

REPORT

Shane Noreen

LFR

Aug 07, 2009 17:07

Closure Report for Windiate Park

**Windiate Park
Flint, Michigan**

Prepared for:
**General Motors Corporation
Detroit, Michigan**

October 2001

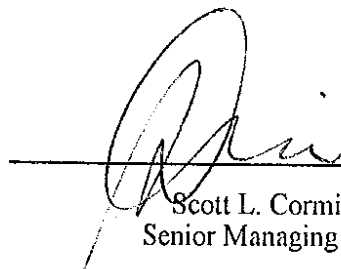


O'BRIEN & GERE
ENGINEERS, INC.

Closure Report for Windiate Park

*Windiate Park
Flint, Michigan*

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Scott L. Cormier, P.E.
Senior Managing Engineer

October 2001



Confidential under FOIA
33469 West 14 Mile Road, Suite 150
Farmington Hills, Michigan 48331

Contents

List of Figures	ii
List of Appendices	ii
List of Exhibits	ii
1. Introduction	1
1.1. Objectives	3
2. Site specifics	5
2.1. Site description	5
2.2. Site history	5
2.3. Nature and extent of waste fill material	8
2.4. Identification of substances of potential concern (SOPCs)	8
3. Site remediation	11
3.1. Interim remedial measures (IRMs)	12
3.1.1. Soil cover IRM (Park and Parcels A and B)	12
3.1.2. Excavation, disposal, and soil cover IRM (former 4407 and 4413 Milton Drive and the South Utility Easement portion of the Park)	13
3.1.3. Ground water removal and disposal IRM (4407 Milton Drive)	14
3.1.4. Deed restrictions	14
4. Attainment of closure criteria	17
5. Conclusions	19

Aug 07, 2009 17:07

List of Figures

1. Site Location Map
2. Property to be added to the Park
3. Thickness of Soil Cover Plan

List of Appendices

- A. Operation and Maintenance Plan for Windiate Park, dated June 2001.

List of Exhibits

- A. MDEQ Notice of Intent to Approve (Closure) Letter (for Park property), dated July 19, 1996.
- B. O'Brien & Gere's Monitoring Well Decommission Documentation Letter to MDEQ, dated August 19, 1999.
- C. MDEQ Approval Letter (with contingencies, regarding the IRMs for twenty-two residential properties), dated April 22, 1997.
- C.1 O'Brien & Gere's Response to MDEQ comments Letter (regarding the IRMs for twenty-two residential properties), dated July 17, 1997.
- D. MDEQ Approval Letter regarding the limits of investigation (identified in the Residential RAP), dated July 14, 1997.
- E. MDEQ Notice of Approval (for Closure) Letter (for twenty residential properties), dated August 12, 1998.
- E.1 4537 and 4401 Milton Drive property closure documents.
- F. Topographic Survey Plan (with final grade elevation and legal description of Park).
- G. Remediation Agreement and Covenant Not to Sue for Windiate Park between the City of Flint and General Motors Corporation, dated October 26, 1995 and First Amendment to Remediation Agreement and Covenant Not to Sue for Windiate Park between the City of Flint and General Motors Corporation, dated June 23, 1998 (Remediation Agreement).
- H. O'Brien & Gere's Monitoring Well Abandonment Letter to MDEQ (regarding four quarters of ground water sampling non-detect results), dated July 2, 1998.
- I. H.1 MDEQ Monitoring Well Abandonment Approval Letter, dated July 13, 1998. MDEQ Soil Cover IRM Agreement Letter, dated September 25, 1995.
- J. O'Brien & Gere's Summary Letter regarding residential property IRMs, dated January 21, 1997.
- K. MDEQ Letter dated November 3, 1995 (topsoil and silty sand deemed adequate for usage as a soil cover).
- L. Consent Agreement between GM and the Genesee County Drain Commission, dated January 24-31, 1996.

Aug 07, 2009 17:07

1. Introduction

This report is the final Windiate Park Closure Report (Closure Report) for the Windiate Park (Park) property located in Flint, Michigan. This Closure Report documents the implementation of interim remedial measures (IRMs) at the Park as the final remedial action for the Park in accordance with Part 201 (Environmental Remediation) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201). The IRMs were performed in accordance with O'Brien & Gere Engineers, Inc., (O'Brien & Gere) February 1996 Windiate Park Remedial Investigation/Feasibility Study (Park RI/FS) and O'Brien & Gere's approved February 1996 Windiate Park Remedial Action Plan (Park RAP) as amended on August 16, 1996 (RAP Addendum) and February 11, 1998 (RAP Addendum No. 2).

The Park RAP, which consisted of a Limited Residential/Recreational closure with recreational deed restrictions, was approved by Michigan Department of Environmental Quality (MDEQ) as expressed in a Notice of Intent to Approve (Closure) Letter (for Park Property), dated July 19, 1996, included as Exhibit A. The following contingent items listed in the July 19, 1996 MDEQ letter are or will be incorporated into the closure program as outlined in this Closure Report:

- Completion and signing of a legally enforceable land use agreement between General Motors Corporation (GM), the City of Flint and MDEQ. The proposed land use agreement is being submitted to MDEQ under separate cover.
- Land and resource use restrictions including prohibition of ground water use and protection for utility workers. Land and resource use restrictions are included in the proposed land use agreement.
- Quarterly ground water monitoring completed for one year. Quarterly ground water monitoring was completed as noted in O'Brien & Gere's August 19, 1999 letter to MDEQ (attached as Exhibit B).
- Completion of an Operation and Maintenance Plan (O&M Plan) that provides for semi-annual inspections of the soil cover. An O&M Plan is included as an attachment to this report (Appendix A).

Closure Report for Windiate Park

LFR

Aug 07, 2009 17:07

- Financial assurance: financial assurance is not proposed due to the routine nature of the O&M activities and the estimated annual costs being considered de minimis.
- Receipt of a certified copy of a MDEQ approved restrictive covenant that includes the liber and page number as recorded in the Genesee County Register of Deeds. To be completed upon approval by MDEQ of the land use agreement and declaration of restrictive covenant.
- A RAP Addendum that confirms the presence of a regional confining unit (under the Park) as well as performance of vertical ground water profiling in the Park. This RAP Addendum was submitted to MDEQ on August 16, 1996 confirming the presence of a regional confining unit and results of vertical ground water profiling in the Park.

The IRMs, which serve as the final remedy for the Park, were voluntarily implemented by GM prior to approval of the Park RAP to expedite the remedial action process. The IRMs completed at the Park consisted of the following elements:

- As described in the Park RAP and RAP Addendum, a minimum 2 ft thick soil cover (minimum 1 ft thick in areas where no surface soil impact was identified) was placed over the Park and Parcels A and B.
- As described in RAP Addendum No. 2, excavation of surface soil (4407 and 4413 Milton Drive) and subsurface waste fill (South Utility Easement), followed by installation of a minimum 2 ft thick soil cover was completed.
- Ground water removal and disposal at former 4407 Milton Drive.
- Performance of maintenance activities associated with the existing soil cover implemented as an IRM in accordance with the Park O&M Plan.

The following items are proposed to be completed:

- Donation of property from GM to the City of Flint to be added to Park property.
- Implementation of deed restrictions for the entire Park.
- A land use agreement between GM, the City of Flint and MDEQ for the entire Park.

These IRM activities have been and will be implemented in accordance with the requirements of Part 201.

Confidential under FOIA

Aug 07, 2009 17:07

A separate RAP for twenty-two residential properties located outside the Park property in the Windiate Park/Dixieland Subdivision (Residential RAP) has already been approved (with contingencies) by MDEQ, as expressed in MDEQ's letter dated April 22, 1997 (attached as Exhibit C). The contingent items were incorporated into the closure program as outlined in O'Brien & Gere's July 17, 1997 response to MDEQ comments letter (attached as Exhibit C.1). The limits of the remedial investigations as identified in the Residential RAP were approved by MDEQ in a letter dated July 14, 1997 (attached as Exhibit D). Therefore, in relation to historical filling activities in Windiate Park and the surrounding residential area, no further investigatory study was deemed necessary by MDEQ, with the exception of the Pengelly Apartments, which was investigated and remediated in accordance with Part 201, and the Pengelly Road area which will be investigated.

A closure report addressing the twenty-two residential properties discussed in the Residential RAP was submitted to MDEQ in January 1998, requesting a "Generic (unrestricted) Residential" categorical closure at twenty of the properties and a "Limited Residential" categorical closure for the remaining two properties. In a letter, dated August 12, 1998, MDEQ approved a Generic Residential Closure for twenty properties (attached as Exhibit E), with closure approval for the two Limited Residential properties (4537 and 4401 Milton Drive). Closure of the 4537 Milton Drive property was completed upon recording the declaration of restrictive covenant and transfer of the property as noted in a June 8 and December 6, 1999 letter to MDEQ and a September 13, 1999 letter to the City of Flint Zoning Coordinator. Closure of the 4401 Milton Drive property was completed upon transfer of the property and recording of the declaration of restrictive covenant as noted in a March 5, 1999 letter and a July 30, 2001 letter to MDEQ and a March 15, 2001 letter to the City of Flint Zoning Coordinator (copies of these letters regarding 4537 and 4401 Milton Drive are attached as Exhibit E.1). The mortgagee for the new owner of the 4401 Milton Drive property has not yet agreed to sign a "Consent to Declaration of Restrictive Covenant"; therefore, final closure for this property is still pending. MDEQ will be notified by GM once this issue is resolved.

IRM activities under the Residential RAP, which included excavation of surface soil and subsurface waste fill and subsequent placement of a soil cover supplemented with deed restrictions, are consistent with the Park RAP IRM activities.

1.1. Objectives

The completion of the IRMs at the Park, supplemented by deed restrictions (Section 3.1.4.) and maintenance in accordance with the Park O&M Plan (Section 4.), serve as the final remedy for the Park. The

Aug 07, 2009 17:07

objective of this Closure Report is to document that these final remedies, implemented as IRMs, have resulted in a Limited Residential/Recreational closure of the Park with deed restrictions for recreational use in accordance with Section 20120a of Part 201 of the NREPA.

The Park is in an area of Flint that is zoned as single family residential. This zoning designation allows for and includes areas such as the Park that are used and designated for recreational purposes. In accordance with Section 20120a (6), a property for which a RAP is proposed must have zoning that is consistent with the closure criteria (i.e., limited residential with recreational deed restrictions) being proposed. In accordance with Mich. Admin. Code Rule 299.5719, the land use restrictions will be detailed in a restrictive covenant which will be recorded and is being submitted to MDEQ for approval. The deed restrictions will be implemented for an indefinite duration.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Aug 07, 2009 17:07

2. Site specifics

2.1. Site description

Windiate Park is owned by the City of Flint. It is bordered by Milton Drive to the northwest, residential properties to the west, south and east and by Pengelly Road to the north. The Park is located within Section 29 and 30 of Township 7 North, Range 4 East, in the City of Flint, Genesee County, Michigan. The Site Location Map, Figure 1, identifies the general location of the Park within Genesee County.

The Park is utilized for recreational purposes, is approximately 10.2 acres in size, and is covered by grass vegetation, shrubs, trees, concrete walkways, basketball courts, playground equipment, and above grade pavilion structures. The surface topography of the Park, following placement of the soil cover (completed as an IRM) in 1995-1996 and Park amenities in 1998 and 1999, includes generally flat low lying areas with increasing elevation towards the residential dwellings in the southern, southwestern and northeastern sections. A final grade elevation and legal parcel description of the Park was conducted in February 2000 and is included as Exhibit F, Topographic Survey Plan.

2.2. Site history

Based on the review of historical aerial photographs, the Park has always been open, vacant space. One house existed adjacent to the Park in the 1920s and the Park appeared to have consisted of low lying wetland areas. The location of this house was east of the present 4221 Milton Drive residence. Intermittent construction of additional houses occurred during the 1930s and 1940s along the west side of Windiate Park on Milton Drive adjacent to the former Shelly Lane and north along Milton Drive. Construction of houses adjacent to the Park began in the early 1950's, starting on the southwest side (4317 Milton Drive location) and proceeding around the perimeter of the Park. The Park property was developed as a park in approximately 1954 according to records at the City of Flint.

In the late 1940's and early 1950's, fill materials (ostensibly from a number of sources) were deposited in the Park. Following the filling, the Park consisted of low lying areas which were subject to frequent flooding. Flooding of the Park area continued during heavy rain events

Aug 07, 2009 17:07

until a new storm sewer (Schram Drain) was installed by the Genesee County Drain Commission in 1990.

The 1996 Park RI/FS was prepared in accordance with the November 1994 Windiate Park RI/FS Work Plan as amended and approved in February 1995 by MDEQ. The RI served as the mechanism to collect data to characterize site conditions, identify the nature and extent of environmental impact, and assess risk to human health. The FS served as the mechanism for the development, screening, and detailed evaluation of remedial action alternatives. The Park RI/FS identified waste fill material and substances of potential concern (SOPCs) related to the waste fill. The SOPCs in the waste fill material include lead, arsenic, benzo(a)anthracene, and benzo(a)pyrene. However, as part of the RI/FS, a conservative qualitative human health risk assessment was performed to evaluate the potential threat to human health associated with these SOPCs in the subsurface. The results of the risk assessment indicated that, with the soil cover in place, the SOPCs do not present a threat to human health. Furthermore, perched ground water was not adversely impacted in the Park.

In 1994 and 1995, a blood lead level survey of area residents was performed by the Michigan and Genesee County Departments of Public Health, and a health survey was performed by the Michigan Department of Community Health utilizing the services of the Project for Urban Affairs (PURA) of the Flint Branch of the University of Michigan. These surveys did not identify health impacts attributable to SOPCs in the Park. Nevertheless, GM and the City of Flint implemented a remedial action for the Park as outlined in this Closure Report and in accordance with the October 26, 1995 Remediation Agreement and June 23, 1998 First Amendment to Remediation Agreement with the City of Flint (included as Exhibit G).

The Park RAP was prepared in February 1996 to present and document the final remedy proposed to be implemented for a "Limited Residential (with recreational deed restrictions)" closure upon MDEQ approval. Following the results of the Park RI/FS activities, a soil cover (between 1 ft to 5 ft thick) was installed over the surface of the Park in 1995-1996. This soil cover was installed based on agreement with MDEQ and the Remediation Agreement with the City of Flint (Exhibit G). Further discussion of the soil cover installation activities is included in Section 3.2.1 of this report (soil cover IRM).

The first addendum to the 1996 Park RAP was submitted to MDEQ on August 16, 1996. The purpose of the RAP Addendum was twofold. First, the RAP Addendum presented information that was requested by MDEQ confirming the presence of a regional confining unit (under the Park) as well as the performance of vertical ground water profiling in the Park. Second, GM had acquired three parcels of land that adjoin the Park, which will be donated to the City of Flint by GM and made part of the Park property owned by the City of Flint. These parcels are shown on Figure 2 as parcels A, B, and C. Soil impact and waste fill materials

Aug 07, 2009 17:07

Aug 07, 2009 17:07
were identified on two of the parcels (Parcels A and B) adjacent to the Park. The soil cover IRM was implemented on these two parcels, after demolition of the residential structures at former 4123 Milton Drive and former 428 Shelly Lane, to prevent exposure to impacted media and migration of impacted media off-site. The third parcel of land (Parcel C) was described in the 1996 RAP Addendum (located west and north of the 4102 Pengelly Road residence) as not impacted and did not require remediation; however, soil cover material was placed over this parcel to maintain proper drainage.

The second addendum to the 1996 Park RAP was submitted to MDEQ on February 11, 1998, presenting information collected from environmental investigations performed on three additional parcels of land adjacent to the Park, former 4407 and 4413 Milton Drive (shown as parcels D and E on Figure 2), and the South Utility Easement (see Figure 2). Former 4407 and 4413 Milton Drive were privately owned when the Park RAP was submitted to MDEQ. These two parcels were subsequently acquired by GM, and also will be donated to the City of Flint by GM, and made part of the Park property by the City of Flint. The third parcel, identified as the South Utility Easement, is owned by the City of Flint and is included as part of the Park property. Waste fill materials were identified on the three parcels, with surface soil impact identified on former 4407 and 4413 Milton Drive, and isolated groundwater impact identified only at former 4407 Milton. Prior to implementation of the soil cover IRM, the residential structures at 4407 and 4413 Milton Drive were demolished to grade. IRMs performed at former 4407 and 4413 Milton Drive included removal and disposal of impacted surface soil prior to placement of a 2 ft thick soil cover. Isolated ground water impact was removed from former 4407 Milton via a recovery trench. The IRM performed at the South Utility Easement included removal and disposal of impacted surface soil and waste fill to a depth of 2 feet below grade prior to placement of a 2 ft thick soil cover.

As described in O'Brien & Gere's July 2, 1998 Monitoring Well Abandonment letter to MDEQ, four quarters of ground water sampling in the Park did not detect substances above Part 201 Generic Residential Drinking Water Criteria (attached as Exhibit H). Based on ground water monitoring indicating no impacts to groundwater, and as approved by MDEQ in a July 13, 1998 letter to GM (attached as Exhibit H.1), the monitoring wells were decommissioned and removed on July 27, 1998 as described in O'Brien & Gere's August 19, 1999 letter to MDEQ (attached as Exhibit B).

In the summer of 1998 through the spring of 1999, recreational amenities were installed at the Park, such as: concrete walking paths, basketball courts, baseball backstop, picnic areas with pavilions, and child play areas consisting of play structures and equipment (see Exhibit F for locations). During the construction of Park amenities, a low area south of the basketball courts was filled with soil cover material to meet the 2 ft minimum thickness requirement for this area. In the fall of 1998

Aug 07, 2009 17:07
through the fall of 1999, trees and bushes were also planted to enhance the Park landscaping.

As documented in O'Brien & Gere's June 2001 O&M Plan, attached as Appendix A of this report, and to be submitted to MDEQ under separate cover with the proposed land use agreement, the soil cover and Park amenities will be maintained in accordance with Mich. Admin. Code Rule 299.5517. Since 1998, O'Brien & Gere, on behalf of GM, has completed maintenance activities at the Park for the purpose of maintaining the appearance of the Park and maintaining the integrity of the cover. Mowing of the Park has been performed by the City of Flint. Under the O&M Plan, the City will perform future semi-annual inspections and maintenance at the Park in accordance with the Park O&M Plan.

2.3. Nature and extent of waste fill material

As described in the Park RAP, subsurface waste fill material beneath the Park, which was vertically and horizontally assessed during the February 1996 Park RI, extends to a depth of approximately 13 ft below grade (fbg), prior to the installation of the soil cover, with an average thickness of 4 ft.

As described in the RAP Addendum, subsurface waste fill material was identified on Parcels A and B and generally observed between 2 fbg and 6 fbg.

As described in RAP Addendum No. 2, subsurface waste fill material was identified beneath former 4407 Milton Drive (approximately 2 fbg to 11 fbg), former 4413 Milton Drive (approximately 2 fbg to 6 fbg) and the South Utility Easement (1 fbg to 4.5 fbg).

The nature of the waste fill material is consistent with the waste fill described in both the Park RI/FS and the Residential RI/FS.

2.4. Identification of substances of potential concern (SOPCs)

As part of the RI activities performed at the Park, several surface, subsurface and ground water environmental investigations have been conducted with numerous samples collected.

As identified in the Park RI/FS and RAP Addendum No. 2, SOPCs in soil were defined as substances for which the maximum detected concentrations exceed the lower of MDEQ Generic Residential Direct

Aug 07, 2009 17:07

Contact Value per Interim Operational Memorandum #8, Revision 4, (June 5, 1995) and #14, Revision 2 (June 6, 1995), or the Generic Soil Inhalation Criteria (SIC) for Ambient Air as set forth in the April 29, 1997 Addendum to Memorandum #8. However, in the case of arsenic, the applicable screening criteria are Site Specific Background Values as established in the Park RI/FS (subsurface soil) and Residential RI/FS (surface soil) Reports, in accordance with MDEQ Verification of Soil Remediation (VSR) guidance document, dated April 1994, Revision 1. Because arsenic is a naturally occurring metal found in native soils, VSR guidance allows for site specific background calculations.

Based on the results of numerous RI investigations conducted at the Park, SOPCs were identified in the subsurface soil and waste fill material and consisted of: arsenic, lead, benzo(a)anthracene, and benzo(a)pyrene. Lead was also considered an SOPC in surface soil at former 4407 and 4413 Milton Drive, with arsenic identified as an SOPC in surface soil at former 4413 Milton Drive.

As described in O'Brien & Gere's July 17, 1997 letter to MDEQ (Exhibit C.1), ground water analytical results at former 4407 and 4413 Milton Drive indicated benzene concentrations above the Generic Residential Health-Based Drinking Water Values. However, the perched ground water beneath these parcels (as well as the ground water beneath the Park and surrounding residential properties) is not used for drinking water purposes and is not considered part of a usable aquifer (July 17, 1997 letter to MDEQ, Exhibit C.1). Therefore, the applicable criteria are the Generic Ground Water Contact Criteria (GCC) as set forth in the January 17, 1997 Addenda to Interim Operational Memorandum #8. No ground water analytical results exceeded the GCC values from investigations performed at former 4407 and 4413 Milton Drive.

Furthermore, as described in the July 2, 1998 letter to MDEQ (Exhibit H), four quarters of ground water sampling in the Park did not detect substances above Part 201 Generic Residential Drinking Water Criteria.

Although MDEQ Part 201 criteria and background values were used as the basis for identifying the nature and extent of waste related substances, it must be recognized that exceedence of these criteria does not necessarily represent a threat to human health or the environment.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

This page intentionally blank

Aug 07, 2009 17:07

3. Site remediation

Remedial activities (completed as IRMs) implemented or to be implemented at the Park consist of the following elements or a combination of these elements:

- As described in the Park RAP and RAP Addendum, a minimum 2 ft thick soil cover (minimum 1 ft thick in areas where no surface soil impact was identified) was placed over the Park and Parcels A and B. No waste fill or SOPCs were identified on Parcel C. Therefore, no soil cover was required.
- As described in RAP Addendum No. 2, excavation of surface soil (former 4407 and 4413 Milton Drive) and subsurface waste fill (South Utility Easement), followed by a minimum 2 ft thick soil cover was completed.
- Ground water removal and disposal at former 4407 Milton Drive.
- Implementation of deed restrictions for the Park.
- Performance of maintenance activities associated with the soil cover IRM in accordance with the Park O&M Plan.

The scope of the IRM activities included various requirements during construction. An inspector was on-site daily to document the activities implemented and compliance with GM's technical specifications. Some of the requirements outlined in the specifications included:

- Air monitoring during construction
- Safety maintenance and traffic control
- Soil cover compaction and final grading
- Equipment decontamination
- Resident coordination
- Surface restoration and landscaping
- Follow up maintenance for 2 months after restoration.

The MDEQ approved November 1994 Windiate Park RI/FS Work Plan was used during construction activities to outline the responsibilities, training requirements, safety protocols, protective equipment, and standard operating procedures for on-site personnel.

Aug 07, 2009 17:07

3.1. Interim remedial measures (IRMs)

In accordance with the procedures outlined in the Park RI/FS, Park RAP, RAP Addendum and RAP Addendum No. 2, IRMs were performed at the Park. The IRMs were performed to mitigate potential exposure to SOPCs and have been determined sufficient to serve as the final remedial action at the Park.

Although implementation of IRMs at the Park was not required by MDEQ, IRMs were voluntarily implemented prior to MDEQ approval of the Park RAPs for the purpose of expediting the remedial action process even though the results of the blood lead level survey and the health survey showed no public health impact related to exposure to SOPCs at the Park.

As described in the Park RAP, the soil cover IRM for the Park was approved by MDEQ in a letter to GM dated September 25, 1995, (attached as Exhibit I). The IRMs described in the two RAP Addenda were also implemented voluntarily by GM in accordance with various discussions with MDEQ as outlined in O'Brien & Gere's summary letter submitted to MDEQ dated January 21, 1997 for the purpose of expediting the remedial action process (attached as Exhibit J).

The following sections describe the selected IRMs.

3.1.1. Soil cover IRM (Park and Parcels A and B)

As described in the Park RAP and RAP Addendum, the soil cover IRM was installed to allow unrestricted use of the Park and is considered the final remedy. The soil cover prevents recreational users from potential exposure to substances in the fill material. A minimum of 12 inches of soil cover and topsoil were placed in areas where surface soil samples (prior to placement of the soil cover) were below Part 201 Generic Residential Direct Contact Values. A minimum 2 ft thick soil cover was placed in areas of the Park where surface soil samples identified lead concentrations exceeding the Part 201 Generic Residential Direct Contact Value for that substance. To allow for proper drainage to the stormwater catch basins in the Park, some areas received over 4 ft of soil cover. The final Thickness of Soil Cover Plan, Figure 3, identifies the final soil cover thickness placed across the Park.

Aug 07, 2009 17:07

Aug 07, 2009 17:07

The materials used in the construction of the soil cover were obtained from an off-site borrow area. The soil cover material is characterized as a silty sand and the topsoil is characterized as an organic, fertile, and granular soil. To confirm that soil from the off-site source was not impacted, samples were collected and submitted to an analytical laboratory for analysis. Prior to placement of the Park soil cover, one sample of the topsoil and one sample of the silty sand were analyzed for the waste characterization parameters specified in 40 CFR 261.20 through 261.24 and total Michigan "10" metals. Four additional samples of the topsoil were analyzed for the Michigan "10" metals as these substances are naturally occurring elements. In a letter dated November 3, 1995 from MDEQ to GM, MDEQ deemed the topsoil and silty sand adequate for use as a soil cover IRM for the Park (attached as Exhibit K).

During installation of the soil cover in the fall of 1995, elevations were collected along a 50 ft grid to document compliance with the design parameters. The materials were placed in maximum 12 inch lifts, and then compacted to achieve the design density (85% to 90% of the Standard Proctor Compaction as determined by ASTM standards). The compaction was field tested in accordance with ASTM standards. The existing ground water monitoring wells, catch basins, and manholes in the Park were raised to match the final elevation of the soil cover.

After the 1996 spring thaw, the topsoil was graded to meet the design final grades. Sod was then placed over the topsoil to obtain adequate vegetative cover.

3.1.2. Excavation, disposal, and soil cover IRM (former 4407 and 4413 Milton Drive and the South Utility Easement portion of the Park)

As described in RAP Addendum No. 2, the soil cover IRM at the three parcels included the placement, grading, compaction, and sodding of a layer of permeable soil over areas identified as having SOPCs above applicable Part 201 criteria remaining in the soil and/or waste fill. Prior to soil cover installation, some areas of the three parcels were excavated up to 2 fbg in order to achieve placement of a minimum 2 ft thick soil cover, and to tie the new soil cover into the existing grade.

The soil cover included a 6 inch layer of topsoil and sod. The soil cover was graded to provide for proper drainage and was tied into the soil cover previously placed over the adjacent Park property and adjacent residential properties.

Aug 07, 2009 17:07

3.1.3. Ground water removal and disposal IRM (4407 Milton Drive)

As described in RAP Addendum No. 2, this IRM included excavation of a recovery trench at 4407 Milton Drive to allow for collection of ground water. Ground water which collected in the excavation was pumped out, temporarily stored, analyzed, and disposed. A ground water sample was collected from the trench following pumping and analyzed for the presence of benzene; however, analytical results indicated levels of benzene below the applicable MDEQ GCC value. Ground water data is included in RAP Addendum No. 2. Approximately 1600 gallons of ground water were removed and disposed. Additionally, waste fill encountered during excavation of the recovery trench was removed and properly disposed.

3.1.4. Deed restrictions

A restrictive covenant for the Park property, to be recorded with the Genesee County Register of Deeds as required by Section 20120b(4) of Part 201, will specify appropriate land use restrictions. As described in the approved Park RAP, the soil cover completed as an IRM enhances the protection of the exposure pathways, and the land use restrictions specified in the restrictive covenant will provide added assurance that no unusual exposure to subsurface soil will occur in the future.

The approved Park RAP, as described in a land use agreement to be entered into by MDEQ, the City of Flint and GM, specifies a limited residential remedy for the Park property with recreational land and resource use restrictions in accordance with Sections 20120a(1)(f) and (h) of Part 201 and Mich. Admin. Code Rule 299.5719.

As stipulated in Section 20120b of Part 201, the land and resource use restrictions will be detailed in the restrictive covenant to be approved by MDEQ (and submitted under separate cover) that will include the following restrictions:

- Use of the Park property shall be limited to use only as a public neighborhood park, including picnic and play areas, pedestrian access routes and related utility easements and facilities.
- The owner shall restrict activities at the Park property that may result in exposures above levels established in the RAP. These activities include:

Aug 07, 2009 17:07

- o All activities at the Park property shall be consistent with the permitted neighborhood park uses and any impacted soil must be isolated at least two feet from exposure points. If during maintenance the soil cover is disturbed, the disturbed area must be replaced with a cover of equivalent protection. Additional improvements at the Park property, which would involve disturbing the soil cover, even if consistent with the permitted uses, shall not be constructed or installed without the prior approval of MDEQ and written notice to GM. Simultaneously with or prior to a request to MDEQ for such approval, the owner shall deliver written notice to GM which shall include a copy of any request for approval and a description of the proposed improvements and the proposed location(s) thereof.
- o All soils at the Park property beneath the soil cover shall be managed in accordance with the requirements of Section 20120c of NREPA and other applicable state and federal laws.
- o Use of groundwater beneath the Park property is prohibited.
- o There shall be no parking of automobiles, trucks or other vehicles on that portion of the Park property which includes the soil cover, nor shall automobiles, equipment or trucks traverse or impact that portion of the Park property; provided, however, that vehicles and equipment necessary to perform maintenance and to repair the County drain and other utilities crossing the Park property shall be permitted on the Park property and, if the soil cover is disturbed as a result thereof, it shall be replaced with a cover of equivalent protection.
- Because the soil cover comprises an exposure barrier to prevent direct contact with subsurface soils, the soil cover must be maintained by semi-annual visual inspection, mowing and reseeding of the vegetative portion of the soil cover, as necessary, and repair of any damage to the soil cover. The integrity of the vegetative cover shall be maintained with the appropriate soil thickness as described in the RAP. Repair of damage to the soil cover is to be made within thirty (30) days after discovery. The owner shall maintain records of inspections and maintenance of the Park property and GM shall annually file a report thereon with MDEQ.
- Notice to MDEQ and to GM of the intent to convey any interest in the Park property.
- The owner shall grant to MDEQ and to GM and their designated representatives the right to enter the Park property at reasonable times for the purpose of determining and monitoring compliance with the RAP, including the right to take samples, inspect the operation of the remedial action measures, maintain, repair and monitor the soil cover, and inspect any records relating thereto.

Aug 07, 2009 17:07

Aug 07, 2009 17:07

- The owner shall notify MDEQ and GM prior to performing sampling and analysis of impacted materials in the event transportation and/or disposal of impacted materials is performed. GM shall notify the owner and MDEQ prior to performing sampling and analysis of impacted materials in the event transportation and/or disposal of impacted materials is performed.
- The owner shall perform the operation and maintenance activities described in Section 2 of the June 2001 O&M Plan to be approved by MDEQ.

The deed restrictions will be implemented indefinitely. Any modification of the deed restrictions must be approved by MDEQ. The Remediation Agreement between GM and the City of Flint (Exhibit G), as amended by the Second Amendment being submitted under separate cover, will remain in effect, and the Consent Agreement between GM and the Genesee County Drain Commission (attached as Exhibit L), as discussed in Section 4.2 of the Park RAP, will remain in effect.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Aug 07, 2009 17:07

Aug 07, 2009 17:07

4. Attainment of closure criteria

Based on numerous investigations in the Park described in detail in the Park RI/FS Report, SOPCs (benzo(a)anthracene, benzo(a)pyrene, lead, and arsenic) were detected in the material underlying the Park cover. In accordance with Section 20120a of Part 201, to obtain closure of a site, the SOPC concentrations remaining in the soil must be protective considering migration and exposure pathways pertinent to the site. In general, the potential migration and exposure pathways include: leaching of substances from soil to ground water, migration of substances in soil to surface water, inhalation of substances, direct contact with substances and ingestion of substances. An analysis of these exposure pathways, detailed in the Park RI/FS, Park RAP and two RAP addenda, concluded that the closure criteria are achieved, summarized as follows:

- Ground water investigations conducted at former 4407 and 4413 Milton Drive and in the Park area demonstrated that the fill material has not adversely impacted the ground water, thereby eliminating this exposure pathway.
- Because surface water does not exist on or adjacent to the Park, the potential for migration to surface water does not exist. The presence of the soil cover prevents the potential for SOPCs to enter storm water catch basins located on or near the Park.
- SOPCs (excluding volatile substances) are not likely to be emitted to the atmosphere. As described in RAP Addendum No. 2, volatile substances remaining in the soil or ground water (former 4407 Milton Drive) are below applicable Part 201 criteria; therefore, the inhalation pathway is not a concern.
- The excavation of surface soil at former 4407 and 4413 Milton Drive and the South Utility Easement, combined with the presence of the soil cover IRM for the entire Park property, eliminates the potential for ingestion and direct contact, thereby eliminating this exposure pathway.

Additionally, the implementation of deed restrictions at the Park and the performance of maintenance on the Park cover will prevent future uncontrolled excavation activities and provide for repair of any damage to the Park cover.

The required provisions for a Limited Residential/Recreational closure listed in Section 20120b(3) of Part 201 have also been met, as outlined below:

Confidential under FOIA

Aug 07, 2009 17:07

Closure Report for Windiate Park

LFR

Aug 07, 2009 17:07

- Land use or resource use restrictions: the land and resource use restrictions outlined in the land use agreement and the restrictive covenant will run with the land, and will be recorded with the Genessee County Register of Deeds (see Section 3.1.4 of this report).
- Monitoring: no further ground water monitoring activities are required at the Park, as outlined in Section 2.2 of this report because ground water at the Park is not impacted.
- Operation and maintenance: the City of Flint will perform maintenance activities at the Park in accordance with the Park O&M Plan.
- Permanent markers: permanent markers have not been placed in the Park and are not proposed due to the public nature of the Park and contemplated recreational use. Therefore, in accordance with Section 20120b(3) of Part 201, a waiver of permanent markers is requested.
- Financial assurance: financial assurance is also not proposed due to the routine nature of the O&M activities, because the City of Flint, a municipality, has the resources to perform these activities, and because the estimated annual costs are de minimis. Therefore, in accordance with Section 20120b(3) of Part 201, a waiver of financial assurance is requested.

