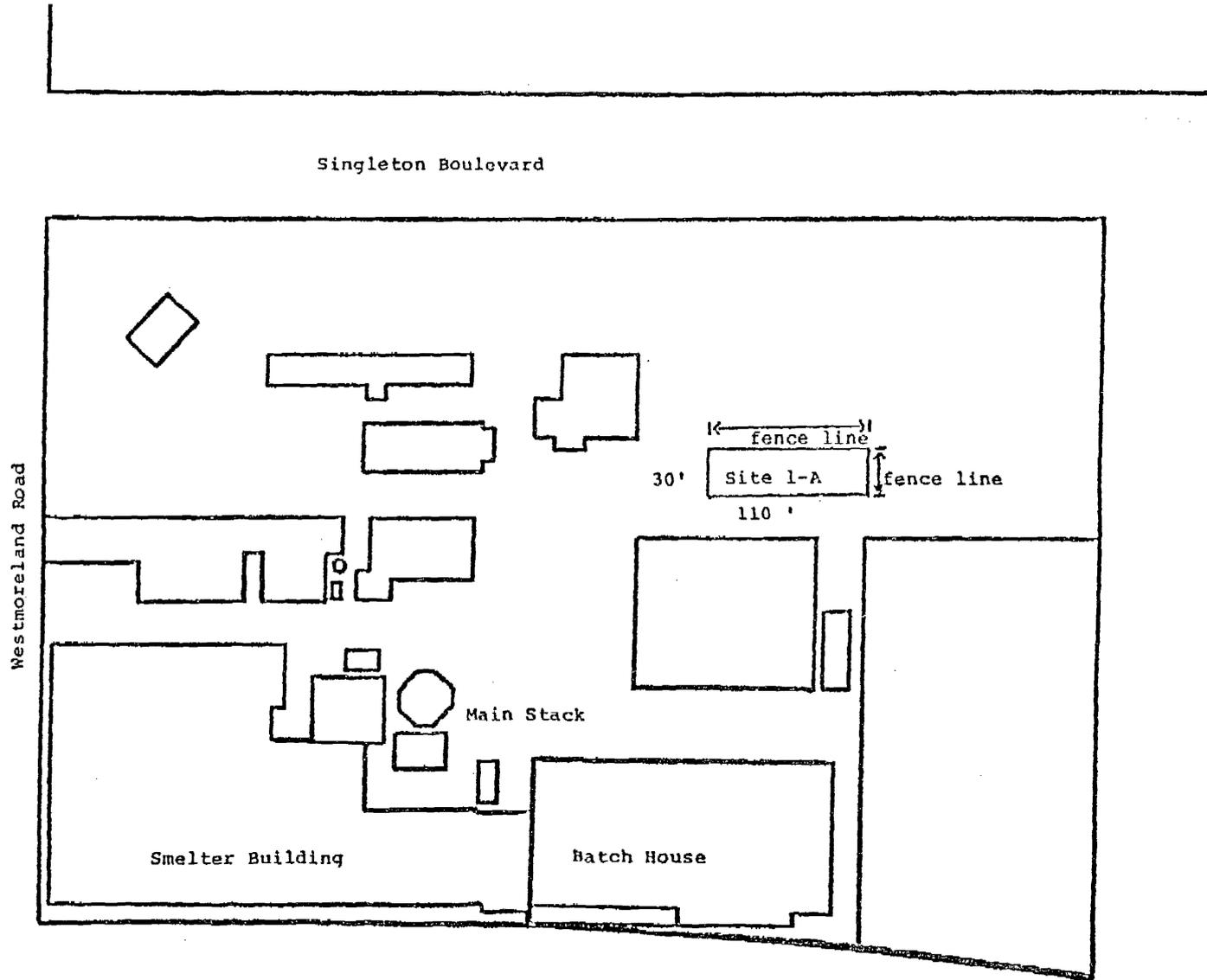
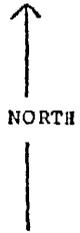
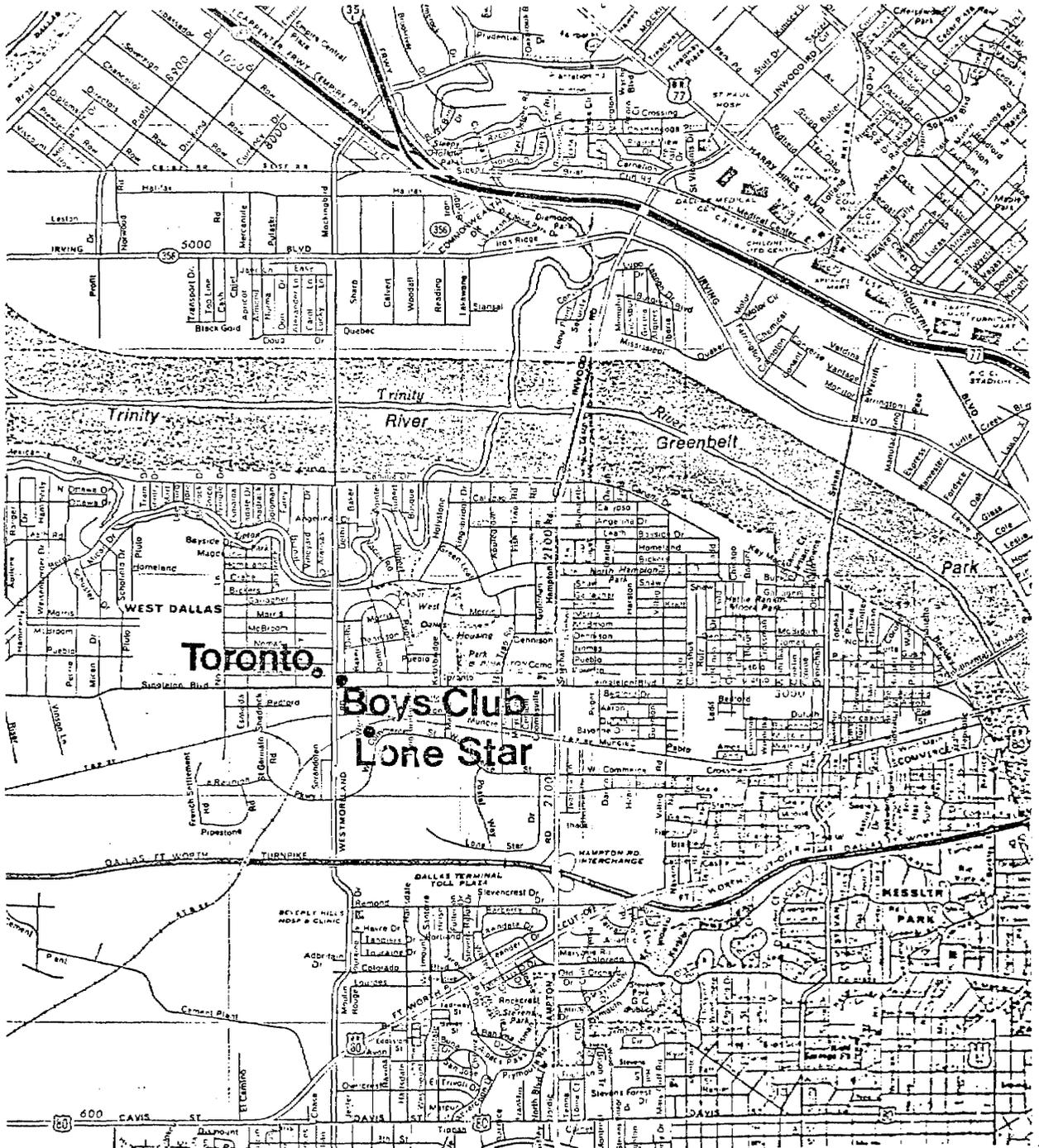