Confidential under FOIA

Aug 07, 2009 17:07

Aug 07, 2009 17:07

5. Conclusions

The completion of the soil cover IRM and Park amenities, supplemented by deed restrictions and maintenance at the Park in accordance with the Park O&M Plan, serves as the final remedy for the Park. This final remedy implemented as an IRM provides for a Limited Residential/Recreational (with recreational deed restrictions) closure for the Park. The property is currently zoned for single family residential. This zoning designation allows for and includes areas such as the Park that are used and designated for recreational purposes.

The remedial action for the Park (and associated areas) consists of the following elements:

- The soil cover IRM for the Park and Parcels A and B has been completed. Placement of topsoil and sod, which completed this IRM, was completed in the spring of 1996 for the Park, and in the summer of 1996 for two of the annexed parcels, Parcels A (former 4123 Milton Drive) and B (former 428 Shelly Lane).
- The IRMs performed at former 4407 Milton Drive (Parcel D), former 4413 Milton Drive (Parcel E), and the South Utility Easement portion of the Park included removal and disposal of surface soil and/or waste fill prior to installation of the soil cover IRM, and removal of isolated ground water impact via a recovery trench at 4407 Milton Drive. IRMs for these annexed parcels were completed in 1996 and 1997.
- Implementation of land and resource use restrictions at the property.
- Performance of maintenance activities associated with the soil cover IRM in accordance with the Park O&M Plan.

Based on the remedial actions completed at the Park, which provide for a Limited Residential/Recreational closure, remediation is considered complete in accordance with PA 451, Part 201.

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

FIGURES

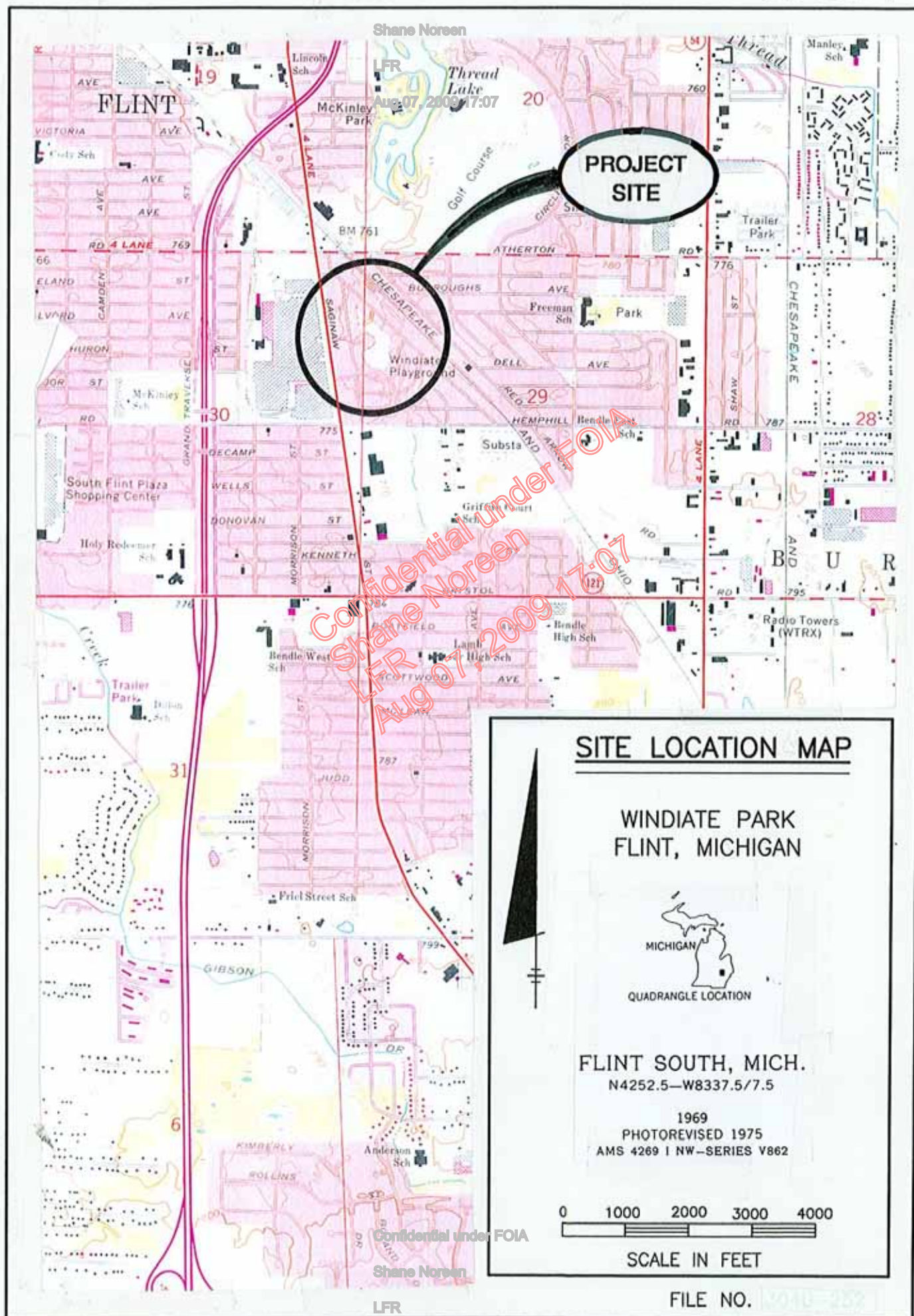
Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07





NOTE:

ALL CURVE DIMENSIONS SHOWN ARE CHORD UNLESS NOTED
ORIGINAL BASE DRAWING PROVIDED BY RICHARD H. KRAMT
ENGINEERING COMPANY.

OVERSHOOT LINES AS SHOWN ARE FROM TITLE COMMENTS
PROVIDED BY GENERAL MOTORS LAGO TITLE DEPARTMENT

ALL DISTANCES ARE MEASURED DISTANCES

[illegible]

IN CHARGE OF _____	
DESIGNED BY _____	

10

**OWEN CORNE
ENGINEERS, INC.**

WINDIATE PARK
FLINT, MICHIGAN

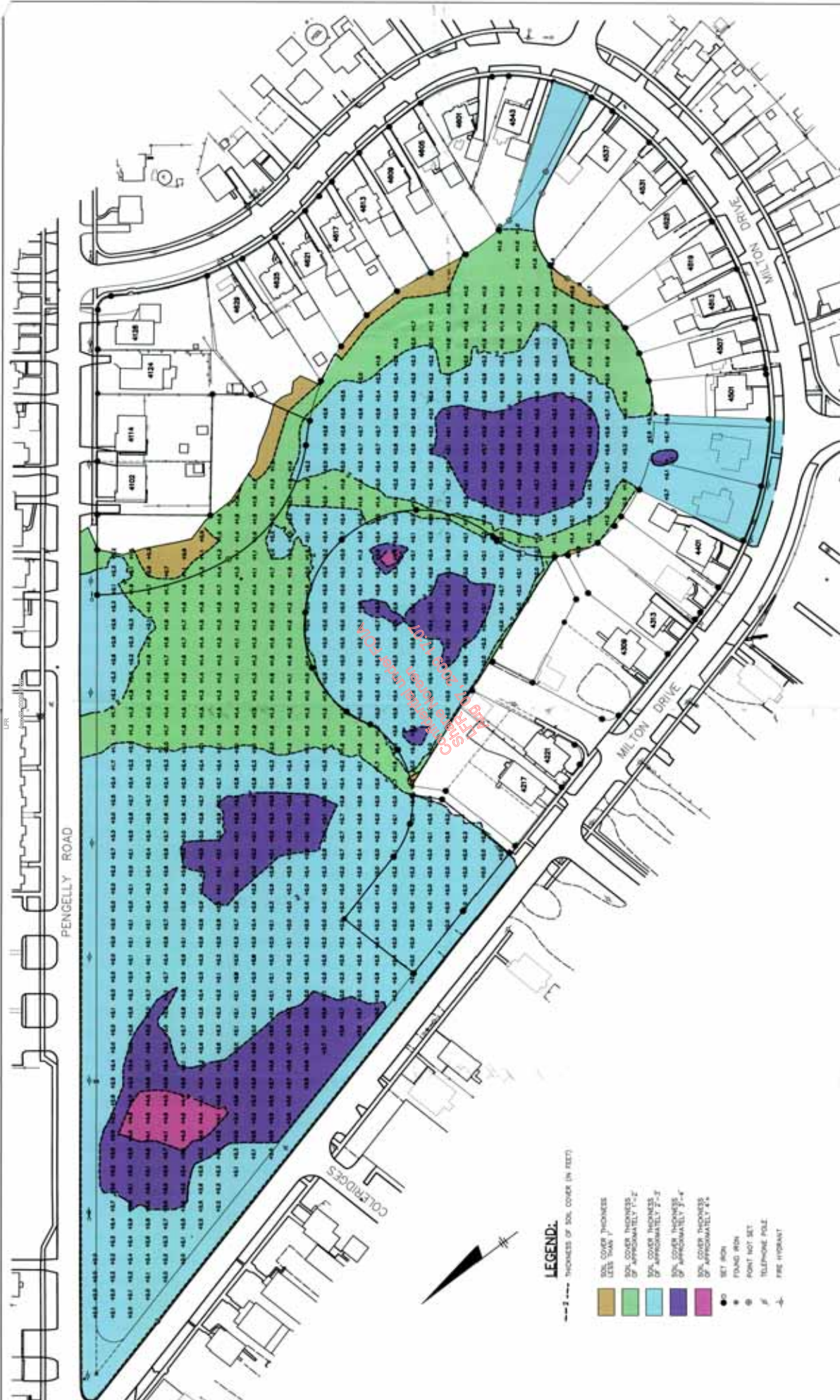
PROPERTY TO BE
ADDED TO THE PARK

FILE NO.	6009/24518.0042
DATE	

Confidential under FOIA
Sara Brown

LPR

\\VOP\PROD\TS\9008\2\518\10\K5\1005.DWG



LEGEND:

--- 2' --- THICKNESS OF SOIL COVER (IN FEET)

- SOIL COVER THICKNESS LESS THAN 1"
- SOIL COVER THICKNESS OF APPROXIMATELY 1"-2"
- SOIL COVER THICKNESS OF APPROXIMATELY 2"-3"
- SOIL COVER THICKNESS OF APPROXIMATELY 3"-4"
- SOIL COVER THICKNESS OF APPROXIMATELY 4"-6"
- SET IRON
- FLANG IRON
- POINT NOT SET
- TELEPHONE POLE
- FIRE HYDRANT

IN CHARGE OF SLE
DESIGNED BY JMB, CHECKED BY
DRAWN BY JMB/MD

1"=40'

NO. DATE REVISION

NO.	DATE	REVISION

OBRIEN GOERE
CONSULTING ENGINEERS, INC.
Sara Brown
LPR

GENERAL MOTORS CORPORATION
WINDATE PARK
FLINT, MICHIGAN

THICKNESS OF SOIL COVER

WINDATE PARK SOIL COVER

FILE NO.
009/2451&.002
DATE
NOVEMBER 2000

Operation and Maintenance Plan for Windiate Park, dated June 2001

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Operation and Maintenance Plan

**Windiate Park
Flint, Michigan**

Prepared for:
**General Motors Corporation
Detroit, Michigan**

June 2001



O'BRIEN & GERE
ENGINEERS, INC.

Operation and Maintenance Plan

*Windiate Park
Flint, Michigan*

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Scott L. Cormier, P.E.
Senior Managing Engineer

June 2001



Confidential under FOIA
33469 West 14 Mile Road
Suite 150
Farmington Hills, Michigan 48331
LFR

Contents

1. Introduction	1
1.1. Site description and background	2
2. Maintenance activities	3
2.1. Responsible operation and maintenance personnel	4
2.2. Previously completed soil cover repairs	4
3. Implementation schedule	5

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Operation and Maintenance Plan for Windiate Park

Aug 07, 2009 17:07

List of tables

3-1	Inspection Schedule	5
-----	---------------------------	---

List of figures

- 1 Site Location Map
- 2 Operation and Maintenance Site Plan

List of appendices

- A MDEQ Notice of Intent to Approve (Closure) Letter (for Park property), dated July 19, 1996.
- B Windiate Park Maintenance Checklist
- C Completed Windiate Park Maintenance Checklists
- D Waste Manifest Document

Aug 07, 2009 17:07

1. Introduction

The installation of a soil cover for Windiate Park and parcels to be annexed (Park) has been completed. The soil cover was installed as an interim remedial measure for the Park, in accordance with procedures outlined in the February 1996 Windiate Park Remedial Action Plan for a Limited Residential Closure (RAP), prepared by O'Brien & Gere Engineers, Inc. (O'Brien & Gere). The RAP was approved by Michigan Department of Environmental Quality (MDEQ), as expressed in a Notice of Intent to Approve (Closure) Letter (for Park property), dated July 19, 1996, included in Appendix A.

The soil cover was also installed on four parcels of land adjacent to the Park (which will be annexed to the Park) in accordance with two RAP addenda. Three of the annexed parcels, Parcels A, B, and C, were discussed in O'Brien & Gere's RAP Addendum, dated August 1996, while the fourth parcel, the former 4407/4413 Milton Drive property, was discussed in O'Brien & Gere's RAP Addendum No. 2, dated February 1998.

In addition, a soil cover was also installed over the South Utility Easement area in accordance with procedures outlined in RAP Addendum No. 2. The South Utility Easement is owned by the City of Flint (the City).

In the summer of 1998 through the spring of 1999, recreational amenities were installed at the Park, such as: concrete walking paths, basketball courts, baseball backstop, picnic areas with pavilions, and child play areas consisting of play structures and equipment. Trees and bushes were also planted to enhance the Park landscaping (completed from the fall of 1998 through the fall of 1999).

The soil cover will be maintained with the performance of Operation and Maintenance (O&M) activities in accordance with Mich. Admin. Code Rule 299.5517, and in response to the comments received from MDEQ RAP approval letter (see Appendix A). Since 1998 O'Brien & Gere, on behalf of General Motors Corporation (GM), has completed maintenance activities at the Park for the purpose of maintaining the appearance of the Park and maintaining the integrity of the cover. Beginning in the fall of 2001, the City will perform the semi-annual maintenance inspections.

Aug 07, 2009 17:07

Operation and Maintenance Plan for Windiate Park

Aug 07, 2009 17:07

1.1. Site description and background

Windiate Park is located in the City of Flint, Genesee County, Michigan as shown on the Site Location Map, Figure 1. The Park property, as remediated and covered under this O & M Plan, including all four annexed parcels of land and the South Utility Easement, is shown on the Site Plan, Figure 2.

The Windiate Park site formerly consisted of low-lying wetland areas which were reportedly subject to frequent flooding. In the late 1940s and early 1950s, fill materials (ostensibly from a number of sources) were deposited at the Park site. Flooding of the Park area continued during heavy rain events until a new storm sewer (referred to as the Schram Drain) was installed by the Genesee County Drain Commission in 1990.

The February 1996 Windiate Park Remedial Investigation/Feasibility Study (O'Brien & Gere) identified lead, arsenic, benzo(a)anthracene, and benzo(b)pyrene as Substances of Potential Concern (SOPC) in subsurface soil and fill material. Perched ground water was not adversely impacted in the Park. GM and the City implemented a remedial action for the Park which included the installation of a soil cover over the Park, deed restrictions, ground water monitoring for four quarters and future maintenance. Based on ground water monitoring indicating no impacts to ground water, and as approved by MDEQ in a July 13, 1998 letter to GM, the monitoring wells were decommissioned and removed on July 27, 1998, (described in O'Brien & Gere's August 19, 1999 letter to MDEQ). Park enhancement construction activities began thereafter.

Aug 07, 2009 17:07

2. Maintenance activities

Beginning in the fall of 2001, the Park will be inspected semi-annually by the City (GM completed prior inspections). The semi-annual inspections will include documenting the integrity of the soil cover for the Park.

As provided in the Remediation Agreement between the City and GM dated October 26, 1995, as amended, the City will perform the regular maintenance of the soil cover for the Park in perpetuity. Regular maintenance consists of visual inspections, mowing, reseeding as necessary, and filling in settled areas. These maintenance activities will be undertaken as required to maintain the integrity of the soil cover. The equipment and materials that may be required for these maintenance activities will be supplied by the City, either directly or by its contractor.

Mowing will be performed a minimum of twice per year, i.e., within two weeks prior to each semi-annual inspection. Mowing prior to the semi-annual inspections will facilitate proper inspection of the soil cover.

Park inspections will include the completion of checklists by the City inspector or the City's contractor. A copy of the Park Maintenance Checklist to be used is included in Appendix B.

Semi-annual inspections, performed by O'Brien & Gere, were completed on April 30, 1998, October 29, 1998, April 27, 1999, October 29, 1999, May 3, 2000, November 10, 2000 and April 27, 2000. Completed Park Maintenance Checklists are included in Appendix C.

Aug 07, 2009 17:07

Shane Noreen

Operation and Maintenance Plan for Windiate Park

Aug 07, 2009 17:07

2.1. Responsible operation and maintenance personnel

Beginning in the fall of 2001, maintenance activities will be conducted by personnel from the City Parks and Recreation Department. The City office responsible for maintenance and administrative activities is the Parks and Recreation Department. The current Director of Parks and Recreation to contact for information is:

Mr. Kevin Briski
Director of Parks and Recreation
City of Flint
120 East Fifth Street
Flint, MI 48502
(810) 766-7463

Repairs that are beyond the capability of City staff will be subcontracted by the City to a qualified contractor.

2.2. Previously completed soil cover repairs

The soil cover in the Park was disturbed in 1997 due to underground utility repairs completed by Michigan Consolidated Gas Company. On April 13 and June 12, 1998, soil cover repairs were completed by Young's Environmental Cleanup, Inc. (contracted by GM). The repairs to the soil cover are documented in the completed Park Maintenance Checklist dated April 30, 1998 (attached in Appendix C). The non-hazardous waste manifest document for the impacted soil removed from the Park during the repair activities on June 12, 1998, is attached in Appendix D.

Shane Noreen

LFR

Aug 07, 2009 17:07

3. Implementation schedule

Construction activities for Park enhancements including the installation of the concrete walkways, basketball courts, playground equipment and pavilions were implemented in July 1998 and substantially completed in the spring of 1999. Trees and bushes were also planted to enhance the Park landscaping (completed in the fall of 1998 and the fall of 1999).

The following semi-annual Park inspection schedule has been and will continue to be implemented:

Table 3-1. Inspection schedule

Date	Activity	Notes
April 30, 1998	Park inspection	Completed by O'Brien & Gere*
October 29, 1998	Park inspection	Completed by O'Brien & Gere*
April 27, 1999	Park inspection	Completed by O'Brien & Gere*
October 29, 1999	Park inspection	Completed by O'Brien & Gere*
May 3, 2000	Park inspection	Completed by O'Brien & Gere*
November 10, 2000	Park inspection	Completed by O'Brien & Gere*
April 27, 2001	Park inspection	Completed by O'Brien & Gere*
Fall 2001	Park inspection	To be completed by appropriate personnel

*Maintenance checklists are included in Appendix C

Park inspections conducted after April 2001 will be completed by the City on a semi-annual basis, on or before the first of May and the first of November of every year. Routine landscape care will be performed regularly during the spring, summer, and fall months. Mowing will be performed as described above. The concrete walkways, basketball courts, pavilion foundations, and playground equipment foundations will be maintained and repaired as determined by the inspection.

Copies of the completed checklists and repair documentation will be submitted to GM by the City within 30 days of each semi-annual inspection, and GM will submit the completed checklists to MDEQ annually on or before January 31 of each year, beginning January 2002.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

FIGURES FOR O&M PLAN

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

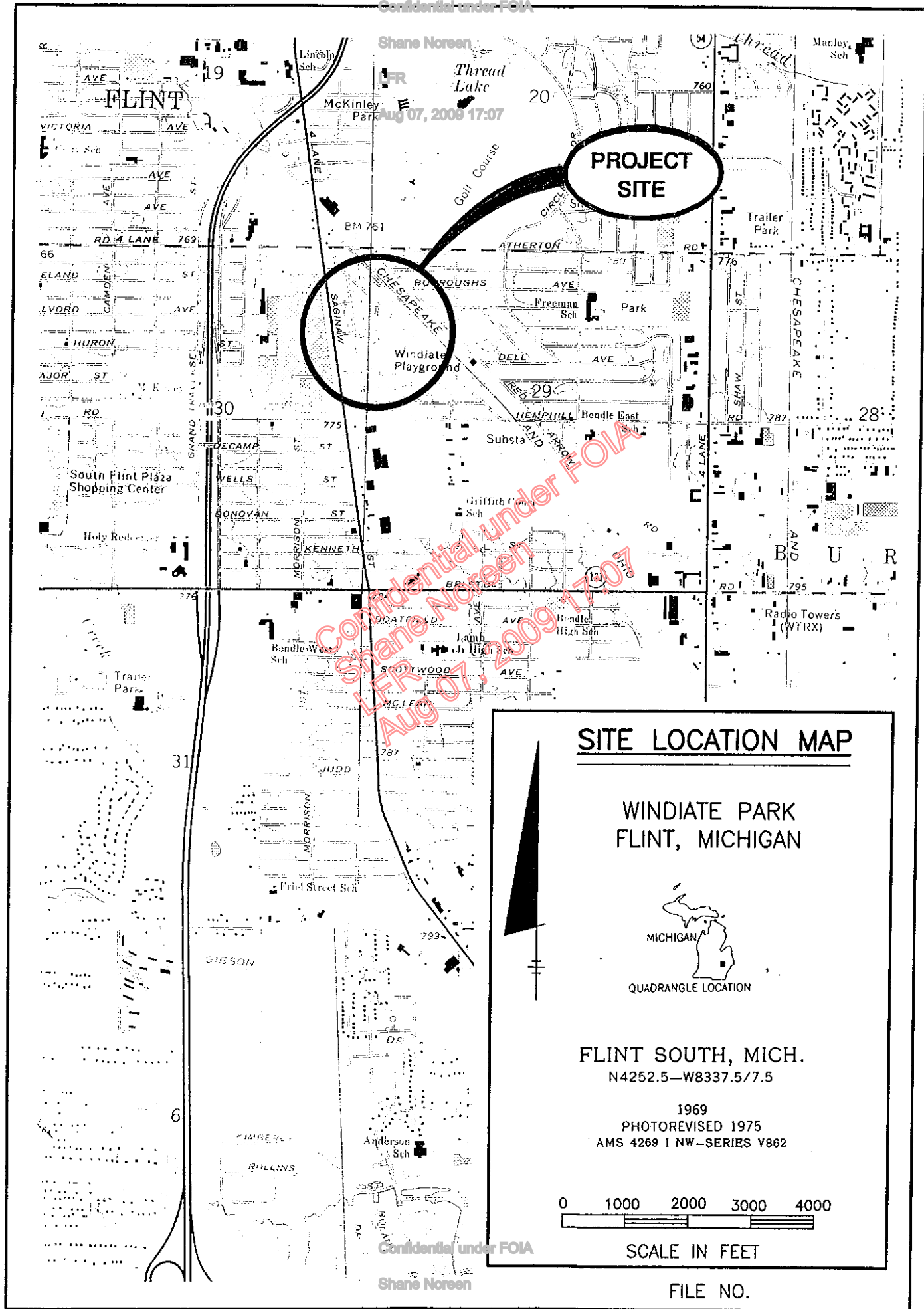
Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA



Shane Noreen

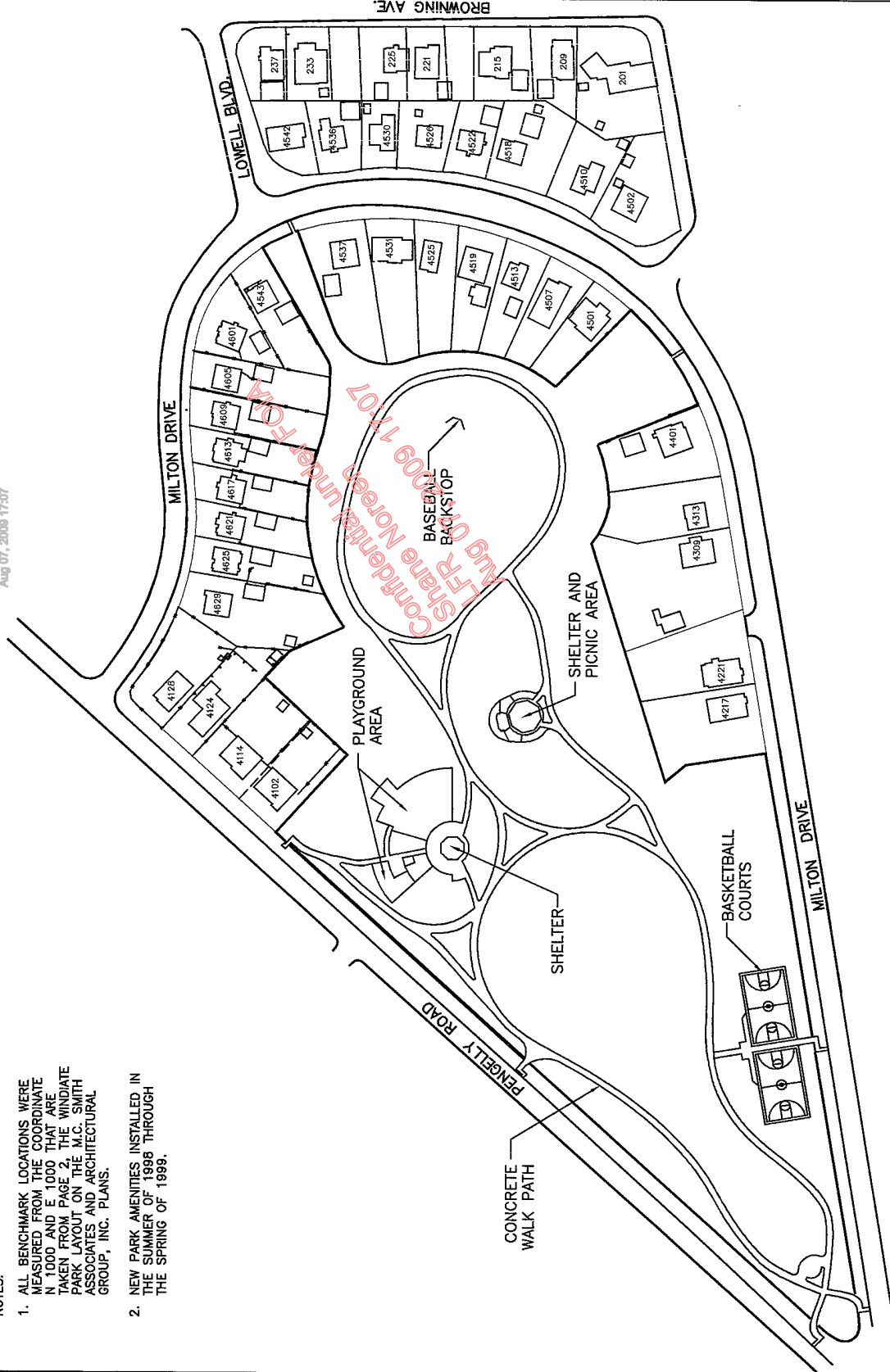
LFR

Aug 07, 2009 17:07

FIGURE 2

NOTES:

1. ALL BENCHMARK LOCATIONS WERE MEASURED FROM THE COORDINATE N 1000 AND E 1000 THAT ARE TAKEN FROM PAGE 2. THE WINDIATE PARK LAYOUT ON THE M.C. SMITH ASSOCIATES AND ARCHITECTURAL GROUP, INC. PLANS.
2. NEW PARK AMENITIES INSTALLED IN THE SUMMER OF 1998 THROUGH THE SPRING OF 1999.



LEGEND

PARK PROPERTY
LIMITS (BOUNDED
BY POST AND CABLE
AND CHAIN-LINKED
FENCING)

WINDIATE PARK AREA
FLINT, MICHIGAN

OPERATION AND
MAINTENANCE
SITE PLAN

125 0 125
APPROXIMATE SCALE IN FEET

FILE NO.6009/24518-002



Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

APPENDICIES FOR O&M PLAN

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

APPENDIX A

July 19, 1996 Michigan Department of Environmental Quality Approval Letter

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
STATE OF MICHIGAN

Shane Noreen

LFR

Aug 07, 2009 17:07
JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48206-7973

RUSSELL J. HARDING, Director

REPLY TO:

ENVIRONMENTAL RESPONSE DIVISION
KNAPP'S CENTRE
PO BOX 30426
LANSING MI 48206-7926

July 19, 1996

1996 JUL 25 PM 1:35

ENVIRONMENTAL QUALITY
FLINT OPERATIONS
RECEIVED

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Avenue
Flint, Michigan 48550

Dear Mr. Metcalf:

SUBJECT: Notice of Intent to Approve a Limited Residential/Recreational Closure for the Park Area of the Windiate Park/Dixieland Subdivision Landfill, Genesee County, Michigan

The Michigan Department of Environmental Quality (MDEQ), Environmental Response Division has reviewed the February 1996 Remedial Action Plan (RAP) prepared by O'Brien & Gere Engineers, Inc., for a Land-Use Based Closure at the subject site pursuant to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101, et seq.

Based upon our evaluation of the submittals, a Limited Residential Closure for the park property only of the Windiate Park/Dixieland Subdivision Landfill has been approved subject to the MDEQ's review of public comment on the proposed RAP and completion of the following:

1. Completion and signing of a legally enforceable agreement between the city of Flint, General Motors, and the MDEQ that includes the provisions for the following:
 - a. Land-use and resource use restrictions including prohibition of groundwater use and protection for utility workers or others who may come in direct contact with site contamination.
 - b. An operation and maintenance (O&M) plan that provides for quarterly monitoring of the groundwater for a period of one year and semi-annual monitoring of the cap. If during the groundwater monitoring period, contamination is detected above the MDEQ Residential Cleanup criteria, additional monitoring, investigation activities, and/or remediation of the groundwater may be necessary.
 - c. A financial assurance mechanism to provide for monitoring and O&M costs to assure the effectiveness and integrity of the remedial action.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Mr. Robert Metcalf

Shane Noreen

July 19, 1996

LFR

Aug 07, 2009 17:07

2. Receipt of a certified copy of a MDEQ-approved restrictive covenant which includes the liber and page number as recorded in the Genesee County Register of Deeds.
3. An addendum to the Remedial Investigation (RI) that details the results of the vertical profiling of the groundwater and confining layer definition. It is the understanding of the MDEQ that the preliminary results of the vertical profiling have not shown contamination above the MDEQ Residential Cleanup criteria and that a confining layer is present beneath the site. Please be advised that if the final results indicate otherwise, further RI activities may be necessary.

If you should have further questions or concerns, please contact Mr. Eric Van Riper, Environmental Response Division, Shiawassee District Office, at 517-625-4621, or you may contact me.

Sincerely,

Alan J. Howard
Alan J. Howard, Chief
Environmental Response Division
517-335-1104

cc: Mr. Michael Joliet, City of Flint
Mr. Kevin Lavalie, Gault & Davison
Mr. Dan Schultz, MDEQ
Mr. Larry Elmleaf, MDEQ
Mr. Rodney Mosler, MDEQ
Mr. Eric Van Riper, MDEQ
Mr. Dave Bartley, MDEQ

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

APPENDIX B

Windiate Park Maintenance Checklist

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of inspection:		Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy):	
Inspected By:		(Print name)	(Signature)
			(Title)
Inspect the following items:		Comments:	
Grass layer (bare patches, diseased/dead patches)			
Soil cover (areas of erosion, settlement, burrowing animals)			
Trees/shrubs (diseased/dead)			
Catch basins/manholes (integrity, condition of soil/grass surrounding)			
Walking paths (cracks, buckling)			
Pavilion/playground equipment foundations			
Post and Cable			
Other observations			
Corrective measures to be taken:			

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
 Shane Noreen
 LFR
 Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

APPENDIX C

Completed Windiate Park Maintenance Checklists -

April 30, 1998

October 29, 1998

April 27, 1999

October 29, 1999

May 3, 2000

November 10, 2000

April 27, 2001

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST

Date of Inspection:		Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy):	
4/30/98		Sunny, 80 degrees, calm	
Inspected By:	Mike Robison (Print name)	(Signature)	O'Brien & Gere (Company Name)
Inspect the following items:		Comments:	
Grass layer (bare patches, diseased/dead patches)		Areas of dead/diseased grass throughout southern half of park.	
Soil cover (areas of erosion, settlement, burrowing animals)		Water ponding (from precipitation) in area at north end of Park, in vicinity of MW-2.	
Trees/shrubs (diseased/dead)		NA	
Catch basins/manholes (integrity, condition of soil/grass surrounding)		Checked OK	
Walking paths (cracks, buckling)		NA	
Other observations		MichCon disturbed the soil cover in the Park in 1997 near Pengelly Rd. due to underground utility repair (Note 2).	
Corrective measures to be taken: Dead/diseased grass to be addressed by the City of Flint after completion of the Park Development/Construction Project. In addition, on May 6, 1998, an application of fertilizer with weed killer was sprayed on the park turf by Custom Lawn Care. Area at north end of park where ponding of water occurred has been addressed. On April 13, 1998 Youngs Environmental has placed topsoil in area to alleviate the ponding. An approximate 4 to 10 inch thick layer of topsoil was placed over an approximate 5000 sq ft area, and subsequently graded. Hydroseed was then applied over the topsoil. In addition, topsoil was placed in the backyard along the fence bordering the park at 4629 Milton Drive. Topsoil was placed in a depression created from removal of large trees associated with the Residential Remediation project. This area was also seeded.			