FIGURE II
AN AREA TO BE COVERED IN
THE VICINITY OF THE BATCH HOUSE

FIGURE III
AMBIENT AIR MONITORING STATIONS IN THE
VICINITY OF THE MURPH METALS SMELTER
DURING YEAR 1982



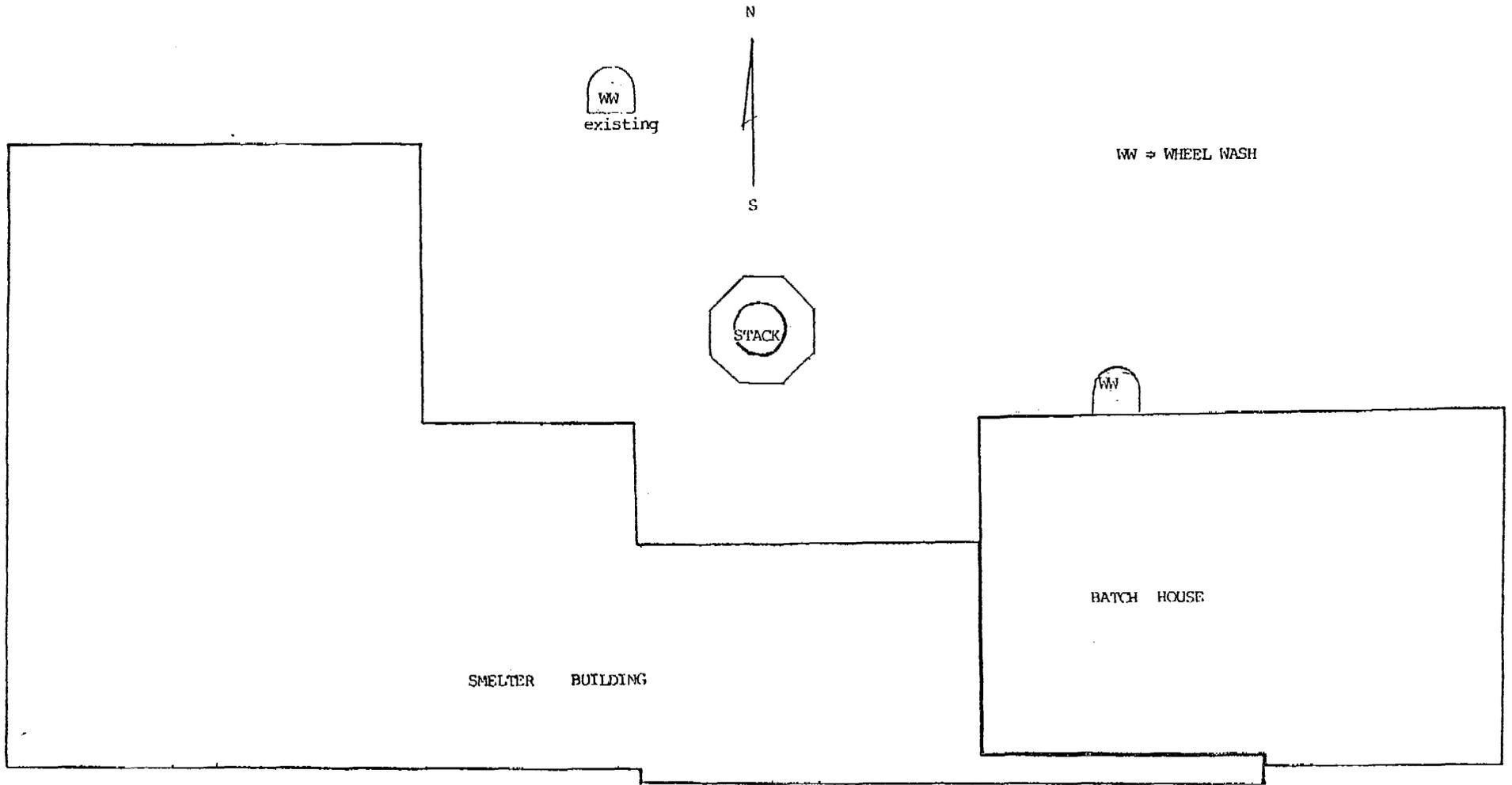


FIGURE IVa

WHEEL WASHES TO BE MAINTAINED IN THE
VICINITY OF THE SMELTER BUILDING AND BATCH HOUSE

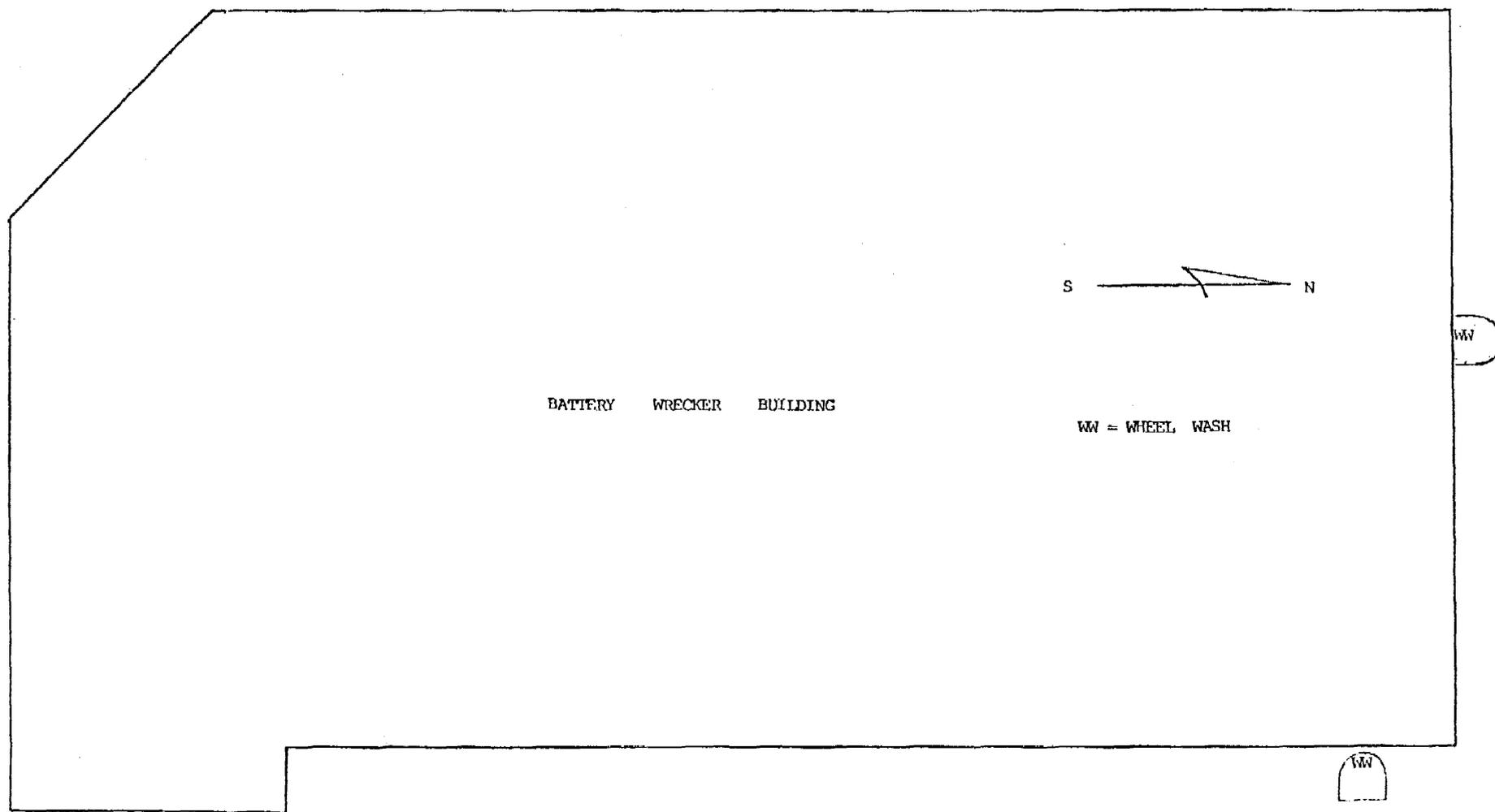


FIGURE IVb
WHEEL WASHES TO BE MAINTAINED IN THE
VICINITY OF THE BATTERY WRECKER BUILDING

NO. 83-5630

CITY OF DALLAS and STATE OF TEXAS, et al.	§	IN THE DISTRICT COURT OF
	§	
Plaintiffs,	§	
	§	
VS.	§	DALLAS COUNTY, TEXAS
	§	
RSR CORPORATION and MURPH METALS, INC.	§	
	§	
Defendants.	§	95th JUDICIAL DISTRICT

ORDER

BE IT REMEMBERED that on the ____ day of _____, 1983, the above-captioned and -numbered cause of action came on to be heard by the Court. Parties to this suit are:

Plaintiff, the State of Texas, a sovereign state acting for itself and on behalf of the Texas Air Control Board.

Plaintiff, the City of Dallas, a home rule city, a municipal corporation, and a political subdivision of the State of Texas, organized and existing under the laws of the State of Texas.

Plaintiff-Intervenor, Child Care Dallas, a corporation duly incorporated under the laws of the State of Texas.

Plaintiff-Intervenor, Boys' Club of Dallas, Inc., a corporation duly incorporated under the laws of the State of Texas.

Defendant, RSR Corporation, a Delaware corporation authorized to do business in the State of Texas.

Defendant, Murph Metals, Inc., a corporation duly incorporated under the laws of the State of Texas.

For purposes of this Order, the following terms shall have the following meaning:

The "Dallas Plant" means all buildings, structures, facilities, or equipment, owned, operated, or controlled by defendants located on any of three (3) separate tracts of land totalling approximately sixty-three (63) acres, adjacent to the intersection of Singleton Blvd. and N. Westmoreland Rd., owned or leased by defendants or defendants' subsidiaries.

The "Dallas Plant site" means the three (3) separate tracts of land totalling approximately sixty-three (63) acres, adjacent to the intersection of Singleton Blvd. and N. Westmoreland Rd., owned or leased by defendants or defendants' subsidiaries and the Dallas Plant located thereon.

Plaintiffs and plaintiff-intervenors have alleged various statutory and common law causes of action against defendants. Common law causes of action alleged include public nuisance, private nuisance and negligence in causing the soil around defendants' Dallas Plant site to become contaminated with lead. Plaintiffs' statutory cause of action alleges that defendants have caused and contributed to a condition of air pollution by emitting lead as an air contaminant in a manner injurious to human health in violation of the Texas Clean Air Act. Defendants have denied and continue to deny plaintiffs' and plaintiff-intervenors' allegations and have previously filed separate suits against plaintiffs in the District Court of Travis County, and the United States District Court for the Western District of Texas, alleging, inter alia, that plaintiffs are prohibited (i) from enforcing the National Ambient Air Quality Standard for lead against an individual emissions source, (ii) due to prior judicial determinations, from bringing an action under the Texas Clean Air Act based on the

concept of "cause or contribute to air pollution," and (iii) from instituting any common law or negligence action against defendants based on emissions of lead from the defendants' plant located at the intersection of Singleton Blvd. and Westmoreland Rd. in Dallas, Texas.

By their proper and duly authorized signatures at the foot of this Order, all parties represent to the Court the following:

This dispute between the parties involves complex issues of fact and law. Trial of these issues would be lengthy and expensive, in all likelihood consuming in excess of six weeks of the Court's trial calendar;

The parties have actively participated in the negotiations leading up to this Order and are well aware of the duties placed upon them by it and are desirous and capable of carrying out these duties in full;

The parties recommend the entry of this Order by the Court, and agree to accept and abide by this Order to resolve the disputed issues raised in this litigation and to ensure the rapid implementation of the remedial plans set forth in this Order to protect the environment in the area near defendants' Dallas Plant site;

Defendants agree that, as part of the agreed resolution of this litigation, they will file motions to dismiss with prejudice the actions for declaratory judgment and other relief filed in Cause No. 347,076 in the District Court of Travis County, Texas, and Cause No. A-83-CA-200 in the United States District Court for the Western District of Texas;

The parties agree that this Court shall have continuing jurisdiction over this cause during the implemen-

tation of this Order and understand that, when this Order has been fully implemented, a final judgment incorporating this Order shall be entered by the Court;

The parties, having actively participated in the negotiations leading to the entry of this Order, waive the requirements of TEX.R.CIV.P. 680 through 691. The parties acknowledge receipt of this Order and the injunctions contained herein;

Defendants acknowledge the expressed intention of the Executive Director of the Texas Air Control Board to submit the provisions of the air quality improvement plan identified in Appendix C, paragraph I to the U.S. Environmental Protection Agency as revisions to the Texas State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standard for lead in accordance with the requirements of the federal Clean Air Act, 42 U.S.C. §7401, et seq. Defendants expressly waive objection to the submission of the provisions identified in Appendix C, paragraph I as revisions to the State Implementation Plan for lead.

It is understood and agreed by all of the parties that this Order is entered without an admission by any party of the validity of any claim or defense raised in this action or in defendants' actions against plaintiffs in Cause No. 347,076 presently pending in the District Court of Travis County, Texas, and Cause No. A-83-CA-200 presently pending in the United States District Court for the Western District of Texas. The parties further agree that this Order does not compromise or settle any claims that are not fully articulated herein and that this Order shall not be entered into evidence in any other judicial, legislative or

administrative proceeding except in post-Order proceedings in this case or in an action by the parties to enforce the terms and provisions of this Order in this Court; provided, however, that the foregoing limitation shall not be construed to limit enforcement, pursuant to the federal Clean Air Act, of the provisions set forth in Appendix C of this Order which are approved as revisions to the Texas State Implementation Plan. The parties further agree that this Order, or acceptance of benefits under this Order, does not resolve any claim between persons who are not parties to this suit, nor does it affect in any manner defenses the parties may have to claims brought by persons who are not parties to this suit.

Upon a hearing in this cause on this date, the Court has reviewed the pleadings in the case, has heard the evidence of the parties in support of the entry of this Order, and has provided for an opportunity for input by the public. Being fully advised in the premises of this matter, the Court makes the following findings:

1. This Court has jurisdiction over the parties and the subject matter of this lawsuit.

2. Bona fide disputes and controversies exist between the parties, both as to liability, and the amount thereof, if any.

3. Proper implementation of this Order and the injunctions contained herein should remove any concern regarding the alleged threat of adverse health effects associated with human exposure to lead in the environment, as well as ensure the continued attainment and maintenance of the National Ambient Air Quality Standard for lead, in the area of defendants' Dallas Plant site.

4. This Court will maintain continuing jurisdiction over this case until this Order is fully implemented and a final order is entered. The Court

will appoint a Special Master to supervise the implementation of the soil cleanup and remedial program set forth in this Order.

5. The entry of this Order is consistent with the policy of the Texas Clean Air Act and is in the public interest.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED:

I.