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

DRAFT

- Notes:
1. This checklist has been completed in accordance with the Windiate Park O & M Plan dated March 1997 (revised June 1997).
 2. Subsequent to this inspection, on June 12, 1998, Young's Environmental excavated and removed the soil (2 ft depth) that was disturbed by Consumers Power for gas line repairs along Pengelly Rd. and replaced with 18 inches of sand and 6 inches of topsoil.

In:\projects\6005007\4_notes\4_30c&m.wb2

WINDIATE PARK MAINTENANCE CHECKLIST

Date of inspection:	Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy):	
10/29/98	53°F, PARTLY CLOUDY	
Inspected By:	(Print name)	(Signature)
MIKE ROBISON		
Inspect the following items:		
Grass layer (bare patches, diseased/dead patches)	Comments:	
	DEAD SOD IN SOUTHERN AREAS OF PARK.	
Soil cover (areas of erosion, settlement, burrowing animals)		
Trees/shrubs (diseased/dead)	OK - TREES NOT YET PLANTED (AS PART OF PARK CONSTRUCTION)	
Catch basins/manholes (integrity, condition of soil/grass surrounding)	OK	
Walking paths (cracks, buckling)	OK - STILL UNDER CONSTRUCTION. ALTHOUGH SOME GRAFFITI SPRAY PAINTED ON PATHS.	
Pavilion/playground equipment foundations	N/A - NOT YET INSTALLED (AS PART OF PARK CONSTRUCTION).	
Other observations	—	
Corrective measures to be taken:		
* PARK IS IN THE PROCESS OF CONSTRUCTION ACTIVITIES, ANTICIPATED TO BE COMPLETED IN SPRING OF 1999. DEAD SOD SHOULD BE ADDRESSED AT LATER DATE DURING LANDSCAPING ACTIVITIES (AS PART OF PARK CONSTRUCTION ACTIVITIES).		

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of Inspection:		Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy):	
4/27/99		60 degrees F, minimal wind, mostly sunny	
Inspected By:	Mike Robison (Print name)	 (Signature) O'Brien & Gere Engineers (Company Name)	
Inspect the following items:		Comments:	
Grass layer (bare patches, diseased/dead patches)		Some grading and hydroseeding still to be completed per Park construction activities. Hydroseed from last fall has not grown in yet in all areas. Weeds are prevalent, and the Park should be mowed.	
Soil cover (areas of erosion, settlement, burrowing animals)		Some topsoil is eroding in (bare) areas adjacent to walkways leading up to picnic area pavilion (where hydroseed has not yet been applied).	
Trees/shrubs (diseased/dead)		OK	
Catch basins/manholes (integrity, condition of soil/grass surrounding)		OK	
Walking paths (cracks, buckling)		Graffiti spray-painted on walk paths leading up to picnic pavilion.	
Pavilion/playground equipment foundations		Some (water) ponding between large (playbooster) playground structure and pavilion area - the drainage problem was observed to the west of playbooster structure and to the east of pavilion. Foundations appeared OK.	
Post and Cable		Cable is unattached at the following locations: Entrance off Milton (just south of basketball courts), the southwest Milton entrance (former 4407/4413 addresses), the Lowell entrance and the Pengelly Rd. entrance (across from apartments).	
Other observations		All garbage bins were over-flowing with garbage. Garbage bin along Milton just to the east of basketball courts not secured to post & cable like other bins.	
Corrective measures to be taken: Topsoil erosion - hydroseed to be applied in May 1999 by City contractor.			
A site walk-through regarding the completion of the Park Development/Construction project is scheduled for June 1999 between the City's contractor, the City and the City's consultant. During this site walk-through, O'Brien & Gere Engineers (who will also attend the site walk-through) will make the City aware of the various above referenced issues.			

Shane Noren

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noren

Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of Inspection: 10/29/99 Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy): 65 degrees, sunny

10/29/99

Inspected By: Mike Robison
(Print name)O'Brien & Gere Engineers
(Title)

(Signature)

Inspect the following items:

Comments:

Grass layer (bare patches, diseased/dead patches)

A few bare areas south of the basketball courts (east of the gated vehicle entrance).

Soil cover (areas of erosion, settlement, burrowing animals)

OK

Trees/shrubs (diseased/dead)

OK. However, at the base of some trees, the weeds are 4 ft - 5 ft tall.

Catch basins/manholes (integrity, condition of soil/grass surrounding)

OK

Walking paths (cracks, buckling)

OK

Pavilion/playground equipment foundations

OK

Post and Cable

Detached cable due to concrete heaving from within posts at east entrance across from Pengelly Apts., and at the southeast entrance across from 4101 Pengelly (east of the playground area).

Two basketball rims need new nets. In addition, a water ponding outline observed in center-north center of south basketball court (however, no water ponding today).

Other observations

Corrective measures to be taken:

A copy of this checklist has been forwarded to The City of Flint as well as the City's Consultant for the Park Development project (ROWE).

Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of Inspection:	5/3/00	Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy): 60 degrees, overcast	
Inspected By:	Mike Robison (Print name)	 (Signature) O'Brien & Gere Engineers (Title)	
Inspect the following items:			
Grass layer (bare patches, diseased/dead patches)		A few bare areas south of the basketball courts (east of the gated vehicle entrance), same as 10/99.	
Soil cover (areas of erosion, settlement, burrowing animals)		OK	
Trees/shrubs (diseased/dead)		OK. However, at the base of some trees, the weeds are 4 ft - 5 ft tall.	
Catch basins/manholes (integrity, condition of soil/grass surrounding)		OK	
Walking paths (cracks, buckling)		OK	
Pavilion/playground equipment foundations		OK	
Post and Cable		Detached cable due to concrete heaving from within posts at east entrance across from Pengelly Apts., and at the southeast entrance across from 4101 Pengelly (east of the playground area). A water ponding outline observed in center-north corner of south basketball court (however, no water ponding today).	
Other observations			
Corrective measures to be taken:			
To be determined.			

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of Inspection:	11/10/00	Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy): 45 degrees, overcast, 20-30 mph wind	
Inspected By:	Mike Robison (Print name)	 (Signature)	O'Brien & Gere Engineers (Title)
Inspect the following items:			
Grass layer (bare patches, diseased/dead patches)			A few small areas of no grass cover in former Shelly Lane area, west of concrete walkway, top of mound.
Soil cover (areas of erosion, settlement, burrowing animals)			Approx. 10 ft long tire ruts, 1/2 ft deep into soil cover, northeast of basketball courts, bottom of hill.
Trees/shrubs (diseased/dead)			Two dead pine trees on top of hill south-southeast of playground area. Two dead pine trees south-southwest of baseball backstop.
Catch basins/manholes (integrity, condition of soil/grass surrounding)		OK	Shane Noreen LFR Aug 07, 2009 17:07
Walking paths (cracks, buckling)		OK	
Pavilion/playground equipment/basketball court foundations		OK	
Post and Cable			Detached cable due to concrete heaving from within posts at east entrance across from Pengelly Apts., and at the southeast entrance across from 4101 Pengelly (east of the playground area).
Other observations			Water ponding observed near center area of southern basketball court.
Corrective measures to be taken:			
To be determined.			

Aug 07, 2009 17:07

WINDIATE PARK MAINTENANCE CHECKLIST (per O & M Plan)

Date of Inspection:	4/27/01	Weather Conditions (temperature, wind speed, precipitation, sunny, cloudy): 70 degrees, sunny, light wind	
Inspected By:	Mike Robison (Print name)	(Signature) 	O'Brien & Gere Engineers (Title)
Inspect the following items:			
Grass layer (bare patches, diseased/dead patches)		OK (however, fertilizer and weed preventer is recommended for grass)	
Soil cover (areas of erosion, settlement, burrowing animals)		The tire ruts observed during 11/10/00 inspection still noticeable northeast of basketball courts.	
Trees/shrubs (diseased/dead)		Two dead pine trees on top of hill south-southeast of playground area (same trees observed last inspection). Two dead pine trees south-southwest of baseball backstop (same trees observed last inspection).	
Catch basins/manholes (integrity, condition of soil/grass surrounding)		OK	Shane Noreen LFR Aug 07, 2009 17:07
Walking paths (cracks, buckling)		OK	
Pavilion/playground equipment/basketball court foundations		OK	
Post and Cable		Detached cable due to concrete heaving from within posts at east entrance across from Pengelly Apts. (the previously detached cable at the southeast entrance across from 4101 Pengelly has been re-attached)	
Other observations		Outline of ponding water observed near center area of southern basketball court (however, dry during site visit).	
Corrective measures to be taken:			
To be determined.			

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

APPENDIX D

Waste Manifest Document

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

NON-HAZARDOUS WASTE MANIFEST

GENERATOR:

GMHAMILTON STWINDATE PARK, FULTON, MICarrier YOUNG'S ENV. CLEANUP, INC.

Vehicle No. _____

Aug 07, 2009 DELIVER TO:

- ☐ Autumn Hills RDF (Zeeland, MI)
☐ Cedar Ridge RDF (Charlevoix, MI)
☐ Eagle Valley RDF (Orion, MI)
☐ Northern Oaks RDF (Harrison, MI)
☐ Tri-City RDF (Carsonville, MI)
☒ Venice Park RDF (Lennon, MI)
☐ Westside RDF (Three Rivers, MI)
☐ Woodland Meadows RDF — Van Buren (Canton, MI)

Company Responsible for Disposal Charges:

YOUNG'S ENV. CLEANUP, INC.☐ Via Transfer Station: _____

Profile No.	Name of Waste Stream	Approx. Volume	Act. Weights
YE372251	DAMAGED SOIL	10 YARDS	23.24
			17.13
			6.13

Shipper: _____

Date: _____

TRANSPORTER

Received at Transfer Station: _____

Date: 6-10-98

Received at Disposal Facility: _____

Date: 6/10/98

White: Generator

Canary: Disposal Facility

Pink: Carrier

Gold: Generator

Confidential under FOIA

Shane Noreen

EXHIBIT A

LFR

Aug 07, 2009 17:07

**MDEQ Notice of Intent to Approve
Closure Letter (for Park Property),
dated July 19, 1996**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

STATE OF MICHIGAN

LFR



Aug 07, 2009 17:07

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48209-7973

RUSSELL J. HARDING, Director

REPLY TO:

ENVIRONMENTAL RESPONSE DIVISION
KNAPP'S CENTRE
PO BOX 30428
LANSING MI 48209-7928

July 19, 1996

1996 JUL 25 PM 1:35

RECEIVED
FLINT OPERATIONS
HARDING COLLECTION

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Avenue
Flint, Michigan 48550

Dear Mr. Metcalf:

SUBJECT: Notice of Intent to Approve a Limited Residential/Recreational Closure for the Park Area of the Windiate Park/Dixieland Subdivision Landfill, Genesee County, Michigan

The Michigan Department of Environmental Quality (MDEQ), Environmental Response Division has reviewed the February 1996 Remedial Action Plan (RAP) prepared by O'Brien & Gere Engineers, Inc., for a Land-Use Based Closure at the subject site pursuant to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101, et seq.

Based upon our evaluation of the submittal, a Limited Residential Closure for the park property only of the Windiate Park/Dixieland Subdivision Landfill has been approved subject to the MDEQ's review of public comment on the proposed RAP and completion of the following:

1. Completion and signing of a legally enforceable agreement between the city of Flint, General Motors, and the MDEQ that includes the provisions for the following:
 - a. Land-use and resource use restrictions including prohibition of groundwater use and protection for utility workers or others who may come in direct contact with site contamination.
 - b. An operation and maintenance (O&M) plan that provides for quarterly monitoring of the groundwater for a period of one year and semi-annual monitoring of the cap. If during the groundwater monitoring period, contamination is detected above the MDEQ Residential Cleanup criteria, additional monitoring, investigation activities, and/or remediation of the groundwater may be necessary.
 - c. A financial assurance mechanism to provide for monitoring and O&M costs to assure the effectiveness and integrity of the remedial action.

Mr. Robert Metcalf

Shane Noreen

-2-

July 19, 1996

LFR

Aug 07, 2009 17:07

2. Receipt of a certified copy of a MDEQ-approved restrictive covenant which includes the liber and page number as recorded in the Genesee County Register of Deeds.
3. An addendum to the Remedial Investigation (RI) that details the results of the vertical profiling of the groundwater and confining layer definition. It is the understanding of the MDEQ that the preliminary results of the vertical profiling have not shown contamination above the MDEQ Residential Cleanup criteria and that a confining layer is present beneath the site. Please be advised that if the final results indicate otherwise, further RI activities may be necessary.

If you should have further questions or concerns, please contact Mr. Eric Van Riper, Environmental Response Division, Shiawassee District Office, at 517-625-4621, or you may contact me.

Sincerely,


Alan J. Howard, Chief
Environmental Response Division
517-355-1104

cc: Mr. Michael Joliet, City of Flint
Mr. Kevin Lavelle, Gault & Davison
Mr. Dan Schultz, MDEQ
Mr. Larry Elmleaf, MDEQ
Mr. Rodney Mosier, MDEQ
Mr. Eric Van Riper, MDEQ
Mr. Dave Bartley, MDEQ

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

EXHIBIT B

LFR

Aug 07, 2009 17:07

**O'Brien & Gere's Monitoring Well
Decommission Documentation Letter
to MDEQ, dated August 19, 1999**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

August 19, 1999

Mr. Eric L. Van Riper
Geologist
Michigan Department of Environmental Quality
Environmental Response Division
10650 S. Bennett Drive
Morrice, MI 48857

Re: Monitoring Well Decommission
Documentation -
Windiate Park, Flint, Michigan

File: 6009/24518 #2

Dear Mr. Van Riper:

O'Brien & Gere Engineers, Inc. (O'Brien & Gere), on behalf of General Motors Corporation (GMC), has prepared this letter to inform your office of the monitoring well decommission and removal activities performed at the Windiate Park site in Flint, Michigan (Figure 1).

BACKGROUND

In response to the comments received from the Michigan Department of Environmental Quality (MDEQ) in a letter dated July 19, 1996, ground water monitoring activities were conducted by ATC & Associates (contracted by GMC) on a quarterly basis for 1 yr (between 2/97 and 11/97). Ground water samples were collected from the eight monitoring wells (MW001 through MW008) at Windiate Park and the upgradient well (MW009) along Browning Avenue. Results from the ground water monitoring were submitted to the MDEQ by GMC within 45 days after each round of quarterly sampling. The ground water analytical results (from each of the four quarterly rounds of sampling) were all below MDEQ Residential Drinking Water Criteria (May 1999), thereby confirming the absence of any ground water impact. Accordingly, monitoring well removal at the site was performed.

DECOMMISSION ACTIVITIES

GMC requested, and in a July 13, 1998 letter from the MDEQ (Appendix A) received approval to remove the monitoring wells at the site. The eight wells at Windiate Park and one well off-site along Browning Avenue were decommissioned and removed in accordance with Michigan Department of Public Health guidance as outlined in Part 127 of 1978 PA 368, as amended, MDEQ guidance as outlined in Part 625 of 1994 PA 451, as amended, and ASTM Standard D 5299-92. A site plan depicting the former location of the wells in relation to the site is included as Figure 2.

Young's Environmental Cleanup, Inc. (YECI) of Flint, Michigan was the drilling company which performed the well removal on July 27, 1998. The monitoring wells were decommissioned by overdrilling the wells, removing the well materials and backfilling each hole with bentonite slurry approximately 2 ft below grade. Sand was

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Mr. Eric L. Van Riper
August 19, 1999
Page 2

then backfilled to approximately 6 inches below grade. Topsoil was then backfilled to the surface and seeded. Monitoring well materials were properly disposed of by YECI.

The soil cover in the vicinity of the monitoring wells, disturbed as a result of the removal of the well materials, was repaired to match the existing cover.

Additionally, in accordance with PA 368, well plugging records documenting the removal of the wells have been completed and will be forwarded to the appropriate agencies, including the Genesee County Health Department. Copies of the well plugging records are included as Appendix B.

Please call either Bob Metcalf at (810) 236-0300 or me at (248) 426-8970 if you have any questions or comments.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

SLC

Scott L. Cormier, P.E.
Managing Engineer

MBR/tss

Enclosures

cc: Mr. James S. McEwan - MDEQ, Drinking Water and Radiological Protection Division, Lansing, MI
Mr. Robert S. Metcalf, P.E. - General Motors WFG, Flint, MI
Mr. Edward E. Peterson - General Motors WFG, Detroit, MI
Mr. Swiatoslav W. Kaczmar, PhD, CIH - O'Brien & Gere Engineers, Syracuse, NY
Kevin Lavalley, Esq. - Gault Davison, Flint, MI

bcc: AM Noel/C Reinholm, JM Polito/K Hammers, M McGee, WC Fulkerson, SJ Adamowski, AJ Finch,
MB Robison

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

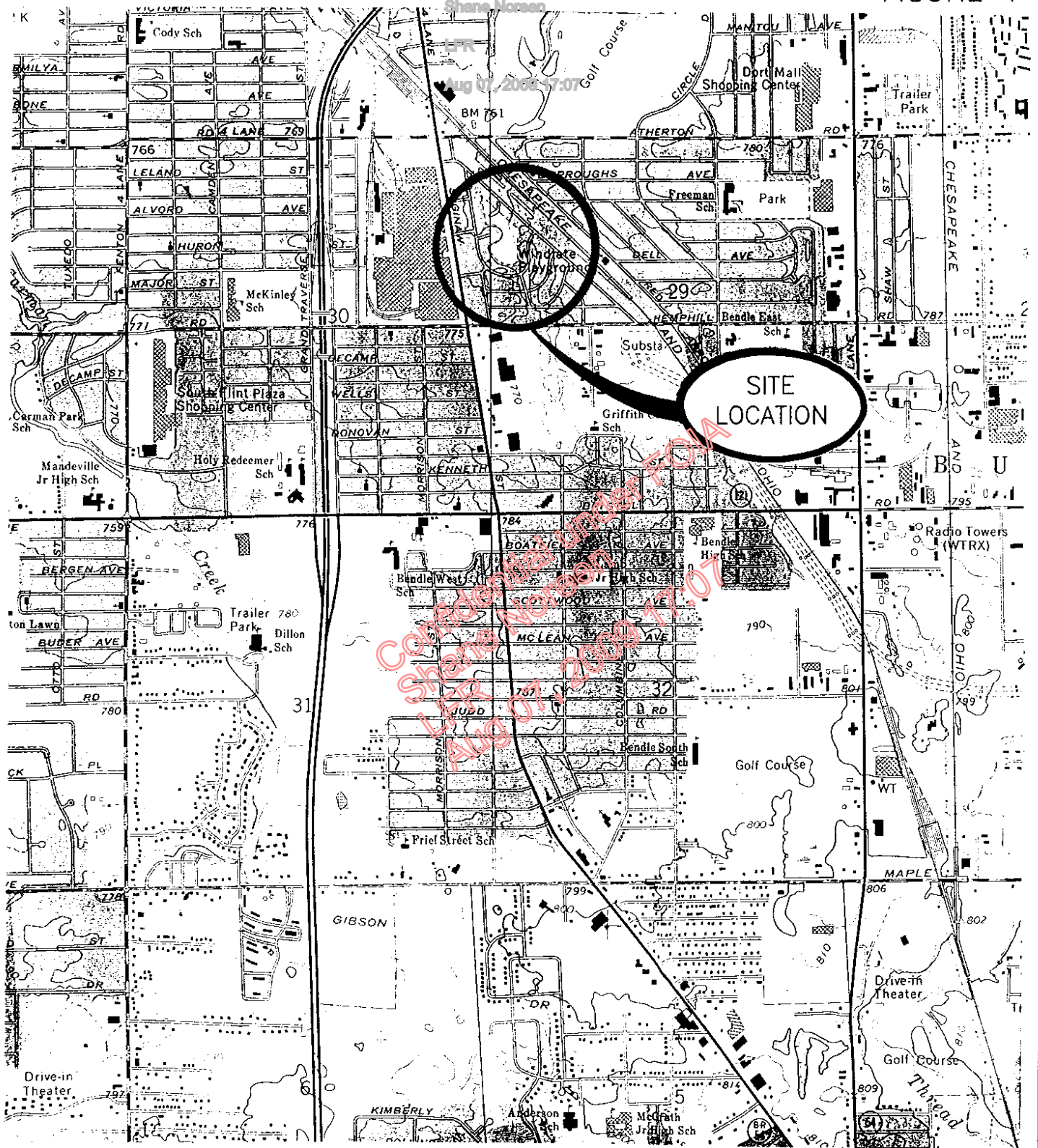
LFR

Aug 07, 2009 17:07

Shane Noren

FIGURE 1

Aug 07, 2008 17:07



FLINT SOUTH, MICH.
N4252.5—W8337.5/7.5

1969
PHOTOREVISED 1975
AMS 4269 I NW—SERIES V862

WINDIATE PARK AREA
FLINT, MICHIGAN

SITE LOCATION MAP

Confidential Under FOIA

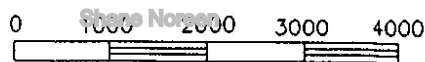
Shane Noren

LFR

Aug 07, 2008 17:07



QUADRANGLE LOCATION



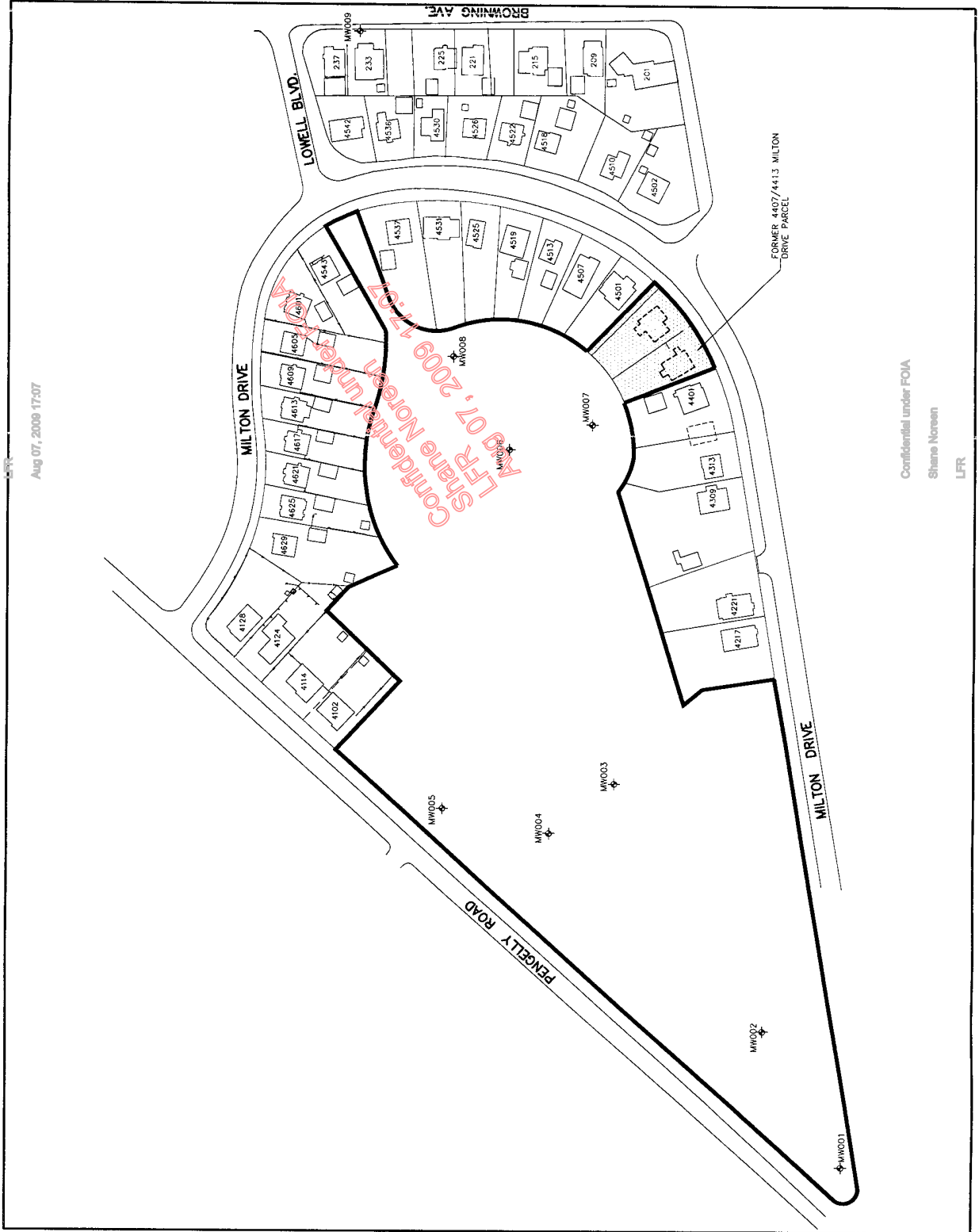
SCALE IN FEET

FILE NO. 6009-011



O'BRIEN & GERE
ENGINEERS, INC.

Aug 07, 2009 17:07



LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

MDEQ Monitoring Well Abandonment Approval Letter

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

DNR SHIA. DIST. HQ.

Fax: 1-517-625-5000

Jul 14 '98

9:27

P. 02/02

Shane Noreen

LFR

STATE OF MICHIGAN

AUG 07, 2009 17:07



REPLY TO:

 SHIAWASSEE DISTRICT OFFICE
 10830 BENNETT DRIVE
 MORRIS, MI 48837-9797

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: <http://www.deq.state.mi.us>

RUSSELL J. HARDING, Director

July 13, 1998

 Mr. Robert Metcalf
 General Motors Corporation
 CLCD North
 902 E. Hamilton Ave.
 Flint, MI 48550-8504

Dear Mr. Metcalf:

 SUBJECT: Monitoring Well Abandonment, Windiate Park/Dixieland Subdivision Landfill, Flint,
 Genesee County, Michigan

The Michigan Department of Environmental Quality (MDEQ) has reviewed the July 2, 1998 correspondence and associated groundwater analytical results from O'Brien & Gere Engineers, Inc. regarding the above referenced site. Based on the results of the groundwater samples collected, including all previous results, the MDEQ concurs that the nine monitoring wells installed to investigate potential groundwater contamination at the site may be abandoned. Please note that all wells should be abandoned according to the procedures described in the Michigan Water Well Construction and Pump Installation Code, Part 127 of 1978; P.A. 368 as amended.

If you have any questions, please feel free to contact me at (517) 625-4621.

Sincerely,

 Eric L. Van Riper
 Shiawassee District Office
 Environmental Response Division

EV: jah

cc: Kevin Lavalle, Gault, Davison P.C.

Confidential under FOIA

Shane Noreen

LFR

Well Plugging Records

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

ABANDONED WELL PLUGGING RECORD

Completion is required under authority of Part 127 Act 368 PA 1978
Failure to comply is a misdemeanor

PERMIT NO:

TAX NO:

1. LOCATION OF WELL

County GENESEE Township Name CITY OF FLINT Fraction NW 1/4 Section No. 30 Town No. 7 Range No. 7

Distance and Direction from Road Intersection

WEST OF MILTON DR. + EAST OF
PENBELLY RD.

Street Address & City of Well Location

WINDATE PARK, FLINT, MI

12. OWNER OF WELL

GENERAL MOTORS CORP.
Address CLCD NORTH
902 E. HAMILTON AVE., FLINT,
Address Same as Well Location ☐ Yes ☒ No MI, 48550

2. WELL DEPTH:

11-16 ft.

3. Date Plugging Completed

7/27/98

4. USE:

☐ Single Family☐ Type I Public☐ Heat Pump☐ Irrigation☐ Type II Public☒ MONITORING WELLS☐ Test Well☐ Type III Public

5. REASON FOR ABANDONING WELL

☐ Municipal Water Hookup☐ New Well Drilled☒ Other MDER APPROVAL LETTER (7/13/98)☐ Unrepairable

6. CASING:

2 in. dia. to 11/16 ft. depth. in. dia. to ft. depth

7. CASING MATERIAL

☒ Steel ☐ Other☐ Plastic

8. CASING STATUS AFTER PLUGGING

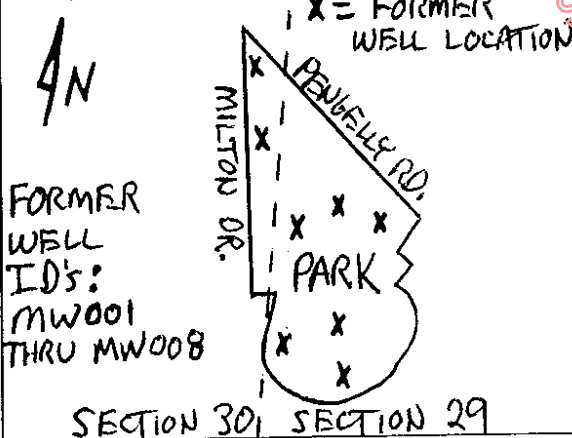
☐ Buried ft. below grade☒ Removed☐ Above Grade in.

9. FLOWING WELL:

☐ Yes ☒ No

10. SITE SKETCH:

Show location of plugged well(s) relative to buildings, drives, roads, and other structures or landmarks on site. Include a North arrow.



11. COMMENTS

TOTAL OF EIGHT MONITORING WELLS DECOMMISSIONED IN PARK. THE WHOLE WELL CASING + SCREEN WAS REMOVED AT EACH LOCATION. BENTONITE PELLETS WERE THEN PLACED FROM THE BOTTOM OF THE BORE HOLE UP TO 2 FEET BELOW GRADE. SAND + TOPSOIL WERE THEN PLACED TO THE SURFACE.

NOTE: Plugging from well bottom up to ground surface is required.

15. LOST CIRCULATION ZONE MATERIALS USED

Type Quantity Placed from ft. to ft.

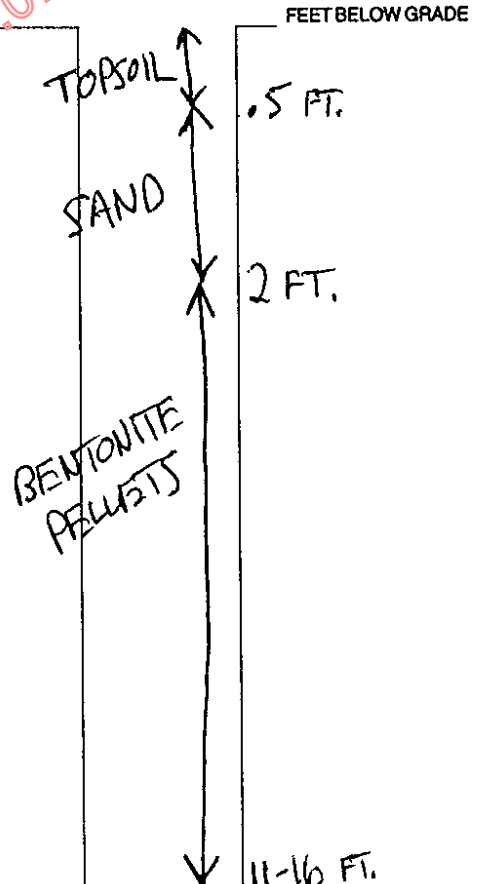
16. PLUGGING SKETCH (Complete if combination of materials was used.) Show type of plugging materials and interval plugged.

MATERIAL:

TYPICAL DIAGRAM FOR EACH OF THE EIGHT DECOMMISSIONED WELLS.

WELL DEPTHS:

MW001 16 FT.
MW002 11 FT.
MW003 13 FT.
MW004 16 FT.
MW005 16 FT.
MW006 13 FT.
MW007 15 FT.
MW008 11 FT.



17. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was plugged under my jurisdiction and this report is true to the best of my knowledge and belief.

DRILLING CONTRACTOR: YOUNG'S ENVIRONMENTAL CLEANUP

REGISTERED BUSINESS NAME

Address: 13-5305 N DORT HIGHWAY, FLINT, MI

REGISTRATION NO.

Signed: Mitchell R. O'Brien

AUTHORIZED REPRESENTATIVE

Date: MAY 1999Oversight Provided By: O'Brien + Gabe Engineers, NW 1/4

IMPORTANT: File with deed.

TAX NO:

PERMIT NO:

Completion is required under authority of Part 127 Act 368 PA 1978
Failure to comply is a misdemeanor

1. LOCATION OF WELL

County

GENESEE

Township Name

CITY OF FLINT

Fraction

1/4 1/4

Section No.

29

Town No.

7

Range No.

7

Distance and Direction from Road Intersection

IN RIGHT-OF-WAY AT
233 BROWNING AVE., WEST OF LOWELL
Street Address & City of Well Location
FLINT, MI BLVD.

12. OWNER OF WELL

GENERAL MOTORS CORP.
Address
CLCD NORTH
902 E. HAMILTON AVE., FLINT, MI
Address Same as Well Location ☐ Yes ☒ No 48550

2. WELL DEPTH:

15 ft.

3. Date Plugging Completed

7/27/98

13. DROP PIPE/PUMPING EQUIPMENT REMOVED

☐ Yes ☐ No (Explain in COMMENTS) N/A

4. USE:

☐ Single Family☐ Type I Public☐ Heat Pump☐ Irrigation☐ Type II Public☒ MONITORING WELL☐ Test Well☐ Type III Public

5. REASON FOR ABANDONING WELL

☐ Municipal Water Hookup☐ New Well Drilled☒ Other MDEQ APPROVAL LETTER (7/13/98)☐ Unrepairable

6. CASING:

2 in. dia. to 15 ft. depth.

in. dia. to ft. depth

7. CASING MATERIAL

☒ Steel ☐ Other☐ Plastic

14. PLUGGING MATERIAL:

Bentonite Chips from ft. to ft. 50# bags

Bentonite Pellets from 2 ft. to 15 ft. 2 50# bags

Bentonite Grout from ft. to ft. 50# bags

Neat Cement from ft. to ft. 94# bags

Cement Grout from ft. to ft. 94# bags

Other

8. CASING STATUS AFTER PLUGGING

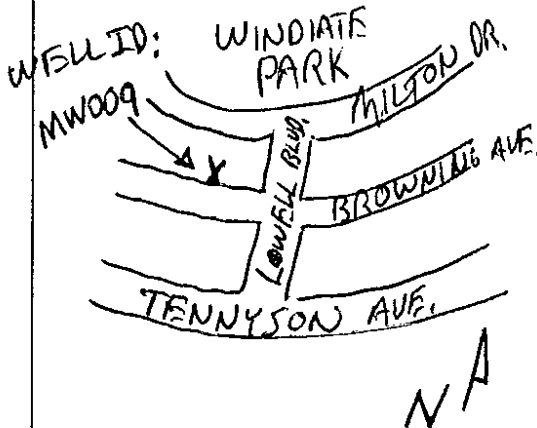
☐ Buried ft. below grade☒ Removed☐ Above Grade in.

9. FLOWING WELL:

☐ Yes ☒ No

10. SITE SKETCH:

Show location of plugged well(s) relative to buildings, drives, roads, and other structures or landmarks on site. Include a North arrow.



11. COMMENTS

THE WHOLE WELL CASING WAS REMOVED. BENTONITE PELLETS WERE PLACED FROM THE BOTTOM OF THE BOREHOLE UP TO 2 FEET BELOW GRADE. SAND & TOPSOIL WERE THEN PLACED TO THE SURFACE.

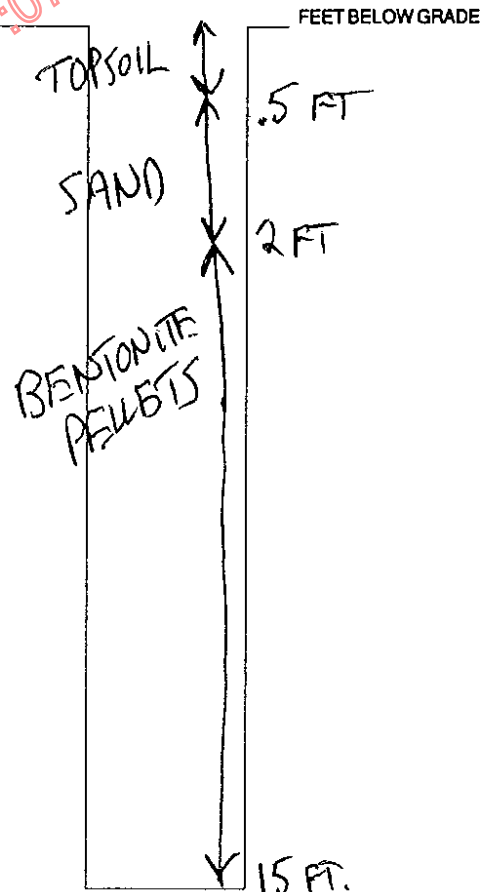
NOTE: Plugging from well bottom up to ground surface is required.

15. LOST CIRCULATION ZONE MATERIALS USED

Type Quantity Placed from ft. to ft.

16. PLUGGING SKETCH (Complete if combination of materials was used.) Show type of plugging materials and interval plugged.

MATERIAL



17. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was plugged under my jurisdiction and this report is true to the best of my knowledge and belief.

REGISTERED BUSINESS NAME: YOUNGS ENVIRONMENTAL CLEANUP

Address: 6-5305 N. DEPT HIGHWAY, FLINT, MI

REGISTRATION NO.

Signed: Rick Rym (O'Brien & Gere)

Date: MAY 1999

AUTHORIZED REPRESENTATIVE

IMPORTANT: File with deed.

OVERSIGHT PROVIDED BY O'BRIEN & GERE ENGINEERS, N.A.

WELL OWNER COPY

**MDEQ Approval Letter (with
contingencies, regarding the IRMs
for twenty-two residential
properties), dated April 22, 1997**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

DNR SHIA. DIST. HQ. Fax:1-517-625-5000

Apr 21 '97 21:05 P.01/02

Aug 07, 2009 17:07
STATE OF MICHIGAN

JOHN ENGLER, Governor
DEPARTMENT OF ENVIRONMENTAL QUALITY
 HOLLISTER BUILDING, PO BOX 30479, LANSING MI 48209-7979
 RUSSELL J. HARDING, Director

REPLY TO:

SHIAWASSEE DISTRICT OFFICE
 10450 E BENNETT DR
 MORRIS MI 48857-9792

April 22, 1997

Mr. Robert Metcalf
 General Motors Corporation
 CLCD North
 902 E. Hamilton Ave.
 Flint, MI 48550-8504

Post-It® Fax Note	7671	Date	4-22-97	# of pages	2
To	BOB METCALF	From	ERIC VAN RIPER		
Co./Dept.	G M	To	MDEQ		
Phone #	810-236-0300	Phone #	517-625-4621		
Fax #	810-236-4151	Fax #	517-625-5000		

Dear Mr. Metcalf:

SUBJECT: Windiate Park/Dixieland Subdivision Landfill, Flint, Genesee County,
 Michigan

Staff of the Michigan Department of Environmental Quality (MDEQ) have reviewed the January 21, 1997 correspondence regarding the interim remedial measures for 22 residential properties of the Windiate Park/Dixieland Subdivision Landfill. In addition, the MDEQ has also reviewed the *Clean Closure Verification Sampling and Analysis* work plan for the Residential Properties contained in Appendix I of the *February 1997 Remedial Investigation/Feasibility Study* report. The proposed interim response measures for the individual properties include the excavation of impacted surface soils, the excavation and removal of waste fill material, or the placing of a soil cover over the waste material or a combination thereof. One property is also proposed to have impacted groundwater remediated as part of the interim response measures. It is proposed to use an on-site X-ray fluorescence (XRF) analyzer to analyze for lead for verification sampling of each excavated area and to implement deed restrictions on those properties where waste material will be left in place.

The following comments stem from the MDEQ review of the proposed interim response measures:

1. The use of the XRF is acceptable for soil verification for lead, however, a minimum of 10 percent of the samples should be submitted to a certified laboratory for confirmation analysis. The proposed verification sampling with the XRF is intended to use lead as an indicator compound for remediation purposes. Since lead is the compound of most concern, the MDEQ has no objections in using lead as an indicator compound for remediation purposes. The MDEQ does request, however, that a minimum of one sample per excavation also be analyzed for all substances of concern.

2. The proposal to collect, remove, and dispose of contaminated groundwater that enters the excavation at 4407 Milton Drive is acceptable, however, the MDEQ has concerns regarding the horizontal and vertical extent of the impacted groundwater at this location and where the contaminated groundwater is migrating. The MDEQ does not agree that the contaminated

Confidential under FOIA

Shane Noreen

LFR

Shane Noreen

DNR SHIA. DIST. HQ.

Fax:1-517-625-5000

Apr 21 '97

21:05

P.02/02

Aug 07, 2009 17:07

Mr. Robert Metcalf

-2-

April 22, 1997

groundwater is not part of a potentially usable aquifer. The MDEQ also does not agree with the proposal to only sample the water that enters the excavation until levels are below the indoor air cleanup criteria. All potential routes of exposure for the groundwater must be addressed.

Please be advised that the above listed comments stem from MDEQ Shiawassee District staff review of the proposed interim response measures only. The MDEQ is currently conducting a complete review of the *February 1997 Remedial Investigation/Feasibility Study* and the *February 1997 Remedial Action Plan* for the Residential Properties of the Windlate Park/Dixieland Subdivision Landfill. The MDEQ anticipates having the review completed in May 1997, however, the following must be submitted before the MDEQ can complete its review of the proposed remedial action:

1. The results of the interim response measures as proposed in Section 3 of the Appendix I of the *February 1997 Remedial Investigation/Feasibility Study* should be submitted.
2. For all properties where deed restrictions will become part of the final remedy for the site, a draft legal agreement, restrictive covenant, operation and maintenance plan, and financial assurance mechanism must be submitted for MDEQ review.

If you have any questions or would like to discuss this matter further, please contact Mr. Eric Van Riper at 517-625-4621.

Sincerely,



Rodney Mosier
Shiawassee District Supervisor
Environmental Response Division
517-625-4615

cc: Mr. Eric Van Riper, MDEQ
Mr. Scott Cormier, OBG
Mr. Kevin Lavallo, Gault Davison, P.C.
Mr. John Pettit, GCHD
Mr. Jim Bedford, MDCH

Shane Noreen

LFR

**O'Brien & Gere's Response to
MDEQ comments Letter (regarding
the IRMs for twenty-two residential
properties), dated July 17, 1997**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



O'BRIEN & GERE
ENGINEERS, INC.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

July 17, 1997

Mr. Eric L. Van Riper
Geologist
Michigan Department of Environmental Quality
Environmental Response Division
10650 S. Bennett Drive
Morrice, MI 48857

Re: Residential Properties in the Windiate Park
Area - Flint, Michigan

File: 6009 016 #2

Dear Mr. Van Riper:

This letter is to update the MDEQ on the X-Ray Fluorescence (XRF) lead analysis for clean closure verification sampling during the Windiate Park Residential Remediation Project, and to respond to the MDEQ April 22, 1997 letter to General Motors Corporation (GM).

1. MDEQ Comment: *The use of the XRF is acceptable for soil verification for lead, however, a minimum of 10 percent of the samples should be submitted to a certified laboratory for confirmation analysis. The proposed verification sampling with the XRF is intended to use lead as an indicator compound for remediation purposes. Since lead is the compound of most concern, the MDEQ has no objections in using lead as an indicator compound for remediation purposes. The MDEQ does request, however, that a minimum of one sample per excavation also be analyzed for all substances of concern.*

Response: As discussed, we have incorporated a minimum of 10% laboratory confirmation analysis and a minimum of one sample per excavation of waste fill analyzed for lead, arsenic, benzo(a)pyrene, and benzo(a)anthracene into the interim remedial measures (IRM) Work Plan (Appendix I of the February 1997 RI/FS Report). Excavations for lead impacted surface soil will have confirmatory analysis for lead only, as you verbally approved.

For your information, we are providing you with an update regarding the correlation of the XRF results to the laboratory confirmation results. XRF data results are compared to Lab data results on Chart 1 (attached as Appendix A). The XRF instrument is calibrated for lead concentrations in soil from 100 ppm to 700 ppm, and has an approximate tolerance of ± 75 ppm; therefore, if the XRF result identifies a concentration of lead at or above 325 ppm for a "small" site, that sample is also submitted to the laboratory for lead analysis by Method 6010A. It should be noted that actual lead concentrations below 100 ppm are below the detection limit of the XRF instrument, and may result in negative reported values. There is good correlation between the XRF results and Lab results. A majority of the samples were determined by the Lab to be below 100 ppm; a trend also represented in the XRF data.

Confidential under FOIA

O'Brien & Gere Engineers, Inc., an O'Brien & Gere company
39830 Grand River Avenue / Suite B-2 / Novi, MI 48275-1000
... and offices in major U.S. cities.

LFR

Aug 07, 2009 17:07

Mr. Eric L. Van Riper
July 17, 1997
Page 2

Aug 07, 2009 17:07

2. MDEQ Comment: *"The proposal to collect, remove, and dispose of contaminated ground water that enters the excavation at 4407 Milton Drive is acceptable, however, the MDEQ has concerns regarding the horizontal and vertical extent of the impacted ground water at this location and where the contaminated ground water is migrating."*

Response: Based on analytical results from geoprobe ground water samples collected at 4401, 4407, and 4413 Milton Drive (Site), and analytical results from the monitoring wells located in and around Windiate Park, ground water impact at the Site has been delineated to MDEQ Generic Residential Health-Based Drinking Water Values.

During Site investigations, ten ground water samples were collected where field screening by PID and sensory methods indicated the potential presence of VOCs. The samples from 4401, 4407, and 4413 Milton Drive were collected by geoprobe methods using a hydraulic probe attached with a screened water sampler at locations GB-43D, GB-46D, GB-50D, GB-51D, GB-61D, GB-64D, GB-65D, GB-1E, GB-2E, and GB-3E as shown on Figure 1. Analytical results indicated benzene concentrations above Health-Based Drinking Water Values in seven out of the ten ground water samples at these three properties.

However, analytical results from the downgradient monitoring well in the Park (MW-7, installed during the Windiate Park RI) and results from a geoprobe ground water sample (GB-51D), collected upgradient of the localized benzene impact, were below the method detection limit for benzene. Analytical results from geoprobe ground water samples GB-1E and GB-2E, collected cross-gradient of the localized impact, were below the method detection limit for benzene. Furthermore, as identified in the Windiate Park RI/FS Report dated February, 1996 (Park RI/FS), monitoring wells located radially outward in and around Windiate Park indicated ground water analytical results below method detection limits for benzene. In addition, as identified on Figure 1, ground water was not observed in some of the geoprobe borings installed at the Site, thereby indicating that the perched ground water beneath the Site may be discontinuous at certain times of the year.

The geoprobe ground water analytical results, including data validation qualifiers, are summarized on the attached Tables 1A, 1B, 2A, 2B, 3A, and 3B. It should be noted that the full scope of investigation and results (soil and ground water) at 4413 Milton Drive will be included in the Windiate Park Remedial Action Plan Addendum #2 Report which is anticipated for submittal to the MDEQ later this year.

In summary, based on the above discussion, the horizontal extent of impacted ground water is assessed and impacted ground water does not appear to be migrating off-site. The vertical extent of impacted ground water is also delineated as summarized in the response to the following MDEQ comment.

3. MDEQ Comment: *"The MDEQ does not agree that the contaminated ground water is not part of a potentially usable aquifer"*

Response: The perched water at the Site is not a usable aquifer as the perched zone is discontinuous across the site within the fill material, is above a clay confining unit with thicknesses of over 100 ft and does not provide a significant source of water. Additionally, the perched water does not appear to be hydrogeologically connected to the usable aquifer due to the presence of the local and regional clay confining unit. This issue is discussed in more detail below:

Shane Noreen

LFR

Aug 07, 2009 17:07

Mr. Eric L. Van Riper
July 17, 1997
Page 3

Ground water beneath the Site was observed in a perched zone at depths ranging from 7 fbg to 12 fbg in the backyards of 4407 and 4413 Milton Drive, and 10 fbg to 15 fbg in the backyard of 4401 Milton Drive. Field observations indicate that the perched water at the Site is discontinuous based on the lack of water observed in seven of the geoprobe borings installed at the Site (see Figure 1 for locations). In addition, during ground water sample collection (by geoprobe methods), only small quantities of the perched water could be collected at each sampling location due to the slow recharge observed. Because only an insignificant amount of water could be extracted from the perched zone, and, based on the relatively shallow clay confining unit observed in this area (generally from 12 fbg to 135 fbg), aquifer-type conditions do not exist within the perched zone.

Based on the thickness of the observed confining unit in this area, it is unlikely that the perched water at the Site will migrate vertically to a usable aquifer. There is a usable aquifer identified within this region; however, it is separated from the perched zone by a confining unit of significant thickness. This confining unit is described as a blue/grey clay that generally exists from 12 fbg to 135 fbg, with thicknesses ranging from 30 ft to over 150 ft, as outlined in the Park RI/FS and the August 1996 Addendum to the Remedial Action Plan.

Furthermore, perched water is not used by residents in this area as they are supplied by municipal water from a water main underneath Milton Drive. In addition, the City of Flint Ordinance 3271, effective April 17, 1994, requires homes in the City of Flint to be connected to the public water supply if they are within 200 ft of a public water main (by adopting the 1993 BOCA National Property Maintenance Code (see PM-502.1 and PM 506.1) and the 1993 BOCA National Plumbing Code (see P-304.1 and P-304.3)). Our review of Flint records indicate that houses in the Windiate Park subdivision are within 200 ft of the public water main.

4. MDEQ Comment: *"The MDEQ also does not agree with the proposal to only sample the water that enters the excavation until levels are below the Volatilization to Indoor Air (VIA) cleanup criteria. All potential routes of exposure for the ground water must be addressed."*

Response: All potential routes of exposure to ground water were addressed for the Site following IRM implementation, as presented on pages 31-33 in the *Exposure Assessment* Section of the Residential RI/FS. The potential routes of exposure to ground water were identified as:

- Surface water
- Drinking water
- Direct contact
- Volatilization to indoor air

A brief description of the potential routes of exposure to ground water are presented below.

Surface water. There is no standing surface water identified at or adjacent to the Site. Therefore, this exposure pathway is not complete and not a concern.

Drinking water. There are no residential wells in this area and residences are supplied by municipal water. The City of Flint Ordinance 3271 requires use of the public water supply within this area as a public water main is within 200 ft of the residential structures, as outlined in the response to Item No. 3 above. Based on regional and Site specific geological data, perched water beneath the residential properties is not likely connected to the usable aquifer (see Response #3 in this letter). Therefore, this exposure pathway is not complete and therefore not a concern.

Mr. Eric L. Van Riper
July 17, 1997
Page 4

Direct contact. The levels of benzene in the ground water were below the Generic Ground Water Contact Criteria (GCC). Therefore, the exposure pathway for the construction/utility worker is not complete and not a concern.

Furthermore, a deed restriction is proposed for 4407 Milton Drive following IRM implementation. The deed restriction will prevent excavation activities. Therefore, this exposure pathway is not complete and not a concern.

Volatilization to indoor air (VIA). Ground water will be removed until sample results indicate levels below the VIA criteria. Therefore, this exposure pathway is not complete and not a concern. However, this pathway was conservatively evaluated (see page 32 of Residential RI/FS) by measuring the concentration of benzene potentially entering the basement of the 4407 Milton Drive property prior to IRM implementation. This Risk Based Corrective Action Tier II evaluation (Appendix M of the Residential RI/FS) concluded that levels of benzene potentially entering the basement were within acceptable levels.

Furthermore, the former house at 4407 Milton Drive has been demolished and the parcel will be donated to the City of Flint as part of the recreational Park. Therefore VIA criteria will no longer apply to the parcel as there will no longer be a structure on the property. The applicable criteria for this future use would be the Generic Soil Inhalation Criteria (SIC) for Ambient Air, outlined in the MDEQ Technical Support Document, dated April 29, 1997. The maximum benzene level in the soil at these properties is below the benzene finite source volatile SIC for a 5 meter source thickness; therefore, this pathway is not a concern. As previously mentioned, this issue will be further addressed in the Addendum #2 to the Windiate Park RAP.

5. MDEQ Comment: *The results of the interim response measures as proposed in Section 3 of the Appendix I of the February 1997 Remedial Investigation/Feasibility Study should be submitted.*

Response: The results of the IRMs will be submitted to the MDEQ following completion of remedial actions which is currently schedule for mid-July 1997.

6. MDEQ Comment: *For all properties where deed restrictions will become part of the final remedy for the site, a draft legal agreement, restrictive covenant, operation and maintenance plan, and financial assurance mechanism must be submitted for MDEQ review.*

Response: As identified in the February 1997 Remedial Action Plan (see pages 11 - 13), an operation and maintenance plan and financial assurance mechanism are not proposed for the private residential properties that will contain deed restrictions as the restrictive covenant will specify appropriate land use restrictions and only normal and routine maintenance will be required by the land owner. The deed restriction, restrictive covenant and/or draft legal agreement will be submitted to the MDEQ under separate cover.

Shane Noreen

LFR

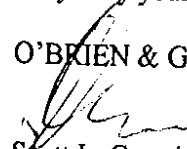
Aug 07, 2009 17:07

Mr. Eric L. Van Riper
July 17, 1997
Page 5

Please call either Bob Metcalf at (810) 236-0300 or me at (248) 426-8970 if you have any questions or comments.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.


Scott L. Cormier, P.E.
Managing Engineer

Enclosure

MBR/tss

cc: Mr. Robert S. Metcalf, P.E. - General Motors WFC, Flint, MI
Mr. Edward E. Peterson - General Motors WFC, Detroit, MI
Mr. Swiatoslav W. Kaczmar, PhD, CIH - O'Brien & Gere Engineers, Syracuse, NY

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07



Table 1A
4401 Milton Drive
Ground Water Analytical Results - Geoprobe Boring
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Draft Res. GW Volatilization to Indoor Air* ug/L	Health Based Drinking Water Value ug/L	GB-43D 4401 Milton 05/17/96 10 - 12 ft ug/L	GB-46D 4401 Milton 07/15/96 12 - 14 ft ug/L	GB-50D 4401 Milton 07/15/96 14 - 15 ft ug/L
Benzene	5	240	5{C}	[100 J]	[86 J]	[42 J]
Ethylbenzene	1	77000	700	3.0 J	14 J	6.6 J
Toluene	1	33000	1000{C}	3.0 J	8.9 J	41 J
Xylene (total)	3	---	10000{C}	8.4 J	48 J	30 J

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

NOTES: [] Exceeds Target MDL/Health Based Drinking Water Value. Data qualifier definitions and MDEQ Cleanup Criteria footnotes are included at end of tables.
--- Denotes MDEQ criteria not established. * - Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria are screening values.
Database/program: windy2/4401.dbf/44018260.prg.

Table 1B
4401 Milton Drive
Ground Water Analytical Results - Geoprobe Boring
SW8015 (Modified) Gasoline Range Organics Data

Analyte	Target Method Detection Limit mg/L	Draft Res. GW Volatilization to Indoor Air* mg/L	Health Based Drinking Water Value mg/L	GB-46D 4401 Milton 07/15/96 12 - 14 ft. mg/L	GB-50D 4401 Milton 07/15/96 14 - 15 ft. mg/L
Diesel Range Organics (DRO)	---	---	---	190 J	10 UJ
Gasoline Range Organics (GRO)	---	---	---	89 J	10 UJ
Mineral spirits	---	---	---	10 UJ	10 UJ
Kerosene	---	---	---	89 J	10 UJ

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

NOTES: Data Qualifier Definitions and MDEQ Cleanup Criteria footnotes are included at end of table.
--- Denotes MDEQ criteria not established. * - Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria are screening values.
Database/Program: windy2/4401.dbf/44018015.prg.

Table 2A
4407 Milton Drive
Ground Water Analytical Results - Geoprobe Boring
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Draft Res. GW Volatilization to Indoor Air* ug/L	Health Based Drinking Water Value ug/L	GB-51D 4407 Milton Dr. 07/15/96 16 - 18 ft. ug/L	GB-61D 4407 Milton Dr. 07/16/96 8 - 10 ft. ug/L	GB-64D 4407 Milton Dr. 07/16/96 10 - 12 ft. ug/L	GB-65D 4407 Milton Dr. 07/16/96 10 - 12 ft. ug/L
Benzene	5	240	5{C}	1.0 UJ	[43]	[55]	[(470 J)]
Toluene	1	33000	1000{C}	6.8 J	58	47	490 J
Ethylbenzene	1	77000	700	1.0 UJ	6.3	4.9	130 J
Xylene (total)	3	---	10000{C}	5.1 J	34	39	450 J

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
 Shane Noreen
 LFR
 Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

NOTES:

[] Exceeds Target MDL/Health Based Drinking Water Value. () Exceeds Draft Residential Ground Water Volatilization to Indoor Air Criteria. Data Qualifier Definitions and MDEQ Cleanup Criteria footnotes are included at end of table. --- Denotes MDEQ criteria not established.
 * - Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria are screening values. Database/Program: windy2/4407.dbf/44078260.prg.

Page 1 of 1



Table 2B
4407 Milton Drive
Ground Water Analytical Results - Geoprobe Boring
SW8015 (Modified) Gasoline Range Organics Data

Analyte	Target Method Detection Limit mg/L	Draft Res. GW Volatilization to Indoor Air* mg/L	Health Based Drinking Water Value mg/L	GB-51D 4407 Milton Dr. 07/15/96 16 - 18 ft. mg/L	GB-61D 4407 Milton Dr. 07/16/96 8 - 10 ft. mg/L	GB-64D 4407 Milton Dr. 07/16/96 10 - 12 ft. mg/L	GB-65D 4407 Milton Dr. 07/16/96 10 - 12 ft. mg/L
Diesel Range Organics (DRO)	---	---	---	10 UJ	13 J	10 UJ	10 UJ
Gasoline Range Organics (GRO)	---	---	---	10 UJ	10 UJ	10 UJ	10 UJ
Mineral spirits	---	---	---	10 UJ	10 UJ	10 UJ	10 UJ
Kerosene	---	---	---	10 UJ	10 UJ	10 UJ	10 UJ

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

NOTES: Data Qualifier Definitions and MDEQ Cleanup Criteria footnotes are included at end of table.
--- Denotes MDEQ criteria not established. * - Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria are screening values.
Database/Program: windy2/4407.dbi/44078015.prg.

Table 3A
4413 Milton Drive
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Health Based Drinking Water Value ug/L	Health Based DW /Target MDL - Highest Value ug/L	GB-1E 4413 Milton 09/10/96 ug/L	GB-2E 4413 Milton 09/10/96 ug/L	GB-3E 4413 Milton 09/11/96 ug/L
1,1,1-Trichloroethane	1	200{C}	200{C}	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	1	4.3	4.3	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	1	880	880	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	1	7{C}	7{C}	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
2-Butanone (MEK)	50	13000	13000	10 U	10 U	10 U
2-Pentanone	50	1000	1000	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	50	370	370	3.0 U	3.8 J	5.0 U
Acetone	100	730	730	84 J	10 U	10 U
Benzene	5	5{C}/240*	240*	2.5 J	15	0.42 J
Bromochloromethane	1	100{C,S}	100{C,S}	0.50 U	0.50 U	0.50 U
Bromoform	1	100{C,S}	100{C,S}	0.50 U	0.50 U	0.50 U
Bromomethane	1	10	10	1.0 U	1.0 U	1.0 U
Carbon disulfide	50	800	800	0.35 J	0.1 J	0.45 J
Carbon tetrachloride	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
Chlorobenzene	1	100{C}	100{C}	0.50 U	0.50 U	0.50 U
Chloroethane	1	220	220	1.0 U	1.0 U	1.0 U
Chloroform	1	100{C,S}	100{C,S}	0.50 U	0.50 U	0.50 U
Chloromethane	1	66	66	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1	100{C,S}	100{C,S}	0.50 U	0.50 U	0.50 U
Ethylbenzene	1	700/77000*	77000*	1.8	1.7	0.35 J
Methylene chloride	5	5{C}	5{C}	0.50 U	0.50 U	0.50 U
Styrene	1	100	100	0.50 U	0.50 U	0.50 U

NOTES: Data qualifier definitions and MDEQ Cleanup footnotes are included at the end of the table.

[] Exceeds Higher of Target MDL/Health Based Drinking Water Value. * Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria (screening values).
--- Denotes MDEQ criteria not established. Database/Program: resprop.dbf/rp8260w.prg.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07



Table 3A
4413 Milton Drive
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Health Based Drinking Water Value ug/L	Health Based DW /Target MDL - Highest Value ug/L	GB-1E 4413 Milton 09/10/96 ug/L	GB-2E 4413 Milton 09/10/96 ug/L	GB-3E 4413 Milton 09/11/96 ug/L
Tetrachloroethene	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
Toluene	1	1000{C}/33000*	33000*	8.8 J	12	1.3
Trichloroethene	1	5{C}	5{C}	0.50 U	0.50 U	0.50 U
Vinyl chloride	1	2{C}	2{C}	1.0 U	1.0 U	1.0 U
Xylene (total)	3	10000{C}	10000{C}	9.2	8.1	1.8
cis-1,2-Dichloroethene	1	70{C}	70{C}	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	1	100{C}	100{C}	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

NOTES: Data qualifier definitions and MDEQ Cleanup footnotes are included at the end of the table.
[] Exceeds Higher of Target MDL/Health Based Drinking Water Value. * Denotes MDEQ Draft Residential Ground Water Volatilization to Indoor Air Criteria (screening values).
--- Denotes MDEQ criteria not established. Database/Program: resprop.dbl/rp8260w.prp.



O'BRIEN & GERE
ENGINEERS, INC.

Table 3B
4413 Milton Drive
Ground Water Analytical Results
SW8270 Semivolatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Health Based Drinking Water Value ug/L	Health Based DW Target MDL - Highest Value ug/L	GB-1E 4413 Milton 09/10/96 ug/L	GB-2E 4413 Milton 09/10/96 ug/L	GB-3E 4413 Milton 09/11/96 ug/L
1,2,4-Trichlorobenzene	5	70{C}	70{C}	6.2 U	6.2 U	12 U
1,2-Dichlorobenzene	1	600{C}	600{C}	6.2 U	6.2 U	12 U
1,3-Dichlorobenzene	1	600{C}	600{C}	6.2 U	6.2 U	12 U
1,4-Dichlorobenzene	1	75{C}	75{C}	6.2 U	6.2 U	12 U
2,4,5-Trichlorophenol	50	730	730	31 U	31 U	62 U
2,4,6-Trichlorophenol	5	77	77	6.2 U	6.2 U	12 U
2,4-Dichlorophenol	5	73	73	6.2 U	6.2 U	12 U
2,4-Dimethylphenol	5	370	370	6.2 U	6.2 U	12 U
2,6-Dimethylphenol	---	---	---	25 U	25 U	50 U
2,4-Dinitrotoluene	5	1.3	5	[6.2 U]	[6.2 U]	[12 U]
2,6-Dinitrotoluene	---	---	---	6.2 U	6.2 U	12 U
2-Chloronaphthalene	---	---	---	6.2 U	6.2 U	12 U
2-Chlorophenol	5	45	45	6.2 U	6.2 U	12 U
2-Methylnaphthalene	5	ID	5	[6.2 U]	[6.2 U]	[9.0 U]
2-Methylphenol	5	370	370	6.2 U	6.2 U	12 U
2-Nitroaniline	---	---	---	25 U	25 U	50 U
2-Nitrophenol	5	20	20	6.2 U	6.2 U	12 U
3,3-Dichlorobenzidine	20	1.9	20	12 U	12 U	R
3-Nitroaniline	---	---	---	25 U	25 U	50 U
4,6-Dinitro-2-methylphenol	20	2.6	20	[25 U]	[25 U]	[50 U]
4-Bromophenyl phenyl ether	---	---	---	6.2 U	6.2 U	12 U
4-Chloro-3-methylphenol	5	150	150	6.2 U	6.2 U	12 U
4-Chloroaniline	---	---	---	6.2 U	6.2 U	12 U
4-Chlorophenyl phenyl ether	---	---	---	6.2 U	6.2 U	12 U
4-Methylphenol	5	37	37	6.2 U	6.2 U	12 U

NOTES: Data qualifier definitions and MDEQ Cleanup footnotes are included at the end of the table.

[] Exceeds higher of Target MDL/Health Based Drinking Water Value.

--- Denotes MDEQ criteria not established. Database/Program: respdp.dbf/rp8270w.prg.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07

Table 3B
4413 Milton Drive
Ground Water Analytical Results
SW8270 Semivolatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Health Based Drinking Water Value ug/L	Health Based DW Target MDL - Highest Value ug/L	GB-1E 4413 Milton 09/10/96 ug/L	GB-2E 4413 Milton 09/10/96 ug/L	GB-3E 4413 Milton 09/11/96 ug/L
4-Nitroaniline	---	---	---	25 U	25 U	50 U
4-Nitrophenol	---	---	---	25 U	25 U	50 U
Acenaphthene	5	1300	1300	6.2 U	6.2 U	12 U
Acenaphthylene	5	26	26	6.2 U	6.2 U	12 U
Anthracene	5	7300	7300	6.2 U	6.2 U	12 U
Benzo(a)anthracene	5	1.2	5	[6.2 U]	[6.2 U]	[12 U]
Benzo(a)pyrene	5	0.2{C}	5	[6.2 U]	[6.2 U]	[12 U]
Benzo(b)fluoranthene	5	1.2	5	[6.2 U]	[6.2 U]	[12 U]
Benzo(k)fluoranthene	5	26	26	6.2 U	6.2 U	12 U
Benzo(e)pyrene	5	12	12	6.2 U	6.2 U	12 U
Butyl benzyl phthalate	5	1200	1200	6.2 U	6.2 U	12 U
Carbazole	---	---	---	12 U	12 U	25 U
Chrysene	5	120	120	6.2 U	6.2 U	12 U
Di-n-butyl phthalate	5	880	880	6.2 U	8.0	12 U
Di-n-octyl phthalate	5	130	130	6.2 U	6.2 U	12 U
Dibenzo(a,h)anthracene	5	0.12	5	[6.2 U]	[6.2 U]	[12 U]
Dibenzofuran	5	10	5	[6.2 U]	[6.2 U]	[12 U]
Diethyl phthalate	5	5500	5500	6.2 U	6.2 U	12 U
Dimethyl phthalate	5	73000	73000	6.2 U	6.2 U	12 U
Fluoranthene	5	880	880	6.2 U	6.2 U	12 U
Fluorene	5	880	880	6.2 U	6.2 U	12 U
Hexachlorobenzene	{K}	1{C}	1{C}	[6.2 U]	[6.2 U]	[12 U]
Hexachlorobutadiene	{K}	11	11	6.2 U	6.2 U	[12 U]
Hexachlorocyclopentadiene	{K}	50{C}	50{C}	6.2 U	6.2 U	12 U
Hexachloroethane	2	61	61	6.2 U	6.2 U	12 U

NOTES: Data qualifier definitions and MDEQ Cleanup footnotes are included at the end of the table.

[] Exceeds higher of Target MDL/Health Based Drinking Water Value.

--- Denotes MDEQ criteria not established. Database/Program: respdp.dbf/rp8270w.prg.