JURISDICTION

This Court has jurisdiction over the parties and the subject matter of this lawsuit. The Court will maintain jurisdiction over this case until this Order is fully implemented and a final order is entered.

II.

SOIL CLEANUP AND REMEDIAL PROGRAM

Defendants shall pay into the Registry of the Court the amount of \$1,000,000.00, together with such other amounts as may be required from time to time to pay for the implementation of the soil cleanup and remedial program described in Appendix A of this Order. These funds will be deposited by the Clerk of the Court as set forth below.

As soon as practicable after the entry of this Order, and after the Special Master has taken his oath and posted his bond, the Clerk shall disburse to the Special Master the sum of \$100,000.00 to be known as the escrow account fund. This fund shall be administered by the Special Master pursuant to Attachment 1 of Appendix A.

The Clerk shall invest all other funds in 30-day, 60-day, or 90-day United States Treasury bills. Following the first 30-day period after deposit of the moneys in the Registry of the Court, the Clerk shall maintain at least \$50,000.00 in a liquid, interest bearing, federally insured account, for the purpose of making disbursements to the escrow account fund administered by the Special Master pursuant to Court Order. The Clerk of the Court shall consult with the Special Master to determine anticipated disbursements so as to allow the Clerk to

maximize the funds invested in longer-term United States Treasury bills consistent with the Special Master's need for liquidity.

The Court appoints _____ as Special Master to implement and oversee the soil cleanup and remedial program set forth in Appendix A of this Order, which is incorporated herein as if fully set forth. The Special Master shall implement and oversee all cleanup procedures and, where not set forth specifically herein, establish protocols for action. The Special Master shall also be charged with the responsibility of ensuring that the contractor or, as the case may be, contractors or subcontractors (hereafter referred to as "contractor"), maintains compliance with all specifications of the soil cleanup and remedial program, while taking reasonable steps to minimize the disruption of the community during the soil cleanup process. The Special Master shall also use due diligence to ensure that no funds are wasted or misappropriated. The Special Master's duties, responsibilities, and compensation, as well as the administration of the escrow account fund therefor, are set forth in detail in Appendix A, Attachment 1.

III.

PUBLIC HEALTH PROGRAM

Defendants shall pay, pursuant to the provisions of Paragraph VI, to the City of Dallas the amounts necessary to pay the costs of the public health program set forth in Appendix B and incorporated herein as if fully set forth.

IV.

AIR QUALITY IMPROVEMENT PLAN

From and after the date of signing of this Order, defendants are enjoined and prohibited from operating their Dallas Plant unless defendants have commenced implementation of the air quality improvement plan set forth in Appendix C and are in compliance with the provisions of that comprehensive regulatory program for lead emissions from the Dallas Plant site. Appendix C is incorporated herein as if fully set forth.

V.

PROHIBITION AGAINST AIR POLLUTION

From and after the date of signing of this Order, defendants are enjoined and prohibited from causing, suffering, allowing, or permitting the emission of lead from their Dallas Plant site in a manner which causes or contributes to, or which will cause or contribute to, a condition of air pollution as that term is defined in the Texas Clean Air Act.

VI.

RESOLUTION OF DISPUTED CLAIMS AND COSTS

The disputed claims and defenses of the parties involve complex issues of fact and law. Because of the uncertainties inherent in adjudication, and without the adjudication of any issue of fact or law pertaining to the disputed claims and defenses, defendants agree to pay to plaintiffs the sum of \$206,000.00, plus court costs. The sums paid by defendants are neither fines nor civil penalties, but rather constitute amounts paid in consideration for the compromise and settlement of the disputed claims and defenses. Defendants will make such payments in the following manner:

Defendants shall pay the amount of \$104,000.00 to plaintiff, State of Texas, in four equal payments in the amount of \$26,000.00, with the initial payment due within ten (10) days from the date of entry of this Order, and the three remaining payments due on September 1, 1984, September 1, 1985, and September 1, 1986.

Defendants shall pay the amount of \$102,000.00 to the City of Dallas ("City payment amount") as payment for (i) the costs associated with the maintenance of ambient air quality monitors and analysis of collected particulate samples ("ambient air monitor costs") and (ii) the venous blood sampling analysis and medical follow-up care costs ("health care costs"), as the same are more fully described in the public health program, to promote the protection of the public health and welfare. The amount payable to the City of

Dallas for costs associated with the maintenance of ambient air quality monitors and analysis of collected particulate samples shall be payable in twelve (12) equal quarterly payments of \$3,000.00 each commencing on October 17, 1983, and continuing on a calendar quarter basis through a final payment on July 17, 1986. The venous blood sample analysis costs shall be paid by defendants upon receipt of invoices, submitted by the City of Dallas, immediately following the medical screening conducted in accordance with the public health program. The indicated diagnostic evaluations and follow-up treatment costs of the public health program, if any, shall be paid by defendants to the City of Dallas upon defendants' receipt of an itemized statement of the costs incurred by the City in its administration of the medical follow-up portion of the public health program. In the event the health care costs exceed \$66,000.00, such additional health care costs attributable to the full implementation of the public health program shall be paid by defendants. After payment of the ambient air costs and the health care costs, any sums remaining due on the City payment amount may be applied by the City of Dallas to offset any costs incurred by the City of Dallas in the implementation of this Order.

This Order is intended to be, and at the time of entry of a final Order shall constitute, a discharge of and release from the governmental plaintiffs' claims against defendants arising or occurring prior to the date of signing of this Order to the following extent and degree:

This Order shall constitute full relief for, and release from, plaintiffs' statutory causes of action against defendants under the Texas Clean Air Act, both as to requested civil penalties and injunctive relief.