Table 3B
4413 Milton Drive
Ground Water Analytical Results
SW8270 Semivolatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Health Based Drinking Water Value ug/L	Health Based DW Target MDL - Highest Value ug/L	GB-1E 4413 Milton 09/10/96 ug/L	GB-2E 4413 Milton 09/10/96 ug/L	GB-3E 4413 Milton 09/11/96 ug/L
Indeno(1,2,3-cd)pyrene	5	1.2	5	[6.2 U]	[6.2 U]	[12 U]
Isophorone	5	900	900	6.2 U	6.2 U	12 U
N-Nitrosodipropylamine	5	0.12	5	[6.2 U]	[6.2 U]	[12 U]
N-Nitrosodiphenylamine	5	170	170	6.2 U	6.2 U	12 U
Naphthalene	5	260	260	6.2 U	3.8 J	6.2 J
Nitrobenzene	5	3.4	5	[6.2 U]	[6.2 U]	[12 U]
Pentachlorophenol	20	1{C}	20	[25 U]	[25 U]	[50 U]
Phenanthrene	5	26	26	6.2 U	6.2 U	12 U
Phenol	5	4400	4400	6.2 U	6.2 U	12 U
Pyrene	5	550	550	6.2 U	6.2 U	12 U
Bis(2-chloroethoxy)methane	---	---	---	6.2 U	6.2 U	12 U
Bis(2-chloroethyl)ether	5	0.77	5	[6.2 U]	[6.2 U]	[12 U]
Bis(2-chloroisopropyl) ether	---	---	---	6.2 U	6.2 U	12 U
Bis(2-ethylhexyl)phthalate (BEHP)	5	6{C}	6{C}	[6.2 U]	2.6 J	[6.7 J]

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

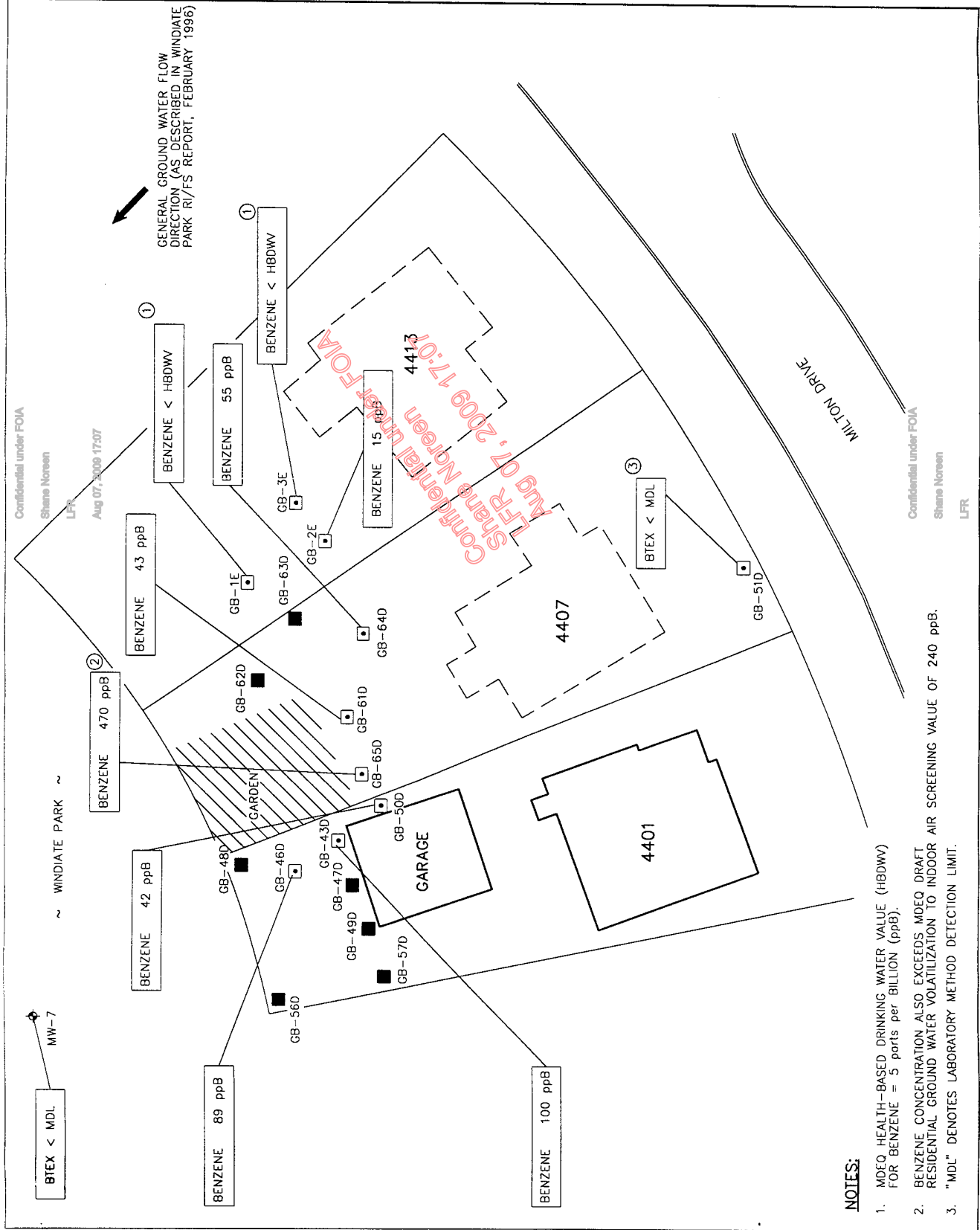
Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

NOTES: Data qualifier definitions and MDEQ Cleanup footnotes are included at the end of the table.
[] Exceeds higher of Target MDL/Health Based Drinking Water Value.
--- Denotes MDEQ criteria not established. Database/Program: resprop.dbf/rp8270w.prg.

LFR

Aug 07, 2009 17:07

FIGURE 1



FILE NO. 6009-016-002



Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

APPENDIX A

Confidential under FOIA

Shane Noreen

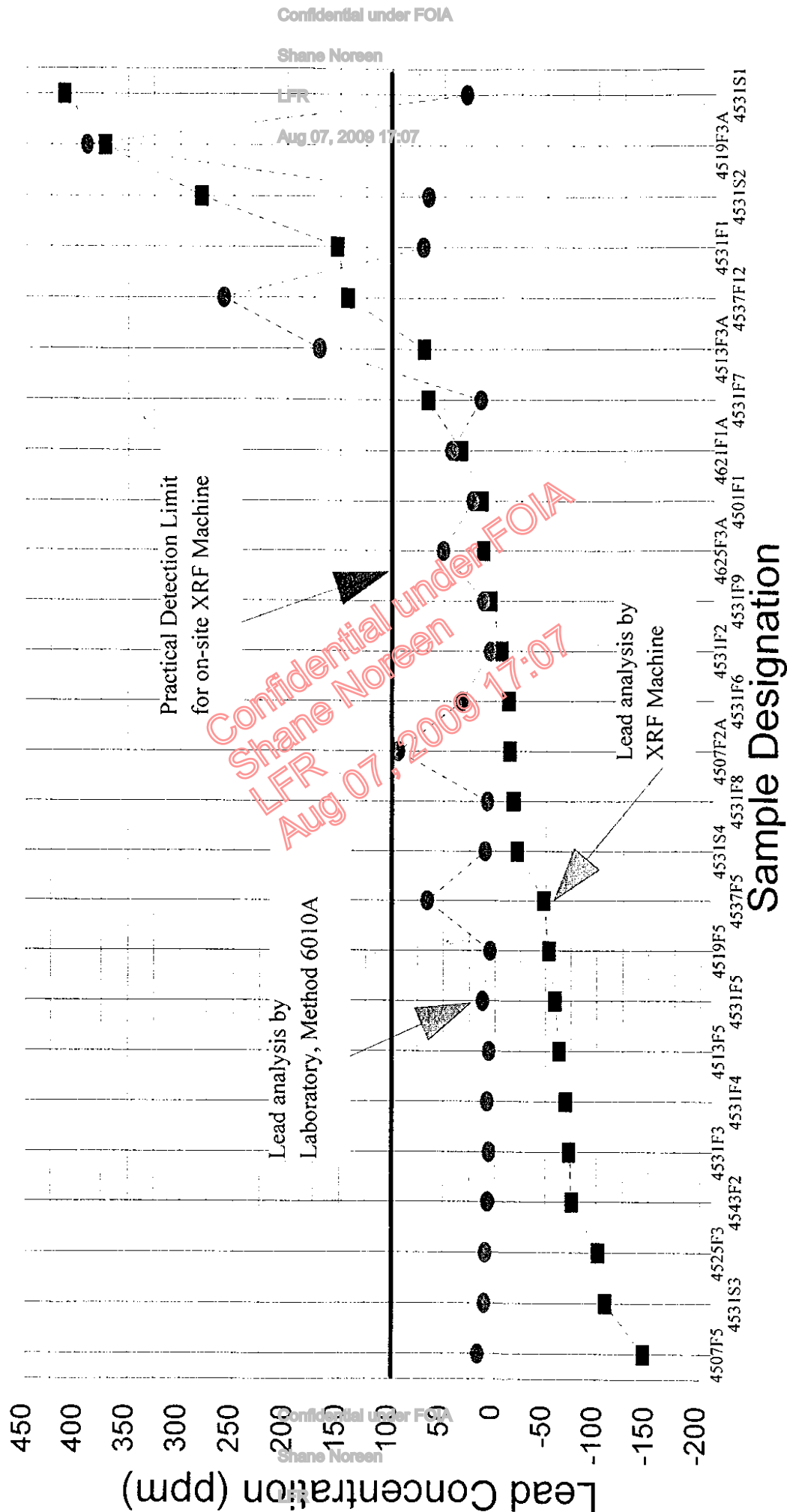
LFR

Aug 07, 2009 17:07

Chart 1

XRF vs. Laboratory Data For Total Lead

Windiate Park Residential Remediation



**MDEQ Approval Letter regarding
the limits of investigation (identified
in the Residential RAP), dated July
14, 1997**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: <http://www.deq.state.mi.us>

RUSSELL J. HARDING, Director

REPLY TO:

SHIAWASSEE DISTRICT OFFICE
10650 BENNETT DRIVE
MORRICE MI. 48857-9792

JUL 21 1997

July 14, 1997

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Ave.
Flint, MI 48550-8504

Dear Mr. Metcalf:

SUBJECT: Windiate Park/Dixieland Subdivision Landfill, Flint, Genesee County, Michigan

This letter is written in response to the April 23, 1997 letter, prepared by O'Brien & Gere Engineers, Inc. (OBG), requesting that MDEQ confirm that no additional investigations are necessary regarding the extent of contamination associated with historical filling activities in the Windiate Park/Dixieland Subdivision Landfill (Windiate) and the surrounding residential area.

The MDEQ has reviewed the Remedial Investigation/Feasibility Study Report for Windiate Park (February 1996), the Pengelly Road Investigation Report (December 1996), and the Remedial Investigation/Feasibility Study Report for the Residential Properties in the Windiate Park/Dixieland Subdivision, as prepared by OBG. In addition, the MDEQ has reviewed soil sampling data collected at 202 and 212 Browning by OBG and soil sampling data collected by the MDEQ from Windiate Park and the surrounding area.

Based upon our review and evaluation of the above referenced reports and the data collected from Windiate Park and the surrounding area, the MDEQ has concluded that no further study is necessary outside of those areas as investigated in the studies referred to in the above reports and that an adequate investigation has been conducted of the lateral extent of contamination associated with the historical filling activities in Windiate Park and the surrounding residential area.

The MDEQ has also reviewed and approved the Remedial Action Plan (RAP) for the Park Area of the Windiate Park/Dixieland Subdivision Landfill (February 1996). The RAP for the Residential Properties in the Windiate Park/Dixieland Subdivision (February 1997) is currently under review by the MDEQ. A RAP for the Pengelly Road Investigation will be reviewed within six months of MDEQ receipt of an administratively complete RAP.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Mr. Robert Metcalf

2

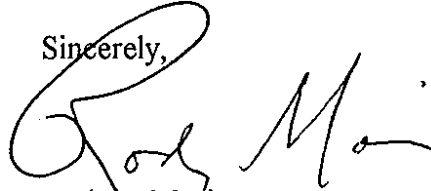
Shane Noreen

July 14, 1997

Please be advised that the MDEQ's decision regarding the adequacy of the investigation of the extent of contamination associated with historical filling activities in Windiate Park and the surrounding residential area is based upon the reports reviewed and the information contained in the files located at the MDEQ Shiawassee District Office. If additional information becomes available, the MDEQ may request further site study outside of those areas investigated in the above reports.

If you have any questions or concerns with respect to this matter, please contact Mr. Eric Van Riper at (517) 625-4621.

Sincerely,



Rodney Mosier
Shiawassee District Supervisor
Environmental Response Division
517-625-4615

RM:EV:jah

cc: ✓ Mr. Scott Cormier, OBG
Mr. Kevin Lavalley, Gault Davison, P.C.
Mr. John Pettit, GCHD
Mr. Jim Bedford, MDCH
Mr. Eric Van Riper, MDEQ

**MDEQ Notice of Approval (for
Closure) Letter (for twenty
residential properties),
dated August 12, 1998**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



LFR
JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

SHIAWASSEE DISTRICT OFFICE
10650 BENNETT DR
MORRICE MI 48857-9792

August 12, 1998

RECEIVED

AUG 19 1998

Mr. Robert Metcalf
General Motors Corporation
CLCD North, 902 E. Hamilton Ave.
Flint, MI 48550-8504

O'BRIEN & GERE ENGINEERS, INC.
NOVI, MI 48375

Dear Mr. Metcalf:

SUBJECT: Notice of Approval of Generic Residential Closure for 4625 Milton Drive, 4621 Milton Drive, 4605 Milton Drive, 4543 Milton Drive, 4531 Milton Drive, 4525 Milton Drive, 4522 Milton Drive, 4519 Milton Drive, 4518 Milton Drive, 4513 Milton Drive, 4510 Milton Drive, 4507 Milton Drive, 4502 Milton Drive, 4501 Milton Drive, 4317 Milton Drive, 4313 Milton Drive, 4309 Milton Drive, 4221 Milton Drive, 4217 Milton Drive, and 201 Browning Avenue, Flint, Genesee County, Michigan

The Michigan Department of Environmental Quality (MDEQ), Environmental Response Division, has reviewed the January, 1998 Closure Report for Residential Properties of the Windiate Park/Dixieland Subdivision Landfill site, prepared by O'Brien & Gere Engineers, Inc. (OBG), for a land use based remedial action plan pursuant to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101, et seq. Based on our evaluation of the report, the MDEQ concurs that the above referenced properties meet the criteria for a Generic Residential Closure and closure has been approved.

Please be advised that closure for the two Limited Residential properties addressed in the January, 1998 Closure Report for Residential Properties will be addressed under separate cover.

If you should have further questions or concerns, please contact Eric Van Riper, Environmental Response Division, Shiawassee District Office, at 517-625-4621.

Sincerely,

Rodney Mosier, Supervisor
Environmental Response Division
Shiawassee District Office

RM:EV:jh

cc: Scott Cormier, OBG
Scott Kincaid, City of Flint
Dan Schultz, MDEQ
Larry Elmleaf, MDEQ

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

**4537 and 4401 Milton Drive property
closure documents**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen



LFR

**General Motors Corporation
Worldwide Facilities Group
Environmental & Regulatory Support
Remediation Team**

December 6, 1999

9 1999

VIA CERTIFIED MAIL

Mr. Eric Van Riper
Michigan Department of Environmental Quality
Shiawassee District Office
10650 Bennett Drive
Morrice, Michigan 48857

**Re: General Motors Corporation (GM) - Notice of Transfer of Ownership
4537 Milton Drive, Flint, Michigan**

Dear Eric Van Riper:

On behalf of General Motors (GM), pursuant to Section 1.1 of the Agreement For Limited Residential Land Use Remedy, Michigan Department of Environmental Quality (MDEQ) Reference No. LANDUSE-ERD-98-010, GM hereby notifies MDEQ of the transfer of all its ownership interest in the above referenced property to Ms. Shannon Couch. The closing of the transaction occurred on September 10, 1999.

If you have any questions, please do not hesitate to contact me at 810.236.0300.

Sincerely,

Robert S. Metcalf
Project Manager
General Motors Corporation

cc: file
Artis M. Noel, Esq., GM Legal Staff
Joseph M. Polito, Esq.

Shane Noreen

LFR
LAW OFFICES

HONIGMAN MILLER SCHWARTZ AND COHN

2290 FIRST NATIONAL BUILDING
660 WOODWARD AVENUE
DETROIT, MICHIGAN 48226-3583

FAX (313) 465-8000

FREDERICK J. FRANK
TELEPHONE: (313) 465-7384
FAX: (313) 465-7385
E-MAIL: fjf@honigman.com

LANSING, MICHIGAN

June 8, 1999

Mr. Eric Van Riper
MDEQ-ERD
Shiawassee District Office
10650 Bennett Drive
Morrice, Michigan 48857

Re: *Declaration of Restrictive Covenant -- 4537 Milton; Agreement for Limited Residential Land Use Remedy ("Agreement"), 4401 and 4537 Milton Drive, Windiate Park, Dixieland Subdivision, Flint, Genesee County, Michigan*

Dear Mr. Van Riper:

Enclosed pursuant to the captioned Agreement is a certified copy of the captioned Declaration of Restrictive Covenant for 4537 Milton as recorded with the Genesee County Register of Deeds in Master Liber 4167, Pages 976-989.

Please call me at the above number or my partner Ken Gold at 313-465-7394 if you have any questions.

Sincerely,



Frederick J. Frank

Enclosure

cc: Dave Bartley (w/enc.)
Artis M. Noel (w/enc.)
Christine Swisher (w/enc.)
William J. McFarland (w/enc.)
Robert Metcalf (w/enc.)
Joseph M. Polito (w/enc.)
Kenneth C. Gold (w/enc.)

DET_CL263909.1

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

Shane Noreen
LFR
Aug 07, 2009 17:07

MASTER LIBER 4167 PAGE 976

May 27 9 32 AM '99

GENESEE COUNTY
REGISTER OF DEEDS

DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No.: RC-ERD-98-013

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the Genesee County Register of Deeds for the purpose of protecting public health, safety and welfare and the environment.

General Motors Corporation, a Delaware corporation ("GM"), of 3031 W. Grand Boulevard, Detroit, Michigan 48202, has received approval from the Michigan Department of Environmental Quality (MDEQ), Shiawassee District Office, 10650 Bennett Drive, Morrice, Michigan 48857, by MDEQ's execution of an Agreement For Limited Residential Land Use Remedy dated September 14, 1998, for: (i) the Closure Report For Residential Properties in the Windiate Park/Dixieland Subdivision, Flint, Michigan prepared by O'Brien & Gere, dated January 21, 1998; and: (ii) a Remedial Action Plan, dated February 1997, as amended by letters from O'Brien & Gere Engineers, Inc., dated July 17, 1997, and March 16, 1998 (the "RAP"), that includes residential land use-based cleanup criteria as defined and set forth in Section 20120a(1)(f) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101 et seq. for the environmental remediation associated with the property located in the City of Flint, County of Genesee, ("Property") more particularly described as:

Lot 172 of Block 152 of Dixieland Subdivision, a subdivision as recorded in Liber 11, Pages 5 and 6, of Plats, Genesee County Records, being a part of the Northeast ¼ of Section 30 and the Northwest ¼ of Section 29, Town 7 North, Range 7 East, City of Flint, Genesee County, Michigan, more commonly known as 4537 Milton ("4537 Milton").

See Attachment A for a survey of the portion of the Property, labeled as "Limits of Deed Restoration," subject to the land-use restrictions imposed herein.

Property Tax ID Number of Property: 25-11-29-152-024-1.

As used herein, the term "Owner" shall mean at any given time the then current title holder of the Property.

NOW, THEREFORE, GM, 3031 W. Grand Boulevard, Detroit, Michigan, pursuant to Section 20120b(4) of NREPA and the Agreement for Limited Residential Land Use Remedy entered into by and between GM and the MDEQ (LANDUSE-ERD-98-010), hereby imposes restrictions on the portions of the Property identified in Attachment A1 and A2 as follows:

1. The Owner shall restrict the uses of the Property to those uses compatible with the limited residential land use category as defined in Section 20120a(1)(f) of Part 201 of NREPA, as amended in June 1995, and the RAP, or other use that is consistent with the assumptions and basis for the cleanup criteria established pursuant to Section 20120a(1)(f). Cleanup criteria for land use-based remedial action plans are located in the Government Documents section of the State of Michigan Library.

Shane Noreen

LFR

Aug 07, 2009 17:07

45911

Aug 07, 2009 17:07

2. The Owner shall prohibit activities at the Property that may interfere with the remedial action, operation and maintenance, monitoring, or other measures necessary to ensure the effectiveness and integrity of the remedial action described in the RAP.

3. The following activities at the Property that may result in unacceptable exposures or the release of a hazardous substance are prohibited:

A. Excavation or related activities that could affect the integrity of the concrete patio, the front steps and walkway, the basement floor and the basement walls below the exterior ground surface, unless otherwise approved by MDEQ, except that excavation is allowed to a depth of two (2) feet within the remaining areas within the "Limits of Deed Restriction," as designated on Attachment A.

B. Extraction of, any use of or any activity in groundwater beneath the Property.

4. Any activity in or related to any contaminated soils found more than two (2) feet below the surface within the "Limits of Deed Restriction" as designated on Attachment A, or any contaminated soils found beneath the concrete patio, the front steps and walkway, the basement floor and the basement walls below the exterior ground surface, must be managed in accordance with the requirements of Section 20120c of NREPA and other applicable state and federal laws.

5. The Owner shall provide notice to the MDEQ and GM (if GM no longer owns the property) of the Owner's intent to convey any interest in the Property fourteen (14) days prior to consummating the conveyance. A conveyance of title, an easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant.

6. The Owner shall grant to the MDEQ and its designated representatives the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the RAP, including the right to take samples, inspect the operation of the remedial action measures and inspect any records relating thereto.

The State of Michigan, through MDEQ, may enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of appropriate jurisdiction.

It is expressly understood that the Owner, to avoid any direct contact with any underlying potentially contaminated soils, shall properly maintain the concrete patio, the front steps and walkways, basement floor, the basement walls below the exterior ground surface, any landscaping, lawn or other ground cover; repair any damaged or eroded areas; and perform all operation and maintenance activities set forth in Attachment B with respect to the Property. The Owner further understands that these obligations shall run with the Property.

The restrictions in this Restrictive Covenant shall run with the Property and shall be binding upon all Owners, future owners, successors, lessees or assigns and their authorized agents, employees, or persons acting under their direction and control, and shall continue until the MDEQ or its successor approves a modification or rescission of this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, assigns and transferees by the person transferring any interest in the Property.

If any provision of this Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof, and all such other provisions shall continue unimpaired and in full force and effect.

Shane Noreen

MASTER
LIBER

LFR

Aug 07, 2009 17:07

4167 PAGE 978

The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner to do so, and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant.

IN WITNESS WHEREOF, the said Owner of the above described Property has caused this Restrictive Covenant to be executed on this 25th day of May, 1999.

Signed in the presence of:

GENERAL MOTORS CORPORATION,
a Delaware corporation

Bernice C. Hoady
Witness: Bernice C. Hoady
[Print or type name]

By L F Whately
[Print name]: L F WHATLEY

Its: DIRECTOR - WRE
[Title]

LORI BRODEUR
Witness: Lori Brodeur
[Print or type name]

Address: 3031 W. Grand Boulevard
Detroit, Michigan 48202
Attn: _____

STATE OF MICHIGAN
COUNTY OF WAYNE

EXECUTION RECOMMENDED
GMAS RELOCATION SERVICES
BY Shane Noreen

The foregoing instrument was acknowledged before me this 25th day of MAY, 1999
by L. F. Whately, the DIRECTOR
Worldwide RE of General Motors Corporation, a Delaware corporation, on behalf of the
corporation.

Sharon E. Boon
Notary Public
[Print or type name]: Sharon E. Boon
Wayne County, Michigan
My Commission Expires: 12/17/2002

SHARON E. BOON
Notary Public, Wayne County, MI
My Commission Expires 12/17/2002

Prepared by: Frederick J. Frank, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7384

When recorded return to:

Kenneth C. Gold, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7394

35.00

DET_C\258296.1

Shane Noreen MASTER
LFR

LFR

Aug 07, 2009 17:07

4167 PAGE 979

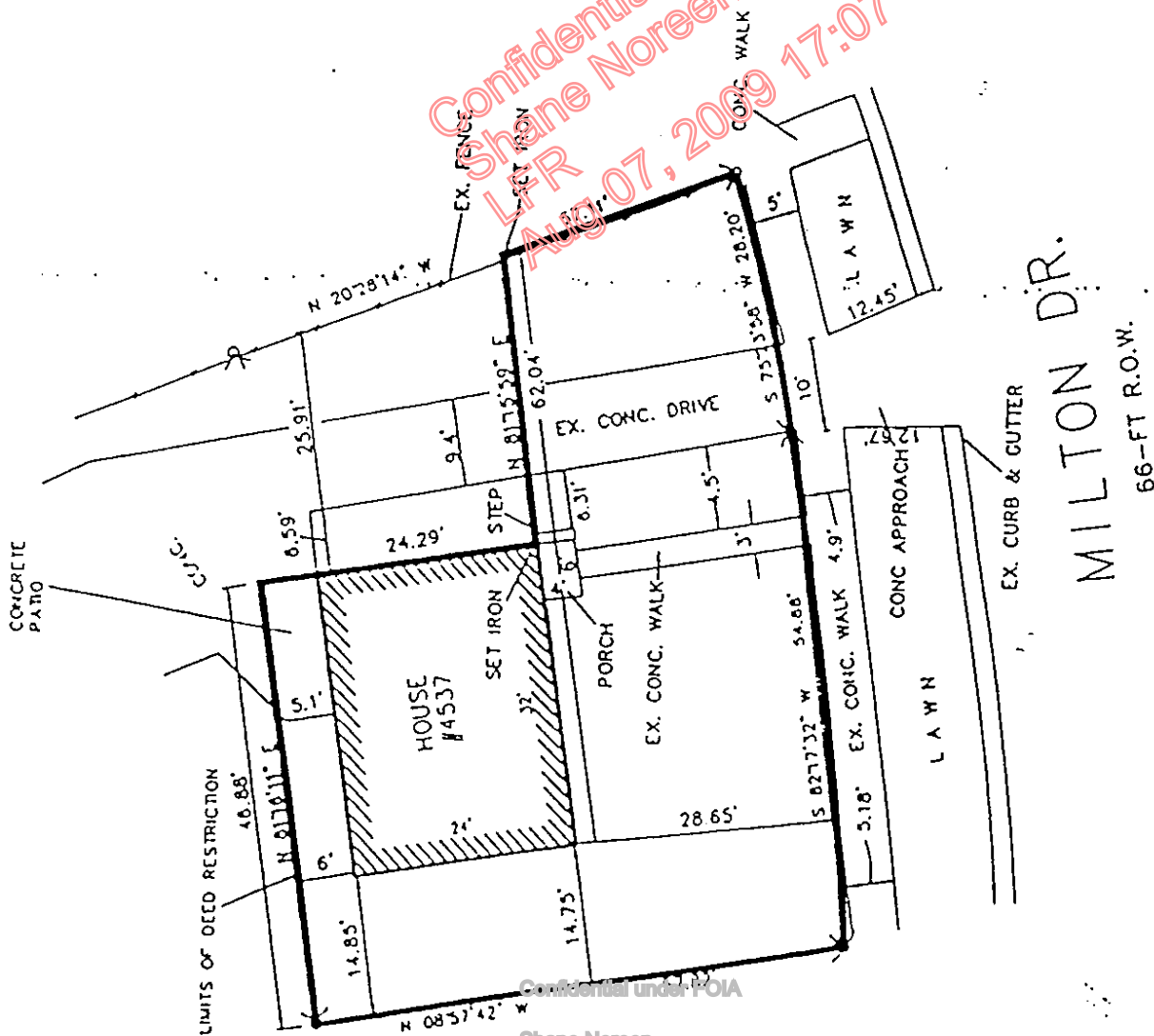
ATTACHMENT A

STRUCTURE SURVEY OF
4537 MILTON DRIVE
FLINT, MICHIGAN

FOR:
O'BRIEN & GERE ENGINEERS, INC.

SCALE: 1"=20'
JOB #/971122/970818SV
REVISED 11/25/97

Bartow & King Engineers
2500 E. Midland Road, Boy City, Michigan 48706
Tel. (317) 664-6650
Fax. (317) 664-8404



Shane Noreen

LFR

Aug 07, 2009 17:07

ATTACHMENT B

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 980

Operation and Maintenance Plan

4537 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

November 1997

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

MASTER
LFR

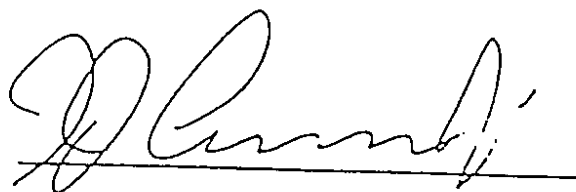
4167 PAGE 981

Aug 07, 2009 17:07

Operation and Maintenance Plan

4537 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Scott J. Adamowski, P.E.
Vice President

November 1997



O'BRIEN & GERE
ENGINEERS, INC.

39830 Grand River Avenue
Suite B-2
Novi, MI 48375

LFR

Aug 07, 2009 17:07

Contents

1. Operation and maintenance (O & M) plan	1
1.1. Property description	1
1.2. Interim remedial measures	2
1.3. Land use restrictions	2
1.4. O & M activities	3

List of Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Existing Waste Fill Extent

Aug 07, 2009 MASTER
LIBER

4167 PAGE 983

1. Operation and maintenance (O & M) plan

This Operation and Maintenance Plan (O & M Plan) was prepared for the property at 4537 Milton Drive, Flint, Michigan in accordance with a Limited Residential Closure as described in the February 1997 "Remedial Action Plan for Residential Properties" at the Windiate Park/Dixieland Subdivision in Flint, Michigan. This O & M Plan complies with the 1995 amendments to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, administered by the Michigan Department of Environmental Quality (MDEQ).

1.1. Property description

The 4537 Milton Drive property is located within Sections 29 and 30 of Township 7 North, Range 7 East, in the City of Flint, Genesee County, Michigan. The property is described in the Genesee County Records as Lot 172. A Site Location Map, Figure 1, identifies the general location of this property within Genesee County. A Site Plan, Figure 2, identifies the location of this property within the Windiate Park/Dixieland Subdivision.

This property contains a residential house with a basement. There is also a detached garage and a concrete driveway. A fence is located on the north and east property boundaries with a concrete sidewalk bordering the south property boundary. The property is covered with grass and a concrete walkway with steps on the south side of the house. Windiate Park borders the property to the north and east.

LFR

1.2. Interim remedial measures

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 984

In response to the identification of waste fill impact to this property, as outlined in the February 1997 Residential Remedial Investigation/ Feasibility Study (RI/FS) Report, interim remedial measures (IRMs) were implemented at the 4537 Milton Drive property. The IRMs consisted of waste fill excavation and disposal in the northern and eastern side of the property which was subsequently backfilled with sand and topsoil with sod placed over the topsoil (there was no sod placed over the topsoil in the flower bed area located east of the house). The garage and concrete driveway were removed during the excavation activities and were replaced following sampling, analysis, and backfilling. The concrete driveway and subgrade material south of the front of the house was removed to a depth of 2 ft below grade (fbg). In addition, surface soil and waste fill in the west yard and front yard was removed to a depth of 2 fbg and backfilled with a sand and topsoil soil cover. Grass seed was then planted in these areas.

Subsurface waste fill remains at the property within the approximate limits as shown on Figure 3. The waste fill material is located at least 2 ft below the surface of the west yard (including a 6 ft wide area north of the house), front yard, and the concrete driveway south of the front of the house. The waste fill material may exist below the basement floor, basement walls below the exterior ground surface, concrete patio, and the front steps and walkway.

1.3. Land use restrictions

As a condition of the land use restrictions which will run with the land, the owner will conduct normal and routine O & M activities at the property. A Restrictive Covenant will describe limiting excavation below 2 ft in the west yard (including the 6 ft wide area north of the house), front yard, and the concrete driveway south of the front of the house. The deed restriction will also include maintaining and limiting excavation underneath the basement floor, basement walls below the exterior ground surface, concrete patio, and the front steps and walkway.

LFR

Aug 07, 2009 17:07

LFR

1.4. O & M activities

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 985

Routine O & M of the property includes vegetation care, such as watering, mowing, hedging and fertilizing of the grass and bushes. Activities such as replacement of topsoil or vegetation damaged from erosion, settlement, subsidence or burrowing animals will also be performed to maintain the property.

Routine maintenance of the concrete patio, front steps and walkway, basement floor, and basement walls below the exterior ground surface will be performed by the homeowner to eliminate potential direct contact with the underlying soil. This activity will likely include repair of cracks in the concrete and/or resurfacing as needed.