This Order shall constitute full relief for, and release from, plaintiffs' claims against defendants

under common law for alleged lead contamination of the soil in Zone A.

This Order shall constitute full relief for, and release from, plaintiffs' claims against defendants under the common law for alleged lead contamination of the soil left in place in Zone B under the soil clean-up and remedial program; provided, however, if the plaintiffs are able to prove to the Court, by a preponderance of the evidence, that soil left in place at any location in Zone B is contaminated by lead from defendants' Dallas Plant site, and that such lead in the soil is causing or significantly contributing to elevated blood lead levels, i.e., blood lead levels of 30 micrograms per deciliter or greater, in Zone B residents, then defendants agree to take additional remedial action, as determined to be reasonable and necessary by the Court, to alleviate such a proven problem at that location within Zone B.

By agreeing to this Order plaintiff-intervenors acknowledge their agreement to accept the terms and provisions of this Order as resolution of any and all claims they have alleged or which may exist as of the date of entry hereof relative to (i) the operation of defendants' Dallas Plant, (ii) the existence or presence of lead in soil in the vicinity of the Dallas Plant site, and (iii) the atmospheric emission of air contaminants from the Dallas Plant.

This Order, or acceptance of benefits under this Order, does not resolve any claim between persons who are not parties to this suit, nor does it affect in any manner any defenses the parties may have to claims brought by persons who are not parties to this suit.

In agreeing to the entry of this Order, the Texas Air Control Board does not waive any right to engage in additional rulemaking or to take any other action to enforce the requirements of the Texas Clean Air Act.

Defendants shall file motions to dismiss with prejudice the actions for declaratory judgment and other relief filed in Cause No. 347,076 in the District Court of Travis County, Texas and Cause No. A-83-CA-200 in the United States District Court for the Western District of Texas.

VII.

PERSONS BOUND BY ORDER

The provisions of the Order shall apply to, and be binding upon, the parties to this action, their officers, directors, agents, representatives, servants, employees, successors, assigns, and attorneys, and upon those persons in active concert or participation with them who receive actual notice of this Order by personal service or otherwise. Defendants shall give notice of this Order to any successor in interest prior to transfer of ownership of all or any part of their Dallas Plant site and shall simultaneously certify to plaintiffs and plaintiff-intervenors that such notice has been given.

VIII.

FORCE MAJEURE

If any event occurs which delays the implementation of the remedial plans set forth herein, the Special Master or any party with knowledge thereof shall notify the Special Master and all other parties, as appropriate, of same as soon as such party becomes aware of such event. All parties and the Special Master shall take all reasonable measures to mitigate the delay caused by such event. If any delay or anticipated delay is caused by an act of God, flood, fire, riot, strike or other labor dispute, explosion, or any other circumstance beyond the parties' or the Special Master's control, and without fault on the part of the party responsible for completion of the task or tasks delayed, then all time periods applicable hereunder to any or all remedial actions thereby delayed, may be extended by the Court, after opportunity for hearing, for a period no longer than the delay resulting from such event or circumstances.

IX.

CONSTRUCTION

This Order is entered solely for the purpose of resolving the disputed claims of the parties, and is entered upon the recommendation and consent of the parties and without (A) any finding of the fact of violation by defendants of (i) any applicable provision of the Texas Clean Air Act, (ii) any regulations promulgated by the Texas Air Control Board pursuant to the authority granted to such agency by such Act, or (iii) any applicable air emission limitation of the City of Dallas, and without (B) any finding of fact relative to whether defendants have operated the Dallas Plant in a negligent manner or in a manner constituting either a public or private nuisance. For this reason this Order, or any provision hereof, is not to be construed, and will not be construed, to any extent or for any purposes, however and whenever arising, as an admission of liability or violation, directly or indirectly on the part of the defendants, their successors or assigns; nor shall this Order be admitted into evidence or used in any way, directly or indirectly, in any judicial or administrative proceeding or in any other manner against any party for any purpose other than in further proceedings by the parties in this case, or in any action by any of the parties to enforce the terms of this Order in this Court; provided, however, that the foregoing limitation shall not be construed to limit enforcement, pursuant to the federal Clean Air Act, of the provisions set forth in Appendix C of this Order which are approved as revisions to the Texas State Implementation Plan. Except in a proceeding in this Court to enforce the Order entered by this Court, this Order shall not be used in any manner nor shall it be admitted into evidence in any legal proceeding, currently pending or any that may be brought in the future. This Order is entered without adjudication of any claims or defenses raised in Cause Nos. 74-3898-D and 74-9242-D, previously filed in this Court, and made final by orders of this Court (identified more specifically below) entered on October 15, 1974, and January 6, 1977.

respectively. Furthermore, the final orders in Cause Nos. 74-3898-D and 74-9242-D are in no way incorporated into this Order; therefore, this Order also does not alter, restrict, or modify any of the rights and obligations of the parties as set forth in and resulting from the Consent Judgment in Cause No. 74-3898-D entered by this Court on October 15, 1974, and the determinations of this Court in the severed cause of action No. 74-9242-D brought by the City of Dallas which was concluded by Order of this Court on January 6, 1977.

X.

MODIFICATION OF DISSOLUTION

By agreeing to this Order, defendants in no way waive any rights which they might have under applicable law to modify or dissolve any of the injunctive provisions of this Order.

SIGNED AND ENTERED this ____ day of _____, 1983.

JUDGE PRESIDING

APPROVED AS TO FORM AND SUBSTANCE:

Jim Mattox
Attorney General of Texas

Jim Mathews
Assistant Attorney General

Nancy N. Lynch
Assistant Attorney General
Environmental Protection
Division
P. O. Box 12548
Capitol Station
Austin, Texas 78711

ATTORNEYS FOR PLAINTIFF,
THE STATE OF TEXAS

Analeslie Muncy
City Attorney
City Hall, Dallas, Texas
By: Galen M. Sparks
Assistant City Attorney

ATTORNEYS FOR PLAINTIFF,
CITY OF DALLAS

JENKINS & GILCHRIST

Louis J. Weber, Jr.
2200 InterFirst One
Dallas, Texas 75202

ATTORNEYS FOR PLAINTIFF-INTERVENORS,
BOYS' CLUB OF DALLAS, INC. and
CHILD CARE DALLAS

1743E

TEXAS AIR CONTROL BOARD

Bill Stewart, P.E.
Executive Director
6330 Highway 290 East
Austin, Texas 78723

BROWN, MARONEY, ROSE, BAKER
& BARBER

R. Kinnan Golemon
1300 American Bank Tower
Austin, Texas 78736

ATTORNEYS FOR DEFENDANTS,
RSR CORPORATION and
MURPH METALS, INC.

APPENDIX C

AIR QUALITY IMPROVEMENT PLAN

I.

Introduction

The purpose of this air quality improvement plan is to protect the air resources of the state and assure continued attainment and maintenance of the National Ambient Air Quality Standard for lead in the area of defendants' Dallas Plant site. This plan has been reviewed and approved by the staff of the Texas Air Control Board as indicated by the signature of its Executive Director on the Court's Order. Based on this plan, estimates of lead emissions from defendants' Dallas Plant site have been prepared. Dispersion modelling of the estimated emissions has been conducted using mathematical formulae, computer technology and Texas Air Control Board models in order to predict the impact of defendants' emissions under this plan upon the ambient air. Based upon his review, the Executive Director of the Texas Air Control Board is able to predict that the implementation of this plan will assure the attainment and maintenance of the National Ambient Air Quality Standard for lead in the area of defendants' Dallas Plant site. The Executive Director of the Texas Air Control Board intends to propose certain portions of this comprehensive regulatory program for control of lead emissions from the defendants' Dallas Plant site, i.e., the emission limitations and standards contained in paragraph II, subparagraphs 1 through 5, paragraph III, subparagraphs 1 through 4 and 6, paragraph IV, subparagraphs 1 and 2, 4, 7 and 8, paragraph V, subparagraphs 1, 3, 4 and 6, and paragraph VI, subparagraph 5, as a revision to the State Implementation Plan for attainment and maintenance of the National Ambient Air Quality Standard for lead in compliance with the requirements of the Federal Clean Air Act, 42 U.S.C. §7401 et seq.

Unless otherwise specified the provisions of this Order take effect immediately upon signing by the Court.

II.

Smelter Building

1. Defendants shall maintain negative pressure within the Dallas Plant smelter building during all periods of operation except when all openings to the building are closed with solid doors; provided, however, from the date of entry of this Order until completion of the closure and sealing of openings as set forth in paragraph VI below, this provision does not apply if all operations in the smelter building have been discontinued for a period of eight (8) or more hours. The negative pressure shall be such that the minimum velocity of air into the building at any point across any opening is 100 feet per minute as measured by a Sierra Instruments Model 440 heated probe anemometer or equivalent monitoring device (hereinafter "hotwire anemometer").

2. From and after June 1, 1984, defendants shall install and maintain a continuous monitoring, recording, and alarm system, acceptable to the Executive Director of the Texas Air Control Board, which shall measure the flow of air into the smelter building (i) across the opening which is required to be equipped with a double hanging curtain (17' x 12' door generally referred to as opening #160 located on the north side of the building) and (ii) at a point in the southwest corner of the building between the 18' x 10' solid door (generally referred to as opening #184) and the 10' x 10' solid door (generally referred to as opening #182). The acceptance of such system shall not be unreasonably withheld by the Executive Director and the system shall be deemed acceptable upon the fifteenth work day following the Executive Director's receipt of the detailed plans and specifications for such system, unless the Executive Director has notified defendant in writing of

the specific insufficiencies of the system. Defendants and the Executive Director of the Texas Air Control Board shall determine and establish the reading on defendants' monitor system that is equivalent to 100 feet per minute as measured by the hotwire anemometer. Defendants' system shall include an alarm which is designed to alert plant personnel immediately if negative pressure drops below 150 feet per minute or its equivalent. Either the hotwire anemometer or an equivalent monitoring device, including the continuous monitoring, recording, and alarm system approved by the Executive Director of the Texas Air Control Board, may be used to enforce paragraph 1 of this appendix.

3. Defendants shall not cause, suffer, allow or permit visible emissions (other than water vapor condensation) from any opening on the smelter building.

4. All smelter building baghouses shall have their emissions ducted to the 300 foot main plant stack ("main stack").

5. Lead emissions from the main stack shall not exceed a concentration of 0.015 grains per dry standard cubic foot of air or a total emission rate equivalent to the sum of the following allowable rates for each of the processes in operation:

<u>Process</u>	<u>Maximum Allowable Emission Rate (pounds per hour)</u>
Sanitary baghouses	0.8
Reverberatory Furnace No. 1	5.2
Reverberatory Furnace No. 2	5.2
Blast Furnace	2.5

6. (See Introduction)

7. (See Introduction)

8. (See Introduction)

9. (See Introduction)

III.

Batch House

1. Defendants shall maintain negative pressure within the Dallas Plant batch house during all periods of operation except when all openings to the building are closed with solid doors or tarpaulins; provided, however, from the date of entry of this Order until completion of the closure and sealing of openings as set forth in paragraph VI below, this provision does not apply if all operations in the batch house have been discontinued for a period of eight (8) or more hours. The negative pressure shall be such that the minimum velocity of air into the building at any point across any opening is 150 feet per minute as measured by a hotwire anemometer.