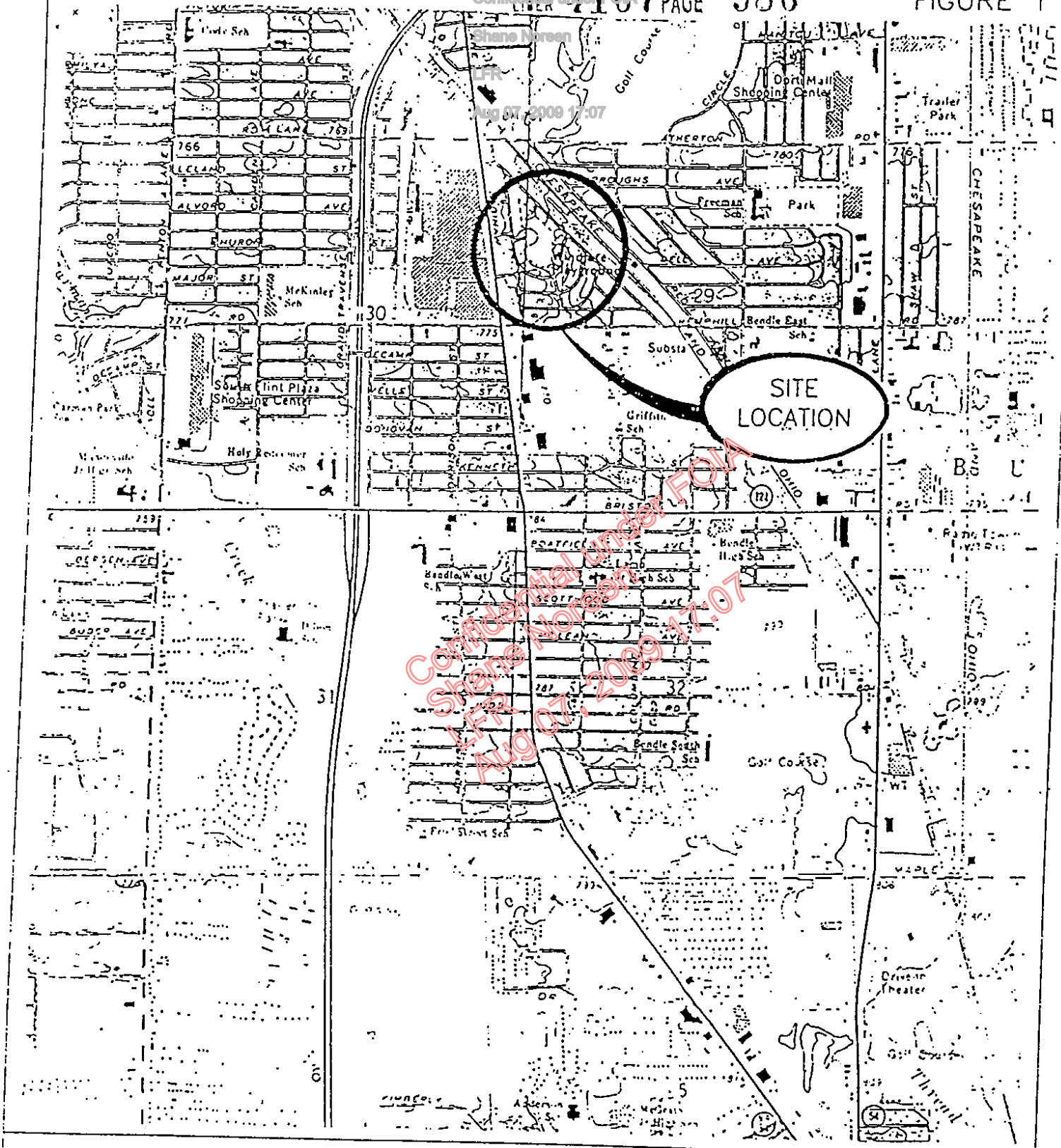
No further operation and maintenance activities will be necessary.

Monitoring activities are not necessary to maintain the integrity of the soil cover barrier or the structures as the deed restrictions will prevent future uncontrolled excavation activity at the 4537 Milton Drive property.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07



FLINT SOUTH, MICH.

WINDIATE PARK AREA
FLINT, MICHIGAN

SITE LOCATION MAP

Confidential under FOIA

ORANGE-ANGLE LOCATION



O'BRIEN & GERE
ENGINEERS, INC.

FILE NO 6009-011

SCALE IN FEET

AUG 07, 2009 17:07

Shane Noreen

LFR
MASTER
LIBER 4167 PAGE 987
Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

PENGELLY ROAD

MILTON DRIVE

Shane Noreen

LFR

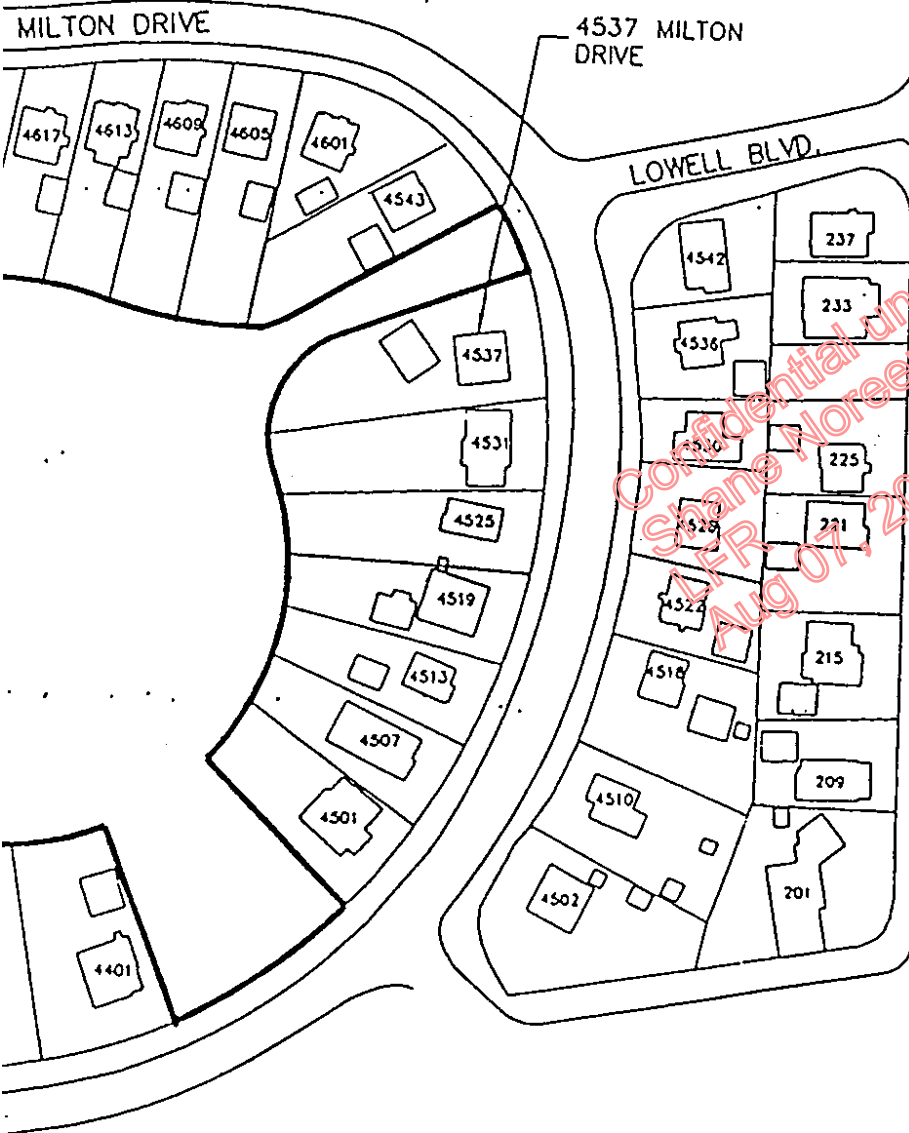
Aug 07, 2009 17:07

Shane Noreen

LFR

MASTER LIBER 4167 PAGE 988
Aug 07, 2009 17:07

FIGURE 2



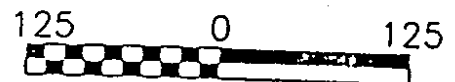
LEGEND

PARK PROPERTY
LIMITS

WINDIATE PARK AREA
FLINT, MICHIGAN

OPERATION AND
MAINTENANCE

SITE PLAN



APPROXIMATE SCALE IN FEET

Shane Noreen

LFR

Aug 07, 2009 17:07

FILE NO. 6009-015-026

I:\NOVI\PROJECTS\6009015\DWG\025.DWG

Confidential under FOIA

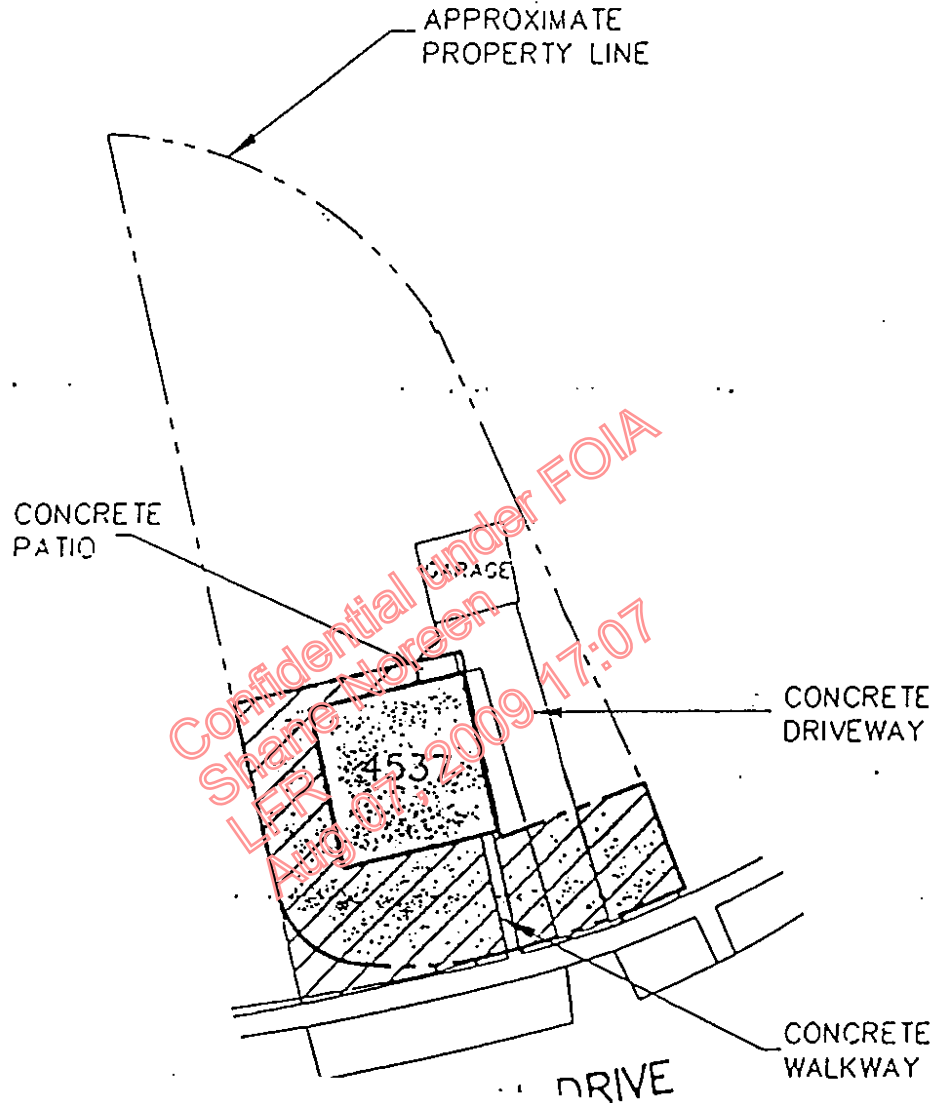
Shane Noreen

MASTER
LIBER

4167 PAGE 989

LFR

Aug 07, 2009 17:07



REGISTER OF DEEDS }
GENESEE COUNTY, MICHIGAN } SS.

I DO HEREBY CERTIFY, That the within and foregoing, is a true copy of the
Record of a Declaration of Restrictive Covenant
as recorded on Page 976-989 of
Liber 4167 of Master Liber
Office of Register of Deeds of Genesee County, Michigan. That I have
compared the same with the said Record and the same is a true copy.

Katherine MBS
Deputy Register of Deeds for Genesee County
Flint, Michigan 48502

Issued 5-27-99
GC 1103

Confidential under FOIA

Shane Noreen

APPROX. SCALE: 1" = 40'



O'BRIEN & GERE
ENGINEERS, INC.

Aug 07, 2009 17:07



LFR

General Motors Corporation
Worldwide Facilities Group
Environmental & Regulatory Support
Remediation Team

11/12/99

SEP 16 1999

September 13, 1999

VIA CERTIFIED MAIL

Mr. David Plewes
Zoning Coordinator
City of Flint
1101 S. Saginaw St.
Flint, MI 48502

**Re: Notice of Land Use Restrictions
4537 Milton Drive, Flint, Michigan**

Dear Mr. Plewes:

On behalf of General Motors (GM), pursuant to Section 20120b(9) of Part 201 of the Michigan Natural Resources and Environmental Protection Act, MCL paragraph 324.20120b(9), GM hereby provides the City of Flint's zoning authority with notice of land use restrictions imposed on the above referenced property in connection with the Michigan Department of Environmental Quality's approval of a remedial action plan for this property on January 29, 1999.

Enclosed are copies of the Declaration of Restrictive Covenant imposing the land use restrictions on the above referenced property, with the attachments thereto.

If you have any questions, please do not hesitate to contact me at 810.236.0300.

Sincerely,

Robert S. Metcalf
Project Manager
General Motors Corporation

Enclosures

cc: file
Artis M. Noel, Esq., GM Legal Staff
Joseph M. Polito, Esq.

Shane Noreen

Shane Noreen
 LFR
 Aug 07, 2009 17:07

MASTER LIBER 4167 PAGE 976

MAY 27 9 32 AM '99

GENESEE COUNTY
 RECORDS DEEDS

DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No.: RC-ERD-98-013

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the Genesee County Register of Deeds for the purpose of protecting public health, safety and welfare and the environment.

General Motors Corporation, a Delaware corporation ("GM"), of 3031 W. Grand Boulevard, Detroit, Michigan 48202, has received approval from the Michigan Department of Environmental Quality (MDEQ), Shiawassee District Office, 10650 Bennett Drive, Morrice, Michigan 48857, by MDEQ's execution of an Agreement For Limited Residential Land Use Remedy dated September 14, 1998, for (i) the Closure Report For Residential Properties in the Windale Park/Dixieland Subdivision, Flint, Michigan prepared by O'Brien & Gere, dated January 21, 1998; and (ii) a Remedial Action Plan, dated February 1997, as amended by letters from O'Brien & Gere Engineers, Inc., dated July 17, 1997, and March 16, 1998 (the "RAP"), that includes residential land use-based cleanup criteria as defined and set forth in Section 20120a(1)(f) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101 et seq. for the environmental remediation associated with the property located in the City of Flint, County of Genesee, ("Property") more particularly described as:

Lot 172 of Block 152 of Dixieland Subdivision, a subdivision as recorded in Liber 11, Pages 5 and 6, of Plats, Genesee County Records, being a part of the Northeast ¼ of Section 30 and the Northwest ¼ of Section 29, Town 7 North, Range 7 East, City of Flint, Genesee County, Michigan, more commonly known as 4537 Milton ("4537 Milton").

See Attachment A for a survey of the portion of the Property, labeled as "Limits of Deed Restoration," subject to the land-use restrictions imposed herein.

Property Tax ID Number of Property: 25-11-29-152-024-1.

As used herein, the term "Owner" shall mean at any given time the then current title holder of the Property.

NOW, THEREFORE, GM, 3031 W. Grand Boulevard, Detroit, Michigan, pursuant to Section 20120b(4) of NREPA and the Agreement for Limited Residential Land Use Remedy entered into by and between GM and the MDEQ (LANDUSE-ERD-98-010), hereby imposes restrictions on the portions of the Property identified in Attachment A1 and A2 as follows:

1. The Owner shall restrict the uses of the Property to those uses compatible with the limited residential land use category as defined in Section 20120a(1)(f) of Part 201 of NREPA, as amended in June 1995, and the RAP, or other use that is consistent with the assumptions and basis for the cleanup criteria established pursuant to Section 20120a(1)(f). Cleanup criteria for land use-based remedial action plans are located in the Government Documents section of the State of Michigan Library.

Shane Noreen

LFR

Aug 07, 2009 17:07

45911

Aug 07, 2009 17:07

2. The Owner shall prohibit activities at the Property that may interfere with the remedial action, operation and maintenance, monitoring, or other measures necessary to ensure the effectiveness and integrity of the remedial action described in the RAP.

3. The following activities at the Property that may result in unacceptable exposures or the release of a hazardous substance are prohibited:

A. Excavation or related activities that could affect the integrity of the concrete patio, the front steps and walkway, the basement floor and the basement walls below the exterior ground surface, unless otherwise approved by MDEQ, except that excavation is allowed to a depth of two (2) feet within the remaining areas within the "Limits of Deed Restriction," as designated on Attachment A.

B. Extraction of, any use of or any activity in groundwater beneath the Property.

4. Any activity in or related to any contaminated soils found more than two (2) feet below the surface within the "Limits of Deed Restriction" as designated on Attachment A, or any contaminated soils found beneath the concrete patio, the front steps and walkway, the basement floor and the basement walls below the exterior ground surface, must be managed in accordance with the requirements of Section 20120c of NREPA and other applicable state and federal laws.

5. The Owner shall provide notice to the MDEQ and GM (if GM no longer owns the property) of the Owner's intent to convey any interest in the Property fourteen (14) days prior to consummating the conveyance. A conveyance of title, an easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant.

6. The Owner shall grant to the MDEQ and its designated representatives the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the RAP, including the right to take samples, inspect the operation of the remedial action measures and inspect any records relating thereto.

The State of Michigan, through MDEQ, may enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of appropriate jurisdiction.

It is expressly understood that the Owner, to avoid any direct contact with any underlying potentially contaminated soils, shall properly maintain the concrete patio, the front steps and walkways, basement floor, the basement walls below the exterior ground surface, any landscaping, lawn or other ground cover, repair any damaged or eroded areas, and perform all operation and maintenance activities set forth in Attachment B with respect to the Property. The Owner further understands that these obligations shall run with the Property.

The restrictions in this Restrictive Covenant shall run with the Property and shall be binding upon all Owners, future owners, successors, lessees or assigns and their authorized agents, employees, or persons acting under their direction and control, and shall continue until the MDEQ or its successor approves a modification or rescission of this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, assigns and transferees by the person transferring any interest in the Property.

If any provision of this Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof, and all such other provisions shall continue unimpaired and in full force and effect.

LFR

The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner to do so, and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant.

IN WITNESS WHEREOF, the said Owner of the above described Property has caused this Restrictive Covenant to be executed on this 20th day of May, 1999.

Signed in the presence of:

GENERAL MOTORS CORPORATION,
a Delaware corporation

Bernice C. Heady
Witness: Bernice C. Heady
[Print or type name]

By LFW [Print name]: L F WHATLEY

Its: Director - WRE
[Title]

LORI BRODEUR
Witness: Lori Brodeur
[Print or type name]

Address: 3031 W. Grand Boulevard
Detroit, Michigan 48202
Attn: _____

STATE OF MICHIGAN
COUNTY OF WAYNE

EXECUTION RECOMMENDED
GMAC RELOCATION SERVICES
BY SHANE NOREEN

The foregoing instrument was acknowledged before me this 25th day of MAY, 1999
by L.F. WHATLEY, the DIRECTOR
Worldwide RE of General Motors Corporation, a Delaware corporation, on behalf of the
corporation.

Sharon E. Boon
Notary Public
[Print or type name]: Sharon E. Boon
Wayne County, Michigan
My Commission Expires: 12/17/2002

SHARON E. BOON
Notary Public, Wayne County, MI
My Commission Expires 12/17/2002

Prepared by: Frederick J. Frank, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7384

When recorded return to:

Kenneth C. Gold, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7394

35.00

DET_C\258296.1

ATTACHMENT A

STRUCTURE SURVEY OF
4537 MILTON DRIVE
FLINT, MICHIGAN

FOR:
O'BRIEN & GERE ENGINEERS, INC.

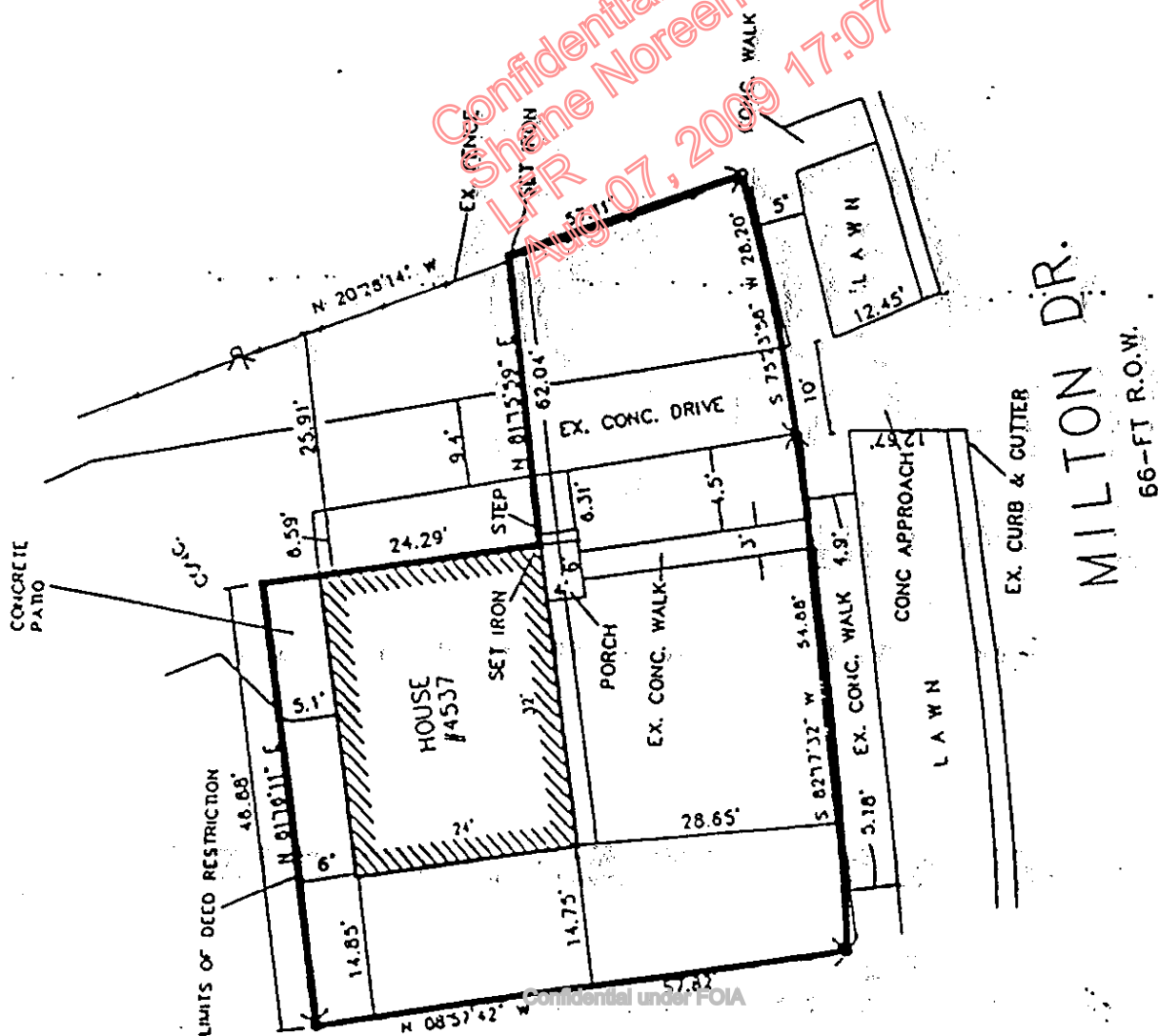
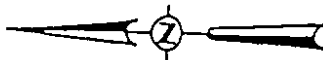
SCALE: 1"=20'

J08 #/971122/970818SV

REMOVED 11/25/97

Bartow & King Engineers

Ed Hood, Bay City, Michigan 48704
 Tel. (517) 684-8830
 Fax. (517) 684-8404



Shane Noreen

ATTACHMENT B

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 980

Operation and Maintenance Plan

4537 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

November 1997

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

MASTER
LFR

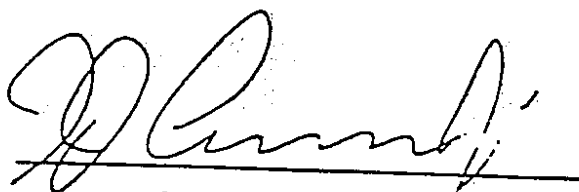
4167 PAGE 981

Aug 07, 2009 17:07

Operation and Maintenance Plan

4537 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Scott J. Adamowski, P.E.
Vice President.

November 1997



O'BRIEN & GERE
ENGINEERS, INC.

39830 Grand River Avenue
Suite B-2

Nov 1, 2009 17:07

LFR

Aug 07, 2009 17:07

Contents

1. Operation and maintenance (O & M) plan	1
1.1. Property description	1
1.2. Interim remedial measures	2
1.3. Land use restrictions	2
1.4. O & M activities	3

List of Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Existing Waste Fill Extent

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 983

1. Operation and maintenance (O & M) plan

This Operation and Maintenance Plan (O & M Plan) was prepared for the property at 4537 Milton Drive, Flint, Michigan in accordance with a Limited Residential Closure as described in the February 1997 "Remedial Action Plan for Residential Properties" at the Windiate Park/Dixieland Subdivision in Flint, Michigan. This O & M Plan complies with the 1995 amendments to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, administered by the Michigan Department of Environmental Quality (MDEQ).

1.1. Property description

The 4537 Milton Drive property is located within Sections 29 and 30 of Township 4 North, Range 7 East in the City of Flint, Genesee County, Michigan. The property is described in the Genesee County Records as Lot 172. A Site Location Map, Figure 1, identifies the general location of this property within Genesee County. A Site Plan, Figure 2, identifies the location of this property within the Windiate Park/Dixieland Subdivision.

This property contains a residential house with a basement. There is also a detached garage and a concrete driveway. A fence is located on the north and east property boundaries with a concrete sidewalk bordering the south property boundary. The property is covered with grass and a concrete walkway with steps on the south side of the house. Windiate Park borders the property to the north and east.

Aug 07, 2009 17:07

1.2. Interim remedial measures

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 984

In response to the identification of waste fill impact to this property, as outlined in the February 1997 Residential Remedial Investigation/Feasibility Study (RI/FS) Report, interim remedial measures (IRMs) were implemented at the 4537 Milton Drive property. The IRMs consisted of waste fill excavation and disposal in the northern and eastern side of the property which was subsequently backfilled with sand and topsoil with sod placed over the topsoil (there was no sod placed over the topsoil in the flower bed area located east of the house). The garage and concrete driveway were removed during the excavation activities and were replaced following sampling, analysis, and backfilling. The concrete driveway and subgrade material south of the front of the house was removed to a depth of 2 ft below grade (fbg). In addition, surface soil and waste fill in the west yard and front yard was removed to a depth of 2 fbg and backfilled with a sand and topsoil soil cover. Grass seed was then planted in these areas.

Subsurface waste fill remains at the property within the approximate limits as shown on Figure 3. The waste fill material is located at least 2 ft below the surface of the west yard (including a 6 ft wide area north of the house), front yard, and the concrete driveway south of the front of the house. The waste fill material may exist below the basement floor, basement walls below the exterior ground surface, concrete patio, and the front steps and walkway.

1.3. Land use restrictions

As a condition of the land use restrictions which will run with the land, the owner will conduct normal and routine O & M activities at the property. A Restrictive Covenant will describe limiting excavation below 2 ft in the west yard (including the 6 ft wide area north of the house), front yard, and the concrete driveway south of the front of the house. The deed restriction will also include maintaining and limiting excavation underneath the basement floor, basement walls below the exterior ground surface, concrete patio, and the front steps and walkway.

LFR

Aug 07, 2009 17:07

MASTER
LIBER 4167 PAGE 985

1.4. O & M activities

Routine O & M of the property includes vegetation care, such as watering, mowing, hedging and fertilizing of the grass and bushes. Activities such as replacement of topsoil or vegetation damaged from erosion, settlement, subsidence or burrowing animals will also be performed to maintain the property.

Routine maintenance of the concrete patio, front steps and walkway, basement floor, and basement walls below the exterior ground surface will be performed by the homeowner to eliminate potential direct contact with the underlying soil. This activity will likely include repair of cracks in the concrete and/or resurfacing as needed.

No further operation and maintenance activities will be necessary.

Monitoring activities are not necessary to maintain the integrity of the soil cover barrier or the structures as the deed restrictions will prevent future uncontrolled excavation activity at the 4531 Milton Drive property.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07

AUG 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

Aug 07 2009 17:07

SITE
LOCATION

FLINT SOUTH, MICH

WINDIATE PARK AREA
FLINT, MICHIGAN

SITE LOCATION MAP

1966
REVISED 1974
MICHIGAN STATE SERIES 1-100

0.5 MILE LOCATION



SCALE IN FEET



O'BRIEN & GERE
ENGINEERS, INC.

Shane Noreen

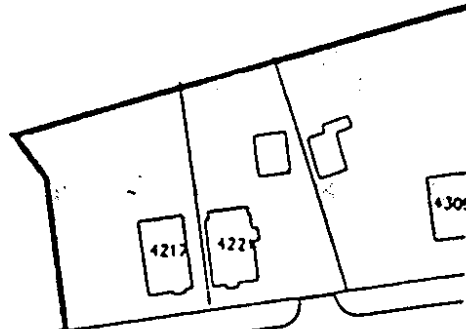
LFR

MASTER LIST 02/2008 17:07
1107 PAGE 987

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

PENGELLY ROAD

MILTON DRIVE



Shane Noreen

LFR

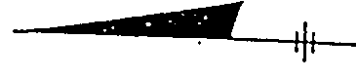
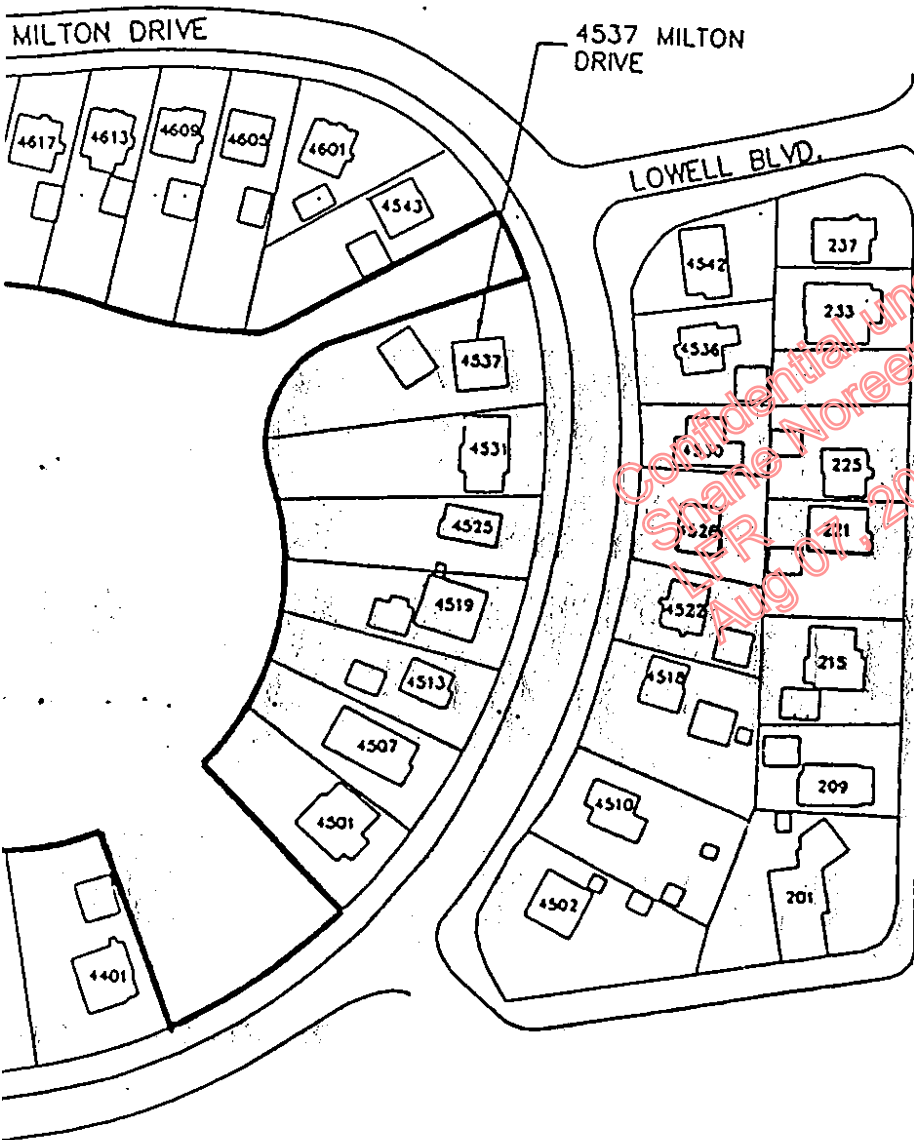
Aug 07, 2009 17:07

Shane Noreen

LFR

MASTER LIBER 4167 PAGE 988 Aug 07, 2009 17:07

FIGURE 2



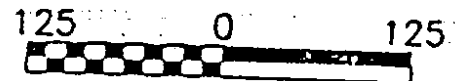
LEGEND

PARK PROPERTY LIMITS

WINDIATE PARK AREA
FLINT, MICHIGAN

OPERATION AND
MAINTENANCE

SITE PLAN



APPROXIMATE SCALE IN FEET

Shane Noreen

LFR

Aug 07, 2009 17:07

FILE NO. 6009-015-026

I:\NOVI\PROJECTS\6009015\DWG\025 DWG

Confidential under FOIA

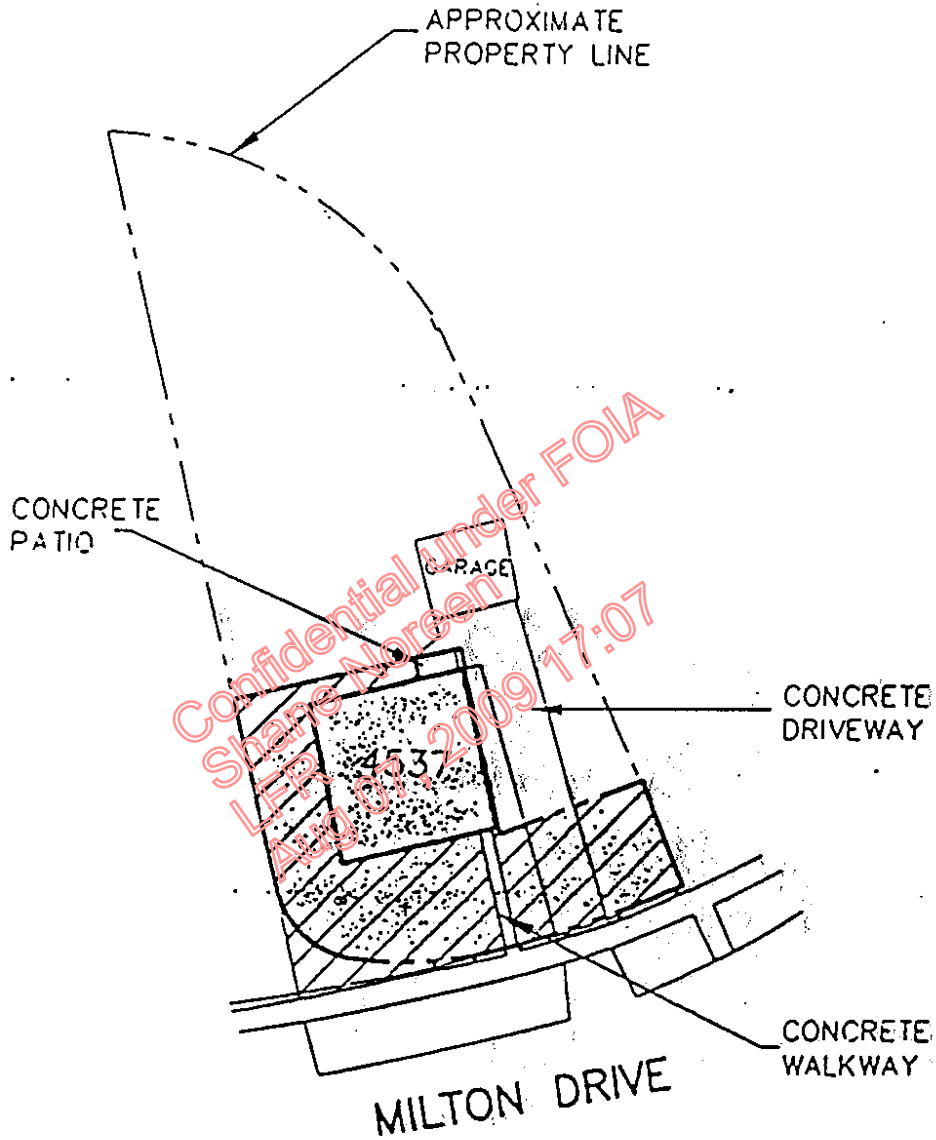
Shane Noreen

LFR

Aug 07, 2009 17:07

MASTER
LIBER

4167 PAGE 989



REGISTER OF DEEDS }
GENESEE COUNTY, MICHIGAN } SS.