2. From and after June 1, 1984, defendants shall install and maintain a continuous monitoring, recording, and alarm system acceptable to the Executive Director of the Texas Air Control Board, which shall measure the flow of air into the batch house across the two openings, located on the north side of the building, which are required to be equipped with a double hanging curtain (12' x 14' opening generally referred to as opening #162 and 21' x 23' opening generally referred to and as #164). The acceptance of such system shall not be unreasonably withheld by the Executive Director and the system shall be deemed acceptable upon the fifteenth work day following the Executive Director's receipt of detailed plans and specifications for such system, unless the Executive Director has notified defendants in writing of the specific insufficiencies of the system. Defendants and the Executive Director of the Texas Air Control Board shall determine and establish the reading on defendants' monitor system that is equivalent to 150 feet per minute as measured by a hotwire anemometer. Defendants' system shall include an alarm which is designed

to alert plant personnel immediately if negative pressure drops below 200 feet per minute or its equivalent. Either the hotwire anemometer or an equivalent monitoring device, including the continuous monitoring, recording, and alarm system approved by the Executive Director of the Texas Air Control Board, may be used to enforce paragraph 1 above.

3. Defendants shall not cause, suffer, allow or permit visible emissions (other than water vapor condensation) from any opening on the batch house.

4. Each of the two baghouse stacks on the batch house shall be exhausted at least 100 feet above ground level. Lead emissions from either of those stacks shall not exceed 0.001 grains per dry standard cubic foot of air or 0.26 pounds per hour.

5. (See Introduction)

6. Process offgases from the agglomeration furnace shall be ducted to a baghouse and then to the smelter building main stack.

IV

Battery Wrecker Building

1. From and after April 1, 1984, emissions from the baghouse on the battery wrecker building shall be exhausted from a stack at least 65 feet above ground level.

2. Lead emissions from the baghouse on the battery wrecker building shall not exceed 0.005 grains per dry standard cubic foot of air or 0.21 pounds per hour.

3. (See Introduction)

4. By December 1, 1983, lead paste from the battery wrecker building shall be loaded directly from the drying kiln to transport vehicles or containers which shall be covered or enclosed prior to leaving the building.

5. (See Introduction)

6. (See Introduction)

7. The only exterior wall openings allowed for the battery wrecker building are:

a. A vehicular door on the south side of the building with an exterior opening of not more than 250 square feet. The doorway shall be covered with two hanging curtains at least 4 feet apart.

b. A vehicular door on the north side of the building with an exterior opening of not more than 225 square feet. The doorway shall be covered with two hanging curtains at least 4 feet apart.

c. Doorways for pedestrian ingress and egress. All such doorways shall be equipped with a solid door and shall be opened only for ingress and egress.

d. An opening along the bottom of the west side of the building limited to not more than 73 square feet in area and covered with a hanging curtain.

e. Openings for conveyors on the west side of the building which shall total not more than 342 square feet in area and each opening being covered with a hanging curtain.

f. Three doorways for the unloading of materials on the east side of the building, consisting of one 264 square foot doorway and two 100 square feet doorways. Each such doorway shall have at least one hanging curtain and a closable solid door or tarpaulin. These doorways shall be opened only for the actual unloading activities and only one doorway shall be opened at any one time. Trucks shall be unloaded through the 264 square foot doorway only by using a mechanical truck dumper.

All curtains specified for doorways and openings in this subparagraph shall consist of overlapping plastic strips at

least 100 mils thick extending from the top of the opening to within 3 inches or less of the bottom of the opening to form an effective barrier to air flow.

8. Notwithstanding the provisions of subparagraphs 3 and 6 of this paragraph, defendants shall wet the work areas within the battery wrecker building as set forth in Attachment 4 and the piles of crushed or shredded material at least once per day; provided, however, this condition shall not apply during periods of freezing weather or when the battery wrecker process is not operational.

9. (See Introduction)

V.

Open Plant Areas

1. Except as provided below, outdoor storage of lead bearing materials is prohibited. The following specifically identified types of lead bearing materials may be stored outside:

- a. Lead and lead alloys in ingot form;
- b. Fabricated lead and lead alloy materials;
- c. Lead shot;
- d. Lead bearing material in enclosed containers; and
- e. Whole unbroken batteries

2. (See Introduction)

3. From and after December 31, 1983, the area indicated as Site 1-A on Attachment 5 shall be paved or covered with three inches (3") of crushed aggregate.

4. Notwithstanding the requirements in subparagraphs 2 and 3 of this paragraph, by June 1, 1984, the areas designated as A through C on Attachment 6 shall be either paved, covered with three inches (3") of crushed aggregate, or vegetated.

5. (See Introduction)

6. All transport vehicles, other than those carrying non-lead bearing materials or those materials which are listed above in subparagraph 1 of this paragraph, shall have their cargo compartments covered with tarpaulins at all times except when loading or unloading. In lieu of covering such transport vehicles when not in use, such vehicles may have their cargo compartments washed down prior to storage so that lead bearing materials are removed and recycled. Transportation of lead bearing feed stocks in closed compartments or containers is not subject to these requirements.

7. (See Introduction)

8. (See Introduction)

VI.

General Provisions

1. (See Introduction)

2. (See Introduction)

3. (See Introduction)

4. (See Introduction)

5. From and after December 1, 1983, truck wheel washes shall be constructed, maintained in operating condition, and used on each vehicle that leaves the smelter building, batch house and battery wrecker building so as to remove lead bearing materials from the vehicle wheels; provided, however, this condition shall not apply during periods of freezing weather. Location of these wheel washes is shown on Attachment 8a of this appendix.

6. (See Introduction)

7. (See Introduction)

8. (See Introduction)

9. (See Introduction)

10. (See Introduction)

11. (See Introduction)

12. (See Introduction)

13. (See Introduction)

14. (See Introduction)