I DO HEREBY CERTIFY, That the within and foregoing, is a true copy of the
Record of a Declaration of Restrictive Covenant
as recorded on Page 976-989 of
Liber 4167 of Master Liber in the
Office of Register of Deeds of Genesee County, Michigan. That I have
compared the same with the said Record and the same is a true copy.

Katherine Noreen
Deputy Register of Deeds for Genesee County
Flint, Michigan 48502 LFR

Issued 5-27-99
GC 1103

O'BRIEN GERE
ENGINEERS, INC.

Aug 07, 2009 17:07

Shane Noreen

LFR

HONIGMAN MILLER SCHWARTZ AND COHN LLP

2290 FIRST NATIONAL BUILDING
660 WOODWARD AVENUE
DETROIT, MICHIGAN 48226-3583
FAX (313) 465-8000

LANSING, MICHIGAN

JOSEPH M. POLITO
TELEPHONE: (313) 465-7514
FAX: (313) 465-7515
E-MAIL: jzp@honigman.com
www.honigman.com

July 30, 2001

Mr. David Bartley
Compliance & Enforcement Section
Environmental Response Division
Michigan Department of Environmental Quality
300 S. Washington
Lansing, MI 48933-2125

Re: *Windiate Park, Dixieland Subdivision, 4401 Milton Drive, Flint, Genesee County, MI –
MDEQ Reference No. RC-ERD-98-012*

Dear Mr. Bartley:

As a followup to several phone conversations and my letter to you, dated March 5, 1999, enclosed for your records is a copy of the Declaration of Restrictive Covenant for 4401 Milton Drive that was recorded with the Genesee County Register of Deeds in Master Liber 4406, Page 626, on February 29, 2000. In my March 5, 1999 letter I explained that 4401 Milton Drive was inadvertently sold by the General Motors' employee in charge of real estate dispositions without executing and recording the Declaration. I explained that General Motors planned to correct this oversight by executing and recording the Declaration, obtaining the consent thereto of the new owner and, if necessary, obtaining the mortgagee's consent. Your review of the recorded Declaration will disclose that it was recorded with a Consent to Declaration of Restrictive Covenant signed by the owner, Genille Brown, which we obtained after significant efforts. However, despite our efforts with Bank of America, the current mortgage holder of record, we have been unable to secure the consent of Bank of America. (Bank of America was not the original lender.)

General Motors requested that Bank of America sign a consent, as mortgagee, as was the case with the owner. Bank of America reviewed the request and the Declaration, but ultimately refused. As an alternative, General Motors asked whether Bank of America would consider selling the mortgage loan to General Motors or an affiliate. Bank of America declined, reporting that the loan was in an investor portfolio – agency pool and Bank of America does not have the ability to remove the loan from the pool and sell it. Although, General Motors is not able to obtain the consent of the current mortgagee to the Declaration, this lack of consent does not currently affect compliance with Part 201 of the Natural Resources and Environmental Protection Act ("NREPA").

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

HONIGMAN MILLER SCHWARTZ AND COHN LLP

Shane Noreen

LFR

Aug 07, 2009 17:07

Mr. David Bartley

Page 2

July 30, 2001

Sections 20120b (3) and (4) of NREPA provide that appropriate land use or resource use restrictions are to be included in a legally enforceable agreement and in a restrictive covenant to be recorded with the register of deeds in the county where the property is located "by the property owner or with the express written permission of the property owner." This has been done. Section 20120b (3) further provides that if the department determines that the applicable land use or resource use restrictions "lapse or are not complied with as provided in the agreement or remedial action plan, the department's approval of the remedial action plan ["RAP"] is void from the time of the lapse or violation, unless the lapse or violation is corrected to the satisfaction of the department...". Paragraph 7.3 of the applicable land use agreement contains a similar provision regarding the lapse or non-compliance with land use or resource use restrictions. If the RAP is void due to a lapse or non-compliance with this provision of paragraph 7.3, the RAP will, however be considered automatically re-approved if the lapse or non-compliance is corrected in accordance with the approved RAP.

Accordingly, there is an effective recorded restrictive covenant of record and General Motors is currently in compliance with Part 201. If, however, in the unlikely event the mortgagee forecloses the mortgage and the owner does not redeem within the one-year redemption period, there would be a lapse or non-compliance which would need to be corrected at that time. General Motors attempted to obtain the mortgagee's consent at this time to avoid this possible future, although likely theoretical, problem.

Please call me or my legal assistant, Katherine Hammers (313-465-7216), if you have any questions regarding the foregoing.

Sincerely,



Joseph M. Polito

kzh

Enclosure

cc: Artis M. Noel, Esq.
Robert Metcalf
Frederick J. Frank, Esq.
Katherine Hammers

Shane Noreen
LAW OFFICES

HONIGMAN MILLER SCHWARTZ AND COHN

2299 FIRST EDITION BUILDING
660 WOODWARD AVENUE
DETROIT, MICHIGAN 48226-3583
FAX (313) 465-8000

JOSEPH M. POLITO
TELEPHONE: (313) 465-7514
FAX: (313) 465-7515
E-MAIL: kzc@honigman.com

LANSING, MICHIGAN

March 5, 1999

Mr. Dave Bartley
Environmental Response Division
Compliance & Enforcement Section
Michigan Department of Environmental Quality
1st Floor, Knapps Centre
300 S. Washington
Lansing, MI 48933-2125

Re: *4401 Milton Drive, Windiate Park, Daceland Subdivision, Flint, Genesee
County, Michigan*

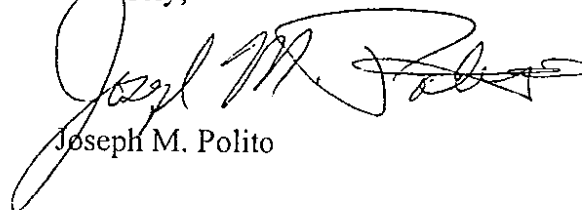
Dear Mr. Bartley:

This letter follows up on our telephone conversation last Tuesday regarding 4401 Milton Drive. As I mentioned, prior to entry of the Agreement for Limited Land Use Remedy ("Agreement") for 4401 and 4537 Milton Drive, 4401 Milton was inadvertently sold by the General Motors Corporation ("GM") employee in charge of real estate dispositions on January 26, 1999 without executing and recording the Declaration of Restrictive Covenant that is Exhibit A to the Agreement.

GM plans to correct this oversight by: (1) executing and recording the Declaration of Restrictive Covenant, with an effective date as of the date of the sale; (2) obtaining from the new property owner written consent to record the Declaration of Restrictive Covenant; and (3) if necessary, obtaining the written consent of any mortgagee on the property.

We will keep you apprised of the status of our efforts in this regard. Thank you for your cooperation.

Sincerely,



Joseph M. Polito

cc: Artis M. Noel, Esq.
DET_B162686.1

Shane Noreen

LFR

Aug 07, 2009 17:07

Feb 29 10 50 AM '00

MASTER
LIBER 4406 PAGE 626GENESEE COUNTY
REGISTER OF DEEDS

DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No.: RC-ERD-98-012

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the Genesee County Register of Deeds for the purpose of protecting public health, safety and welfare and the environment.

General Motors Corporation, a Delaware corporation ("GM"), of 3031 W. Grand Boulevard, Detroit, Michigan 48202, has received approval from the Michigan Department of Environmental Quality (MDEQ), Shiawassee District Office, 10650 Bennett Drive, Morrice, Michigan 48857, by MDEQ's execution of an Agreement For Limited Residential Land Use Remedy dated September 14, 1998, for: (i) the Closure Report For Residential Properties in the Windiate Park/Dixieland Subdivision, Flint, Michigan prepared by O'Brien & Gere, dated January 21, 1998; and: (ii) a Remedial Action Plan, dated February 1997, as amended by letters from O'Brien & Gere Engineers, Inc., dated July 17, 1997, and March 16, 1998 (the "RAP"), that includes residential land use-based cleanup criteria as defined and set forth in Section 20120a(1)(f) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101 et seq, for the environmental remediation associated with the property located in the City of Flint, County of Genesee, ("Property") more particularly described as:

Lot 163 and lot 162, except the northerly 15.0 feet of lot 162, of Block 152 of Dixieland Subdivision, a subdivision as recorded in Liber 11, Pages 5 and 6, of Plats, Genesee County Records, being a part of the Northeast 1/4 of Section 30 and the Northwest 1/4 of Section 29, Town 7 North, Range 7 East, City of Flint, Genesee County, Michigan, more commonly known as 4401 Milton ("4401 Milton"), and

See Attachments A1 and A2 for a survey of the portions of the Property subject to the land-use restrictions imposed herein.

Property Tax ID Number of Property: 11-30-277-007-9 and a portion of 25-11-30-277-006-0.

As used herein, the term "Owner" shall mean at any given time the then current title holder of the Property.

NOW, THEREFORE, GM, 3031 W. Grand Boulevard, Detroit, Michigan, pursuant to Section 20120b(4) of NREPA and the Agreement for Limited Residential Land Use Remedy entered into by and between GM and the MDEQ (LANDUSE-ERD-98-010), hereby imposes restrictions on the portions of the Property identified in Attachment A1 and A2 as follows:

1. The Owner shall restrict the uses of the Property to those uses compatible with the limited residential land use category as defined in Section 20120a(1)(f) of Part 201 of NREPA, as amended in June 1995, and the RAP, or other use that is consistent with the assumptions and basis for the cleanup criteria established pursuant to Section 20120a(1)(f). Cleanup criteria for land use-based remedial action plans are located in the Government Documents section of the State of Michigan Library.

CRTSY 670

Confidential under FOIA

15080

Shane Noreen

RETURN TO:

LFR

LAWYERS TITLE

Aug 07, 2009 17:07

2. The Owner shall prohibit activities at the Property that may interfere with the remedial action, operation and maintenance, monitoring, or other measures necessary to ensure the effectiveness and integrity of the remedial action described in the RAP.

3. The following activities at the Property that may result in unacceptable exposures or the release of a hazardous substance are prohibited:

A. Excavation activities more than two (2) feet below the surface within Lot 163, and any excavation below the garage floor, the driveway, the sidewalks or within the crawl space beneath the existing dwelling, as designated on Attachments A1 and A2, unless otherwise approved by MDEQ.

B. Extraction of, any use of or any activity in groundwater beneath the Property.

4. Any activity in or related to any contaminated soils beneath the soil cover (and more than two (2) feet below the surface of Lot 163) or beneath the garage floor, the driveway, the sidewalks or under the crawl space beneath the existing dwelling, as designated on Attachments A1 and A2, must be managed in accordance with the requirements of Section 20120c of MREPA and other applicable state and federal laws.

5. The Owner (if other than GM) shall provide notice to the MDEQ and GM of the Owner's intent to convey any interest in the Property fourteen (14) days prior to consummating the conveyance. A conveyance of title, an easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant.

6. The Owner shall grant to the MDEQ and its designated representatives the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the RAP, including the right to take samples, inspect the operation of the remedial action measures and inspect any records relating thereto.

The State of Michigan, through MDEQ, may enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of appropriate jurisdiction.

It is expressly understood that the Owner, to avoid any direct contact with any underlying potentially contaminated soils, shall properly maintain the garage floor, the driveway, sidewalks, and any landscaping, lawn or other ground cover, repair any damaged or eroded soil surface areas; and perform all operation and maintenance activities set forth in Attachment B with respect to the Property. The Owner further understands that these obligations shall run with the Property.

The restrictions in this Restrictive Covenant shall run with the Property and shall be binding upon all Owners, future owners, successors, lessees or assigns and their authorized agents, employees, or persons acting under their direction and control, and shall continue until the MDEQ or its successor approves a modification or rescission of this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, assigns and transferees by the person transferring any interest in the Property.

If any provision of this Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof, and all such other provisions shall continue unimpaired and in full force and effect.

LFR

The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner to do so, and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant.

IN WITNESS WHEREOF, the said Owner of the above described Property has caused this Restrictive Covenant to be executed on this 7th day of February, ~~1999~~, but effective as of January 26, 1999. 2000

Signed in the presence of:

GENERAL MOTORS CORPORATION,
a Delaware corporation

By

[Print name]:

Conrad P. Schwartz
CONRAD P. SCHWARTZ
DIRECTOR
WORLDWIDE REAL ESTATE

Its:

[Title]

Address: 3031 W. Grand Boulevard
Detroit, Michigan 48202
Attn: _____

Witness: Aeneé LOIKO
[Print or type name]

Witness: APRIL R. BROWNING
[Print or type name]

STATE OF MICHIGAN
COUNTY OF Wayne

The foregoing instrument was acknowledged before me this 7th day of February, ~~1999~~ 2000
by Conrad Schwartz, the Director of Worldwide Real Estate of General Motors Corporation, a Delaware corporation, on behalf of the corporation.

Notary Public

[Print or type name]:

Wayne

County, Michigan

My Commission Expires: 11-28-2013

ANNE M. BODNAR
NOTARY PUBLIC WAYNE CO., MI
MY COMMISSION EXPIRES Nov 28, 2003

Prepared by: Frederick J. Frank, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7384

When recorded return to:

Kenneth C. Gold, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7394

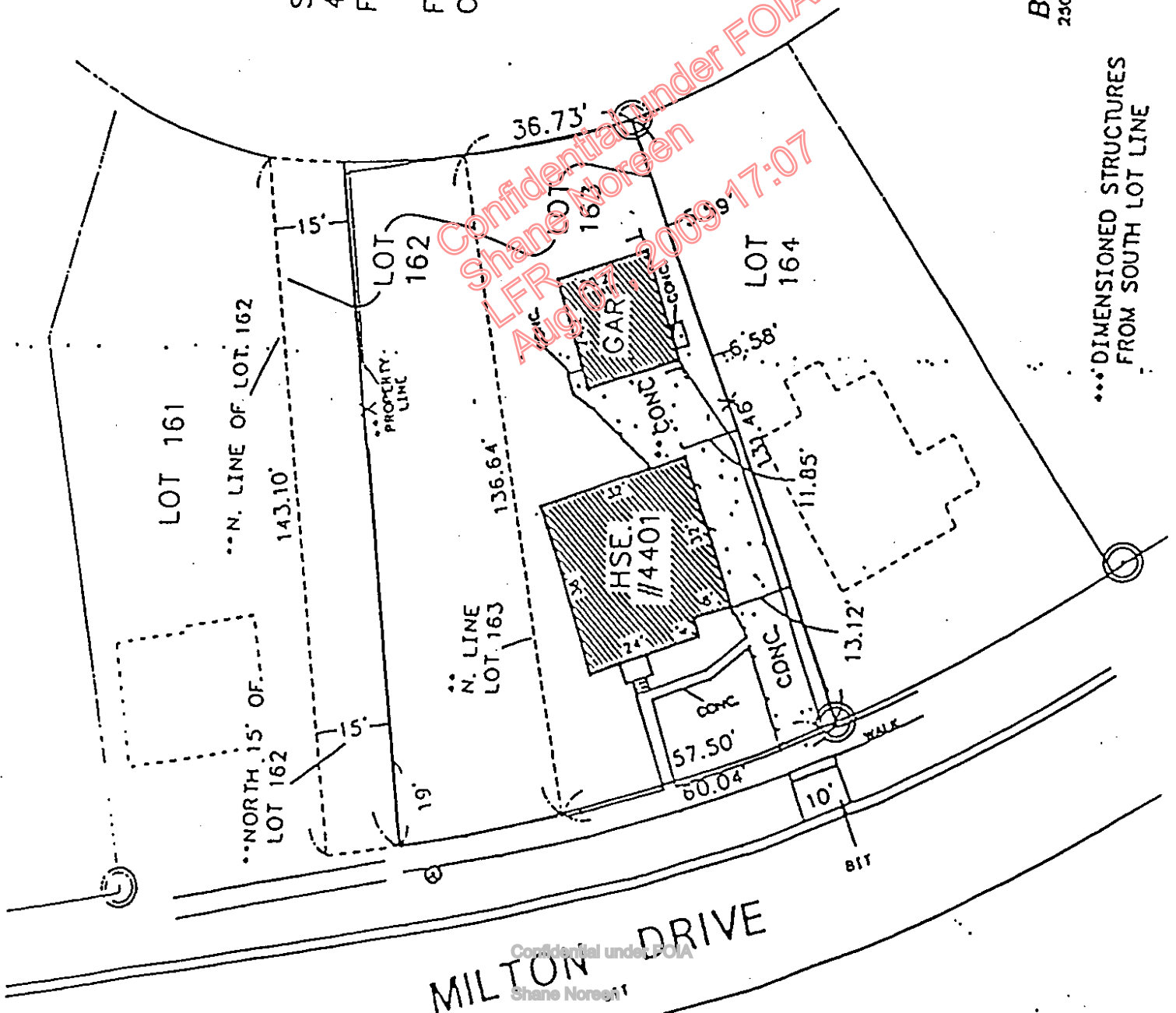
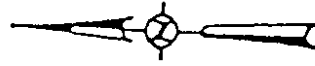
DET_C\226177.2

Aug 07, 2009 17:07

FOR:
O'BRIEN & GERE ENGINEERS, IN

SCALE: 1"=30'

Bartow & King Engineers
2300 E. Mainland Road, Bay City, Michigan 48706
Tel. (317) 684-6630
Fax (317) 684-8404



...DIMENSIONED STRUCTURES
FROM SOUTH LOT LINE

LFR

Aug 07, 2009 17:07

Operation and Maintenance Plan

4401 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

November 1997

Shane Noreen
MASTER
LIBER

LFR

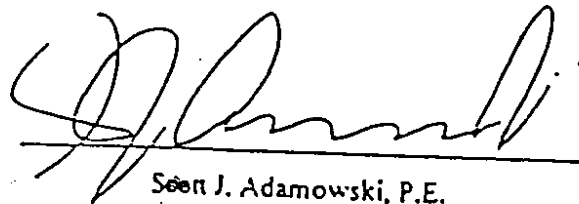
Aug 07, 2009 17:07

4406 PAGE 632

Operation and Maintenance Plan

4401 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Scott J. Adamowski, P.E.
Vice President

November 1997



O'BRIEN & GERE
ENGINEERS, INC.

39830 Grand River Avenue
Suite B-2
Novi, MI 48375

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Contents

1. Operation and maintenance (O & M) plan	1
1.1. Property description	1
1.2. Interim remedial measures	2
1.3. Land use restrictions	2
1.4. O & M activities	2

List of Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Existing Waste Fill Extent

Shane Noreen

LFR

Aug 07, 2009 17:07

Aug 07, 2009 17:07

1. Operation and maintenance (O & M) plan

This Operation and Maintenance Plan (O & M Plan) was prepared for the property at 4401 Milton Drive, Flint, Michigan in accordance with a Limited Residential Closure as described in the February 1997 "Remedial Action Plan for Residential Properties" at the Windiate Park/Dixieland Subdivision in Flint, Michigan. This O & M Plan complies with the 1995 amendments to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, administered by the Michigan Department of Environmental Quality (MDEQ).

1.1. Property description

The 4401 Milton Drive property is located within Sections 29 and 30 of Township 7 North, Range 7 East, in the City of Flint, Genesee County, Michigan. The property is described in the Genesee County Records as Lot 163 and includes the adjacent, southern 35 ft strip of land of Lot 162. A Site Location Map, Figure 1, identifies the general location of this property within Genesee County. A Site Plan, Figure 2, identifies the location of this property within the Windiate Park/Dixieland Subdivision.

This property contains a residential house with a crawl space consisting of a soil floor. There is also a detached garage and an asphalt/concrete driveway. A fence is located on the north, east, and south property boundaries with a concrete sidewalk bordering the west property boundary. The property is covered with grass, trees, bushes, and a concrete walkway on the west side of the house and is topographically higher than Windiate Park which borders the property to the east and south.

Aug 07, 2009 17:07

Shane Noreen

Operation and Maintenance Plan

LFR

Aug 07, 2009 17:07

1.2. Interim remedial measures

In response to the identification of surface soil and waste fill impact to this property, as outlined in the February 1997 Residential Remedial Investigation/Feasibility Study (RI/FS) Report, interim remedial measures (IRMs) were implemented at the 4401 Milton Drive property.

The IRMs consisted of waste fill excavation and disposal within the southerly 35 ft strip of land (Lot 162) which was subsequently backfilled with sand and topsoil with sod placed over the topsoil. Lead impacted surface soil was also removed from the southern 35 ft portion of Lot 162 and from the front yard of Lot 163, including the areas between Milton Drive and the sidewalk.

Subsurface waste fill remains at the property on Lot 163 within the approximate limits as shown on Figure 3 and likely exists underneath the house, garage, sidewalks, and driveway. In vegetated areas, a soil cover of at least 2 ft exists above the remaining waste fill material. The waste fill material is generally located 2 ft below the surface and extends to a depth of approximately 1 ft as identified in the RI/FS Report and during IRM implementation.

1.3. Land use restrictions

As a condition of the land use restrictions which will run with the land, the private owner will conduct normal and routine O & M activities at the property. A Restrictive Covenant will describe limiting excavation below 2 ft on Lot 163, where waste fill remains, including no excavation underneath the house (crawl space), garage, sidewalks, and driveway, and maintaining the garage floor, sidewalks, and driveway surface.

1.4. O & M activities

Routine O & M of the property includes vegetation care, such as watering, mowing, hedging and fertilizing of the grass and trees/bushes. Activities such as replacement of topsoil or vegetation damaged from erosion.

Aug 07, 2009 17:07

settlement, subsidence or burrowing animals will also be performed to maintain the property.

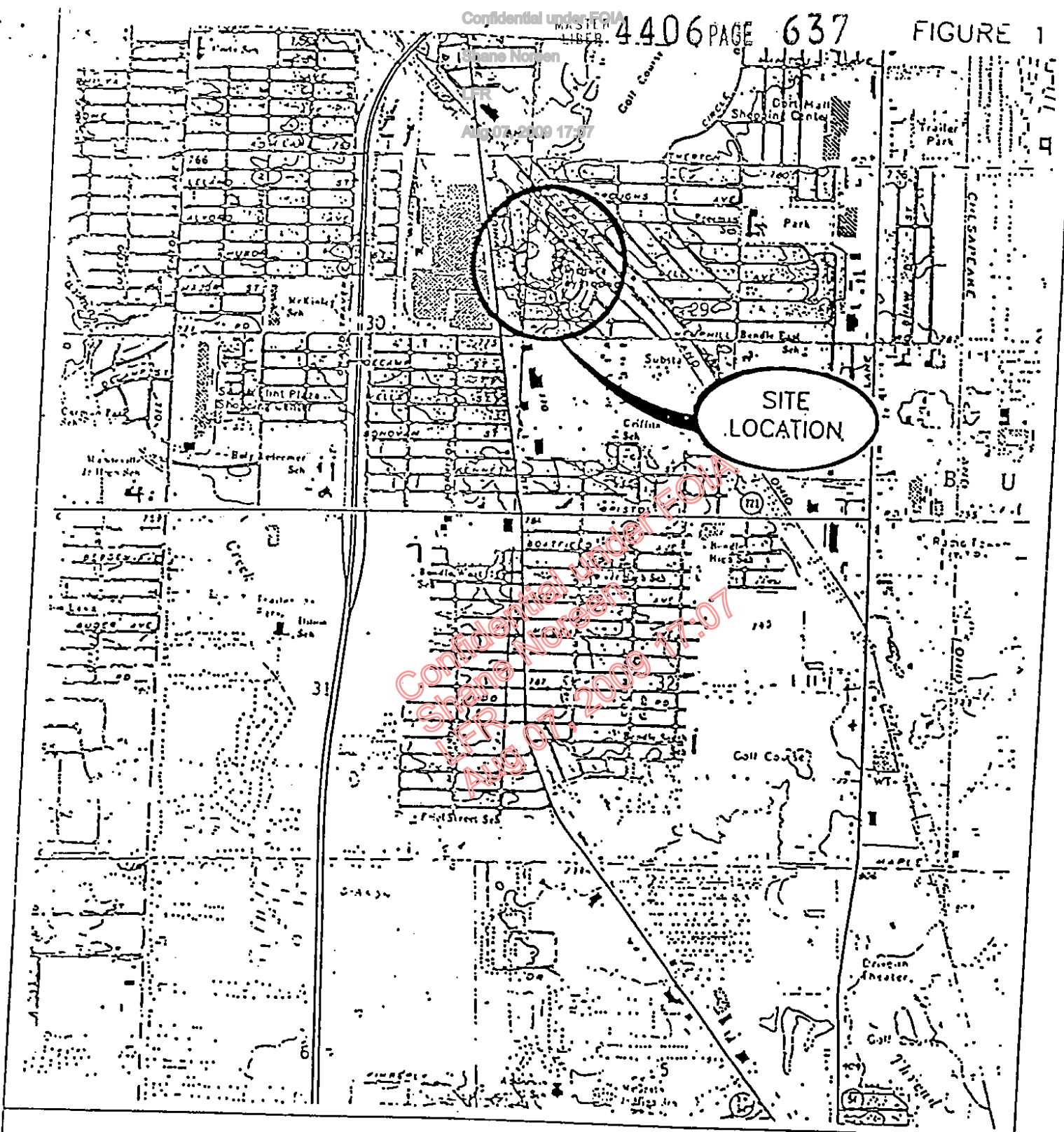
Routine maintenance of the sidewalks, driveway surface, and garage floor will be performed by the homeowner to eliminate potential direct contact with the underlying soil. This activity will likely include repair of cracks in the concrete and/or resurfacing as needed.

No further operation and maintenance activities will be necessary.

Monitoring activities are not necessary to maintain the integrity of the soil cover barrier or the structures as the deed restrictions will prevent future uncontrolled excavation activity at the 4401 Milton Drive property.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

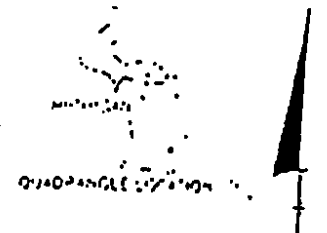
Aug 07, 2009 17:07



FLINT SOUTH, MICH.
1959

WINDIATE PARK AREA
FLINT, MICHIGAN

SITE LOCATION MAP



FILE NO 6009-011

0 1000 2000 3000
SCALE IN FEET

O BRIEN & GERE
ENGINEERS, INC.

LFR

Aug 07, 2009 17:07

I:\NOVIN\PROJECTS\6009015\DWG\023.DWG

PLT SCALE: 30

Confidential under FOIA

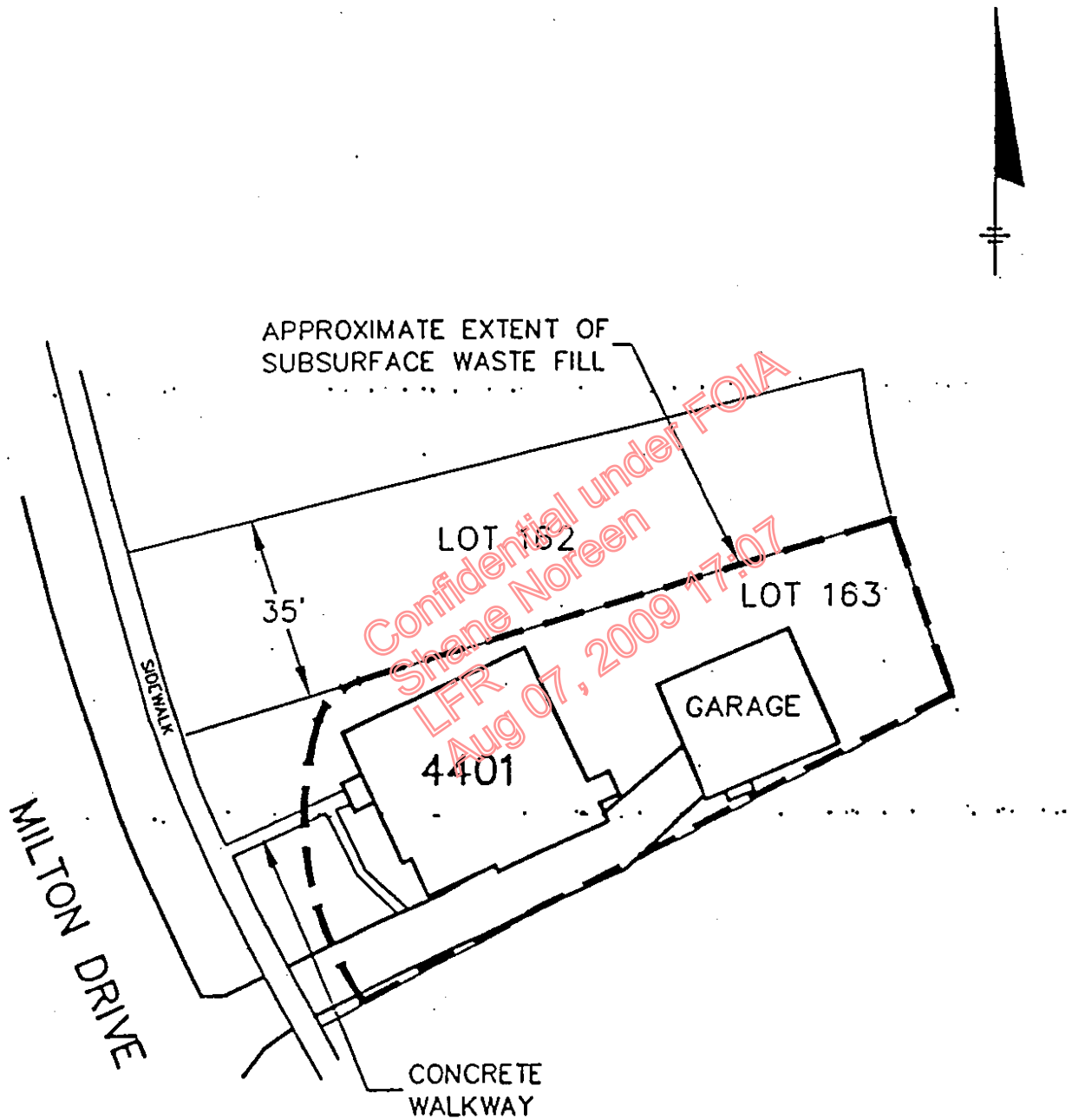
Shane Noreen

LFR

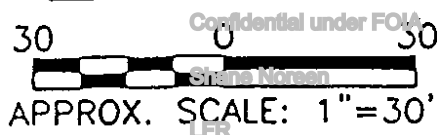
Aug 07, 2009 17:07
LIBER

FIGURE 3

4406 PAGE 639



4401 MILTON DRIVE
FLINT, MICHIGAN



Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

MASTER
LIBER 4406 PAGE 640CONSENT TO DECLARATION OF RESTRICTIVE COVENANT

Genille A. Brown, of 4401 Milton, Flint, Michigan, as owner of the Property commonly known as 4401 Milton and described in the attached Declaration of Restrictive Covenant (MDEQ Reference No.: RC-ERD-98012) hereby authorizes and empowers General Motors Corporation to execute and record this Declaration of Restrictive Covenant, consents to the recording of this Declaration of Restrictive Covenant with respect to the Property and agrees that from and after January 26, 1999 the terms, restrictions and conditions of this Declaration of Restrictive Covenant shall be binding upon me and my heirs, personal representatives, successors and assigns and shall run with the Property.

WITNESSES:

Leslie L. Little
Print Name: Leslie L. Little

Sue Shangle
Print Name: Sue Shangle

Genille A. Brown
Genille A. Brown

STATE OF MICHIGAN)

COUNTY OF GENESEE)

ss.

The foregoing instrument was acknowledged before me this 3 day of June, 1999, by Genille A. Brown.

Arlene Dunn
Print Name: ARLENE DUNN
Notary Public, GENESEE County, Michigan
My Commission Expires: 9-28-03

DET_C1226981.1

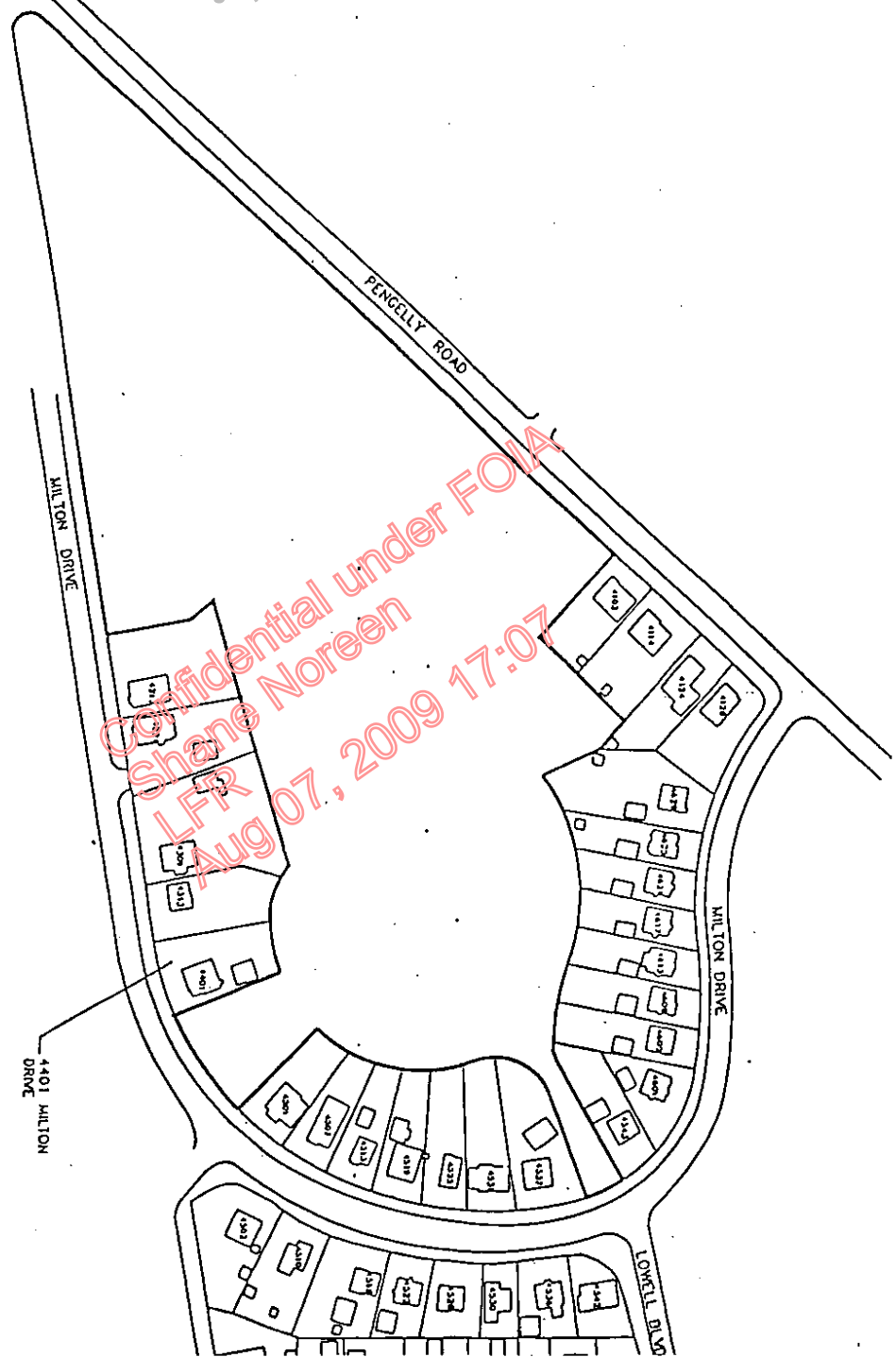
Shane Noreen

LFR

Aug 07, 2009 17:07

JUN 07 1999

Aug 07, 2009 17:07



Shane Noreen

LFR
LAW OFFICES

HONIGMAN MILLER SCHEWARTZ AND COHN LLP

2290 FIRST NATIONAL BUILDING
660 WOODWARD AVENUE
DETROIT, MICHIGAN 48226-3583
FAX (313) 465-8000

JOSEPH M. POLITO
TELEPHONE: (313) 465-7514
FAX: (313) 465-7515
E-MAIL: jzp@honigman.com
www.honigman.com

LANSING, MICHIGAN
BINGHAM FARM, MI

March 15, 2001

Mr. David Plewes
Zoning Coordinator
City of Flint
1101 S. Saginaw St.
Flint, MI 48502

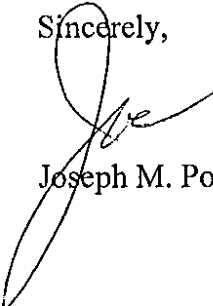
Re: *Notice of Land Use Restrictions, 4401 Milton Drive, Flint, MI*

Dear Mr. Plewes:

On behalf of General Motors Corporation, pursuant to Section 20120b(9) of Part 201 of the Michigan Natural Resources and Environmental Protection Act, GM hereby provides the City of Flint's zoning authority with notice of land use restrictions imposed on the above-referenced property in connection the Michigan Department of Environmental Quality's approval of a remedial action plan for this property on January 29, 1999. Enclosed for your records is a copy of the Declaration of Restrictive Covenant for 4401 Milton Drive (with attachments) that was recorded with the Genesee County Register of Deeds in Master Liber 4401, Page 626, on February 29, 2000.

Please call me or my legal assistant, Katherine Hammers (313-465-7216), if you have any questions.

Sincerely,


Joseph M. Polito

/klh

Enclosure

cc: Artis M. Noel, Esq. (w/enc.)
Robert Metcalf (w/enc.)
Frederick J. Frank, Esq.
Katherine Hammers

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

FEB 29 10 50 AM '00

MASTER
LIBER 4406 PAGE 626GENESEE COUNTY
REGISTER OF DEEDS

DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No.: RC-ERD-98-012

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the Genesee County Register of Deeds for the purpose of protecting public health, safety and welfare and the environment.

General Motors Corporation, a Delaware corporation ("GM"), of 3031 W. Grand Boulevard, Detroit, Michigan 48202, has received approval from the Michigan Department of Environmental Quality (MDEQ), Shiawassee District Office, 10650 Bennett Drive, Morrice, Michigan 48857, by MDEQ's execution of an Agreement For Limited Residential Land Use Remedy dated September 14, 1998, for: (i) the Closure Report For Residential Properties in the Windiate Park/Dixieland Subdivision, Flint, Michigan prepared by O'Brien & Gere, dated January 21, 1998; and: (ii) a Remedial Action Plan, dated February 1997, as amended by letters from O'Brien & Gere Engineers, Inc., dated July 17, 1997, and March 16, 1998 (the "RAP"), that includes residential land use-based cleanup criteria as defined and set forth in Section 20120a(1)(f) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101 et seq., for the environmental remediation associated with the property located in the City of Flint, County of Genesee, ("Property") more particularly described as:

Lot 163 and lot 162, except the northerly 15.0 feet of lot 162, of Block 152 of Dixieland Subdivision, a subdivision as recorded in Liber 11, Pages 5 and 6, of Plats, Genesee County Records, being a part of the Northeast 1/4 of Section 30 and the Northwest 1/4 of Section 29, Town 7 North, Range 7 East, City of Flint, Genesee County, Michigan, more commonly known as 4401 Milton ("4401 Milton"), and

See Attachments A1 and A2 for a survey of the portions of the Property subject to the land-use restrictions imposed herein.

Property Tax ID Number of Property: 11-30-277-007-9 and a portion of 25-11-30-277-006-0.

As used herein, the term "Owner" shall mean at any given time the then current title holder of the Property.

NOW, THEREFORE, GM, 3031 W. Grand Boulevard, Detroit, Michigan, pursuant to Section 20120b(4) of NREPA and the Agreement for Limited Residential Land Use Remedy entered into by and between GM and the MDEQ (LANDUSE-ERD-98-010), hereby imposes restrictions on the portions of the Property identified in Attachment A1 and A2 as follows:

1. The Owner shall restrict the uses of the Property to those uses compatible with the limited residential land use category as defined in Section 20120a(1)(f) of Part 201 of NREPA, as amended in June 1995, and the RAP, or other use that is consistent with the assumptions and basis for the cleanup criteria established pursuant to Section 20120a(1)(f). Cleanup criteria for land use-based remedial action plans are located in the Government Documents section of the State of Michigan Library.

CRTSY 670

Confidential under FOIA

15080

RETURN TO:
Shane Noreen 3700

LAWYERS TITLE

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

2. The Owner shall prohibit activities at the Property that may interfere with the remedial action, operation and maintenance, monitoring, or other measures necessary to ensure the effectiveness and integrity of the remedial action described in the RAP.

3. The following activities at the Property that may result in unacceptable exposures or the release of a hazardous substance are prohibited:

- A. Excavation activities more than two (2) feet below the surface within Lot 163, and any excavation below the garage floor, the driveway, the sidewalks or within the crawl space beneath the existing dwelling, as designated on Attachments A1 and A2, unless otherwise approved by MDEQ.
- B. Extraction of, any use of or any activity in groundwater beneath the Property.

4. Any activity in or related to any contaminated soils beneath the soil cover (and more than two (2) feet below the surface of Lot 163) or beneath the garage floor, the driveway, the sidewalks or under the crawl space beneath the existing dwelling, as designated on Attachments A1 and A2, must be managed in accordance with the requirements of Section 20120c of MREPA and other applicable state and federal laws.

5. The Owner (if other than GM) shall provide notice to the MDEQ and GM of the Owner's intent to convey any interest in the Property fourteen (14) days prior to consummating the conveyance. A conveyance of title, an easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant.

6. The Owner shall grant to the MDEQ and its designated representatives the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the RAP, including the right to take samples, inspect the operation of the remedial action measures and inspect any records relating thereto.

The State of Michigan, through MDEQ, may enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of appropriate jurisdiction.

It is expressly understood that the Owner, to avoid any direct contact with any underlying potentially contaminated soils, shall properly maintain the garage floor, the driveway, sidewalks, and any landscaping, lawn or other ground cover, repair any damaged or eroded soil surface areas; and perform all operation and maintenance activities set forth in Attachment B with respect to the Property. The Owner further understands that these obligations shall run with the Property.

The restrictions in this Restrictive Covenant shall run with the Property and shall be binding upon all Owners, future owners, successors, lessees or assigns and their authorized agents, employees, or persons acting under their direction and control, and shall continue until the MDEQ or its successor approves a modification or rescission of this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, assigns and transferees by the person transferring any interest in the Property.

If any provision of this Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof, and all such other provisions shall continue unimpaired and in full force and effect.

Shane Noreen

LFR

The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner to do so, and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant.

IN WITNESS WHEREOF, the said Owner of the above described Property has caused this Restrictive Covenant to be executed on this 7th day of February, ~~1999~~ 2000, but effective as of January 26, 1999.

Signed in the presence of:

GENERAL MOTORS CORPORATION,
a Delaware corporation

Daniel L. Loh
Witness: Bence LOIKO
[Print or type name]

By

[Print name]:

Its:

[Title]

Address:

3031 W. Grand Boulevard
Detroit, Michigan 48202

Attn:

APRIL R. BROWNING
Witness: APRIL R. BROWNING
[Print or type name]

STATE OF MICHIGAN

COUNTY OF Wayne

The foregoing instrument was acknowledged before me this 7th day of February, ~~1999~~ 2000 by CONRAD P. SCHWARTZ, the/a DIRECTOR of Worldwide Real Estate of General Motors Corporation, a Delaware corporation, on behalf of the corporation.

Anne M. Bodnar
Notary Public
[Print or type name]: Wayne
County, Michigan
My Commission Expires: 11-28-2003

ANNE M. BODNAR
NOTARY PUBLIC WAYNE CO., MI
MY COMMISSION EXPIRES Nov 28, 2003

Prepared by: Frederick J. Frank, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7384

When recorded return to:

Kenneth C. Gold, Esq.
Honigman Miller Schwartz and Cohn
2290 First National Building
Detroit, Michigan 48226
(313) 465-7394

DET_C226177.2

For:

O'BRIEN & GERE ENGINEERS. IN

Shane Noreen

MASTER
LIBER

4406 PAGE 629

LFR

Aug 07, 2009 17:07

SCALE: 1" = 30'

• REVISED 10-10-97

♦♦.REVISED 10-15-97

*** REVISED 11-24-97

JOB //971006PT

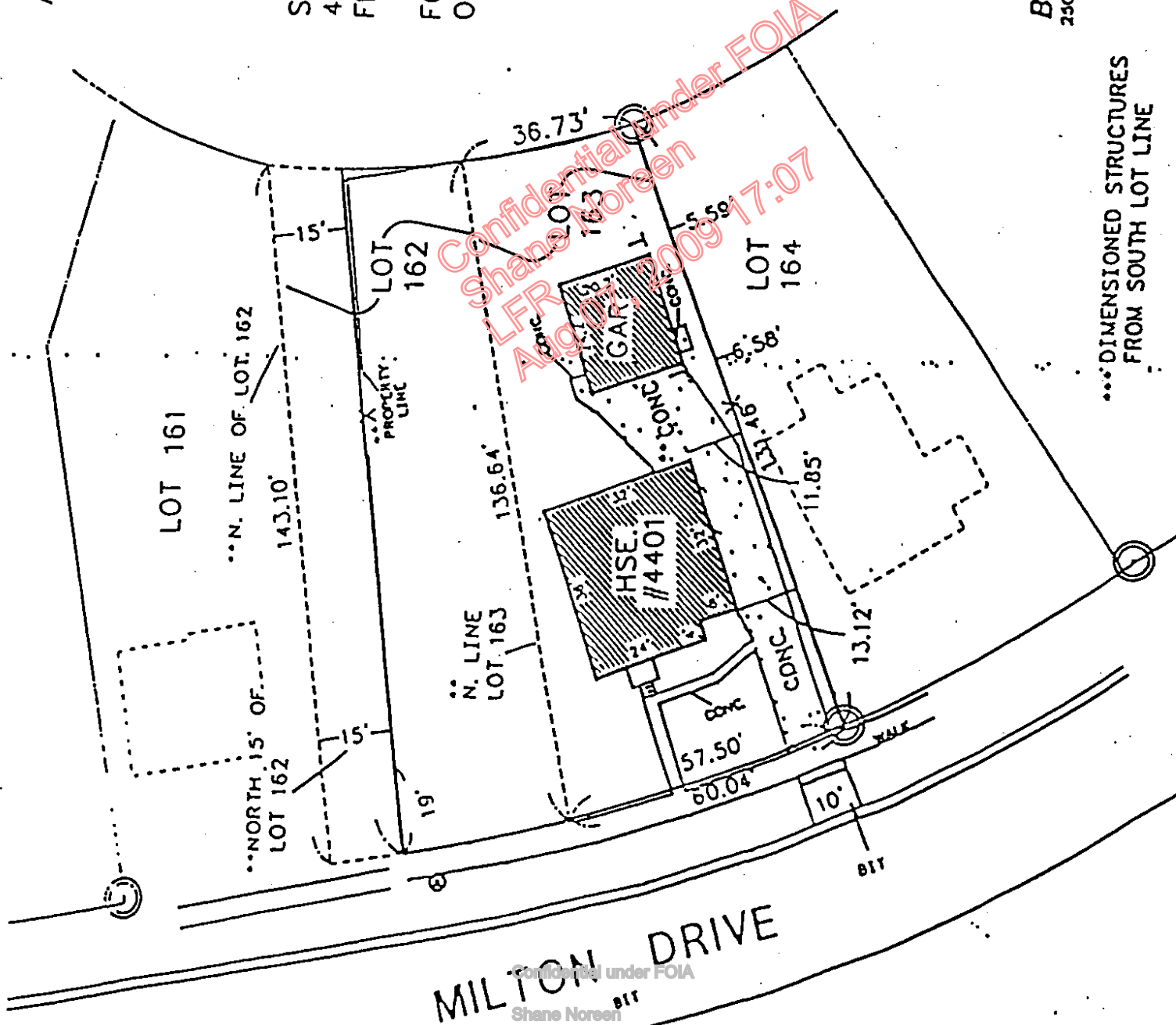
Barlow & Kling Engineers

4300 E. Midland Road, Day City, Michigan 48706

Tel. (517) 684-8830

Fox (317) 684-8404

...DIMENSIONED STRUCTURES
FROM SOUTH LOT LINE



~~CONFIDENTIAL~~ under FOIA
Shane Noreen
MILTON DRIVE
b7c

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

STRUCTURE SURVEY OF
4401 MILTON DRIVE
FLINT, MICHIGAN

FOR:
O'BRIEN & GERE ENGINEERS, IN

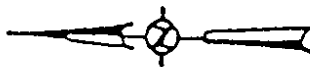
Shane Noreen

MASTER
LIBER

Shane Noreen MASTER LIBER 4406 PAGE 630

LFR

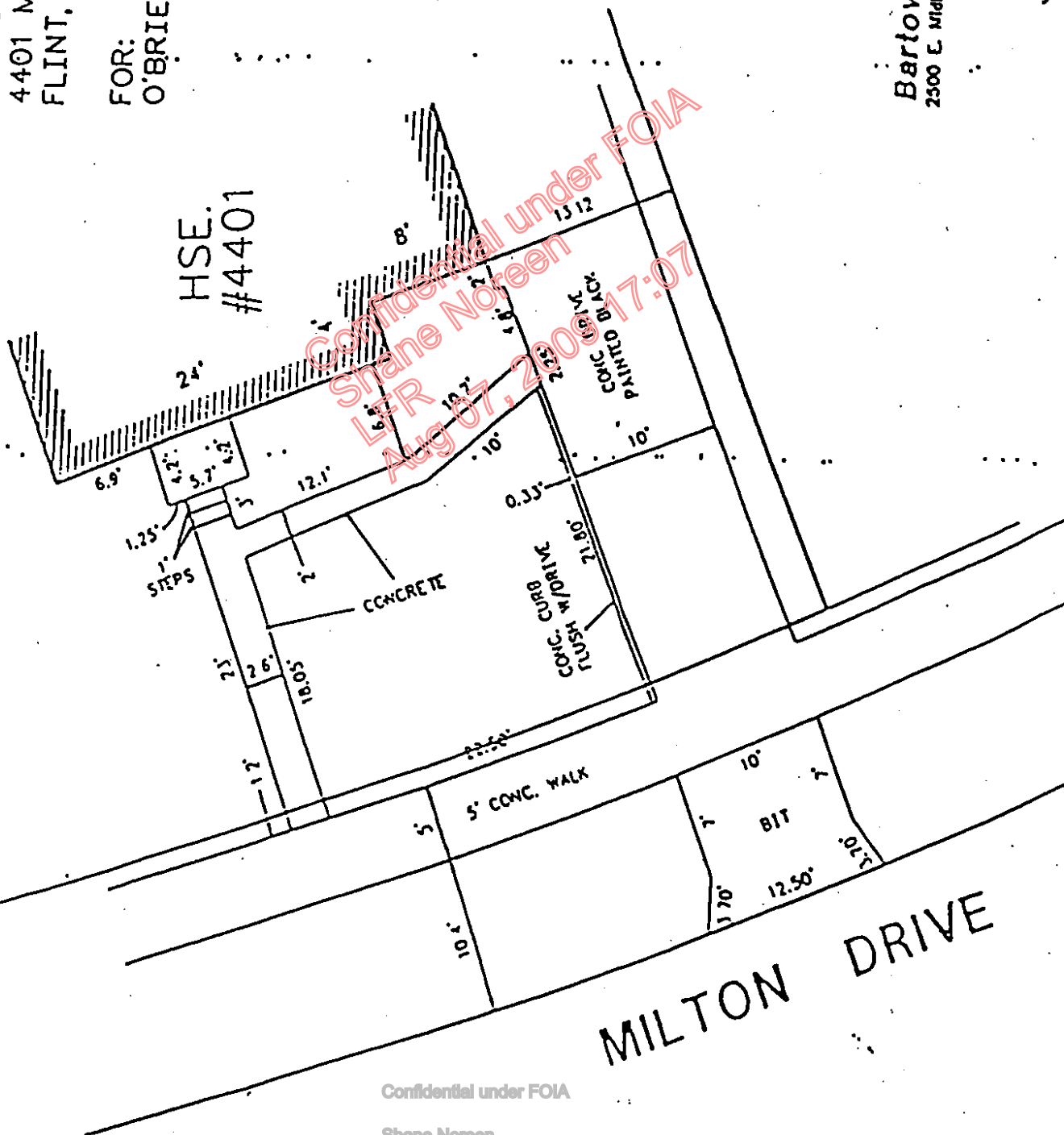
Aug 07, 2009 17:07



SCALE: 1"=10'

Bartow & King Engineers
2500 E. Midland Road, Bay City, Michigan 48706
Tel. (517) 684-8650
Fax. (517) 684-8404

JOB #971006DR



Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07

Operation and Maintenance Plan

4401 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

November 1997

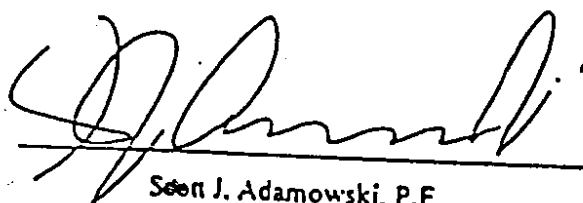
LFR

Aug 07, 2009 17:07

Operation and Maintenance Plan

1101 Milton Drive
Flint, Michigan

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



Sean J. Adamowski, P.E.
Vice President

November 1997



O'BRIEN & GERE
ENGINEERS, INC.

39830 Grand River Avenue
Suite B-2

Nov 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Contents

1. Operation and maintenance (O & M) plan	1
1.1. Property description	1
1.2. Interim remedial measures	2
1.3. Land use restrictions	2
1.4. O & M activities	2

List of Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Existing Waste Fill Extent

Aug 07, 2009 17:07

1. Operation and maintenance (O & M) plan

This Operation and Maintenance Plan (O & M Plan) was prepared for the property at 4401 Milton Drive, Flint, Michigan in accordance with a Limited Residential Closure as described in the February 1997 "Remedial Action Plan for Residential Properties" at the Windiate Park/Dixieland Subdivision in Flint, Michigan. This O & M Plan complies with the 1995 amendments to Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 431, administered by the Michigan Department of Environmental Quality (MDEQ).

1.1. Property description

The 4401 Milton Drive property is located within Sections 29 and 30 of Township 7 North, Range 7 East, in the City of Flint, Genesee County, Michigan. The property is described in the Genesee County Records as Lot 163 and includes the adjacent, southern 35 ft strip of land of Lot 162. A Site Location Map, Figure 1, identifies the general location of this property within Genesee County. A Site Plan, Figure 2, identifies the location of this property within the Windiate Park/Dixieland Subdivision.

This property contains a residential house with a crawl space consisting of a soil floor. There is also a detached garage and an asphalt/concrete driveway. A fence is located on the north, east, and south property boundaries with a concrete sidewalk bordering the west property boundary. The property is covered with grass, trees, bushes, and a concrete walkway on the west side of the house and is topographically higher than Windiate Park which borders the property to the east and south.

Aug 07, 2009 17:07

Aug 07, 2009 17:07

1.2. Interim remedial measures

In response to the identification of surface soil and waste fill impact to this property, as outlined in the February 1997 Residential Remedial Investigation/Feasibility Study (RI/FS) Report, interim remedial measures (IRMs) were implemented at the 4401 Milton Drive property.

The IRMs consisted of waste fill excavation and disposal within the southerly 35 ft strip of land (Lot 162) which was subsequently backfilled with sand and topsoil with sod placed over the topsoil. Lead impacted surface soil was also removed from the southern 35 ft portion of Lot 162 and from the front yard of Lot 163, including the areas between Milton Drive and the sidewalk.

Subsurface waste fill remains at the property on Lot 163 within the approximate limits as shown on Figure 3 and likely exists underneath the house, garage, sidewalks, and driveway. In vegetated areas, a soil cover of at least 2 ft exists above the remaining waste fill material. The waste fill material is generally located 2 ft below the surface and extends to a depth of approximately 1-4 ft as identified in the RI/FS Report and during IRM implementation.

1.3. Land use restrictions

As a condition of the land use restrictions which will run with the land, the private owner will conduct normal and routine O & M activities at the property. A Restrictive Covenant will describe limiting excavation below 2 ft on Lot 163, where waste fill remains, including no excavation underneath the house (crawl space), garage, sidewalks, and driveway, and maintaining the garage floor, sidewalks, and driveway surface.

1.4. O & M activities

Routine O & M of the property includes vegetation care, such as watering, mowing, hedging and fertilizing of the grass and trees/bushes. Activities such as replacement of topsoil or vegetation damaged from erosion.

Aug 07, 2009 17:07

LFR

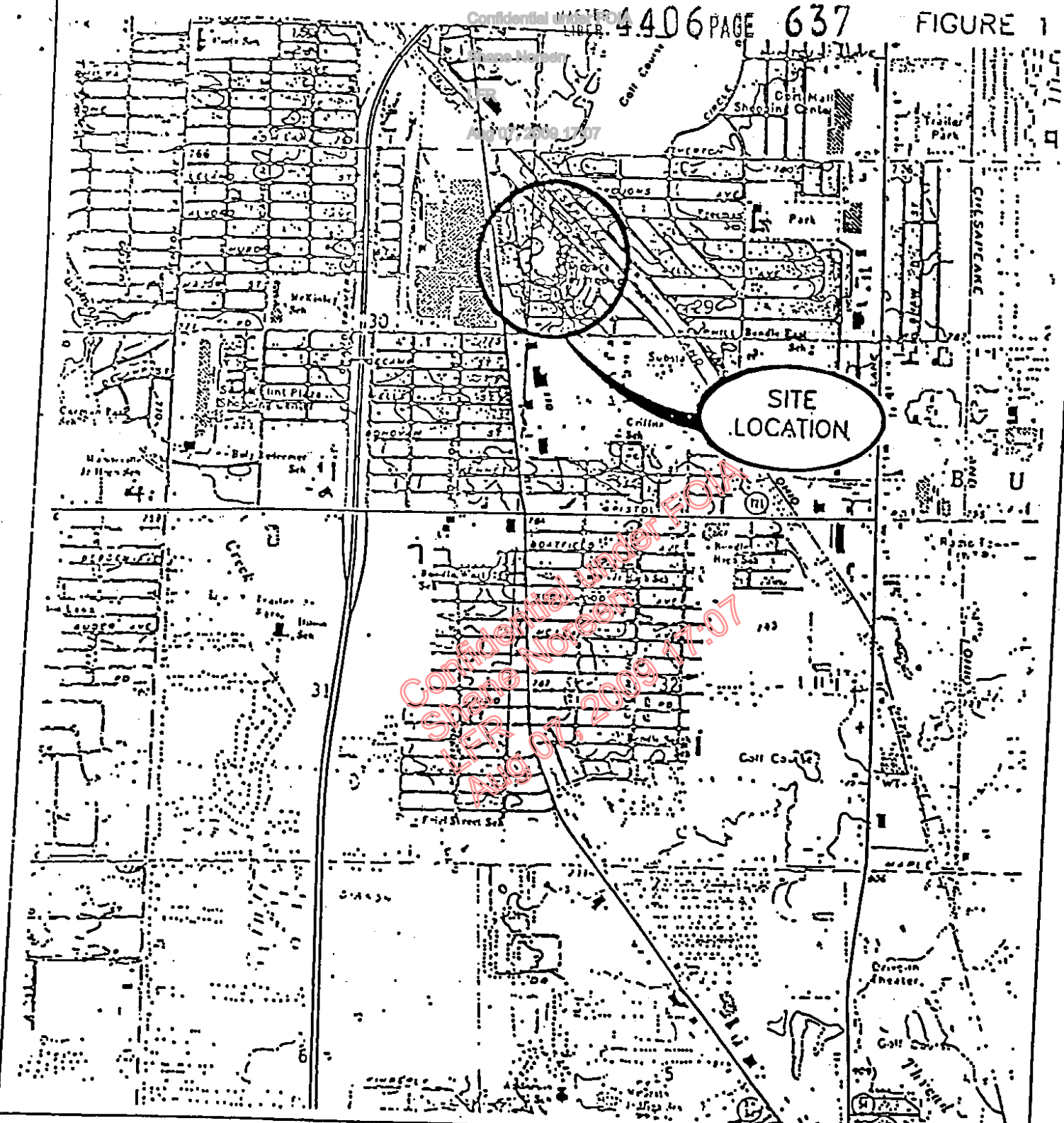
settlement, subsidence or burrowing animals will also be performed to maintain the property.

Routine maintenance of the sidewalks, driveway surface, and garage floor will be performed by the homeowner to eliminate potential direct contact with the underlying soil. This activity will likely include repair of cracks in the concrete and/or resurfacing as needed.

No further operation and maintenance activities will be necessary.

Monitoring activities are not necessary to maintain the integrity of the soil cover barrier or the structures as the deed restrictions will prevent future uncontrolled excavation activity at the 4401 Milton Drive property.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



FLINT SOUTH, MICH.

1959

1959

REVISIONS 1975

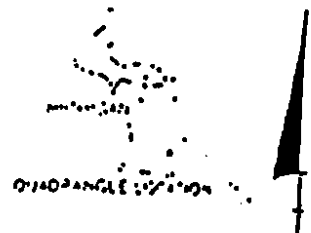
1975

WINDIATE PARK AREA
FLINT, MICHIGAN

SITE LOCATION MAP



SCALE IN FEET



O'BRIEN & GERE
ENGINEERS, INC.

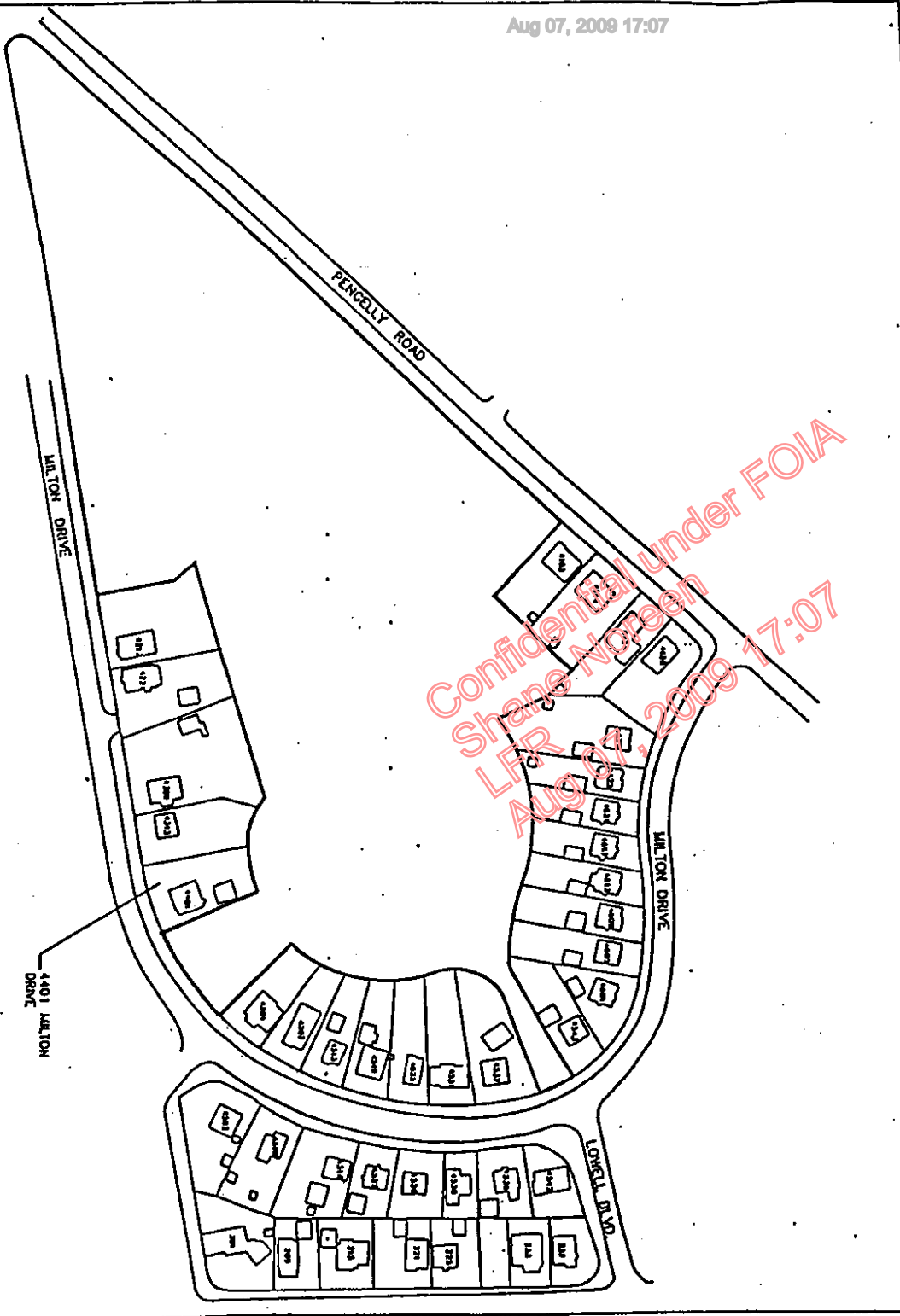
FILE NO 6009-011

LFR

Aug 07, 2009 17:07

LFR

Aug 07, 2009 17:07



Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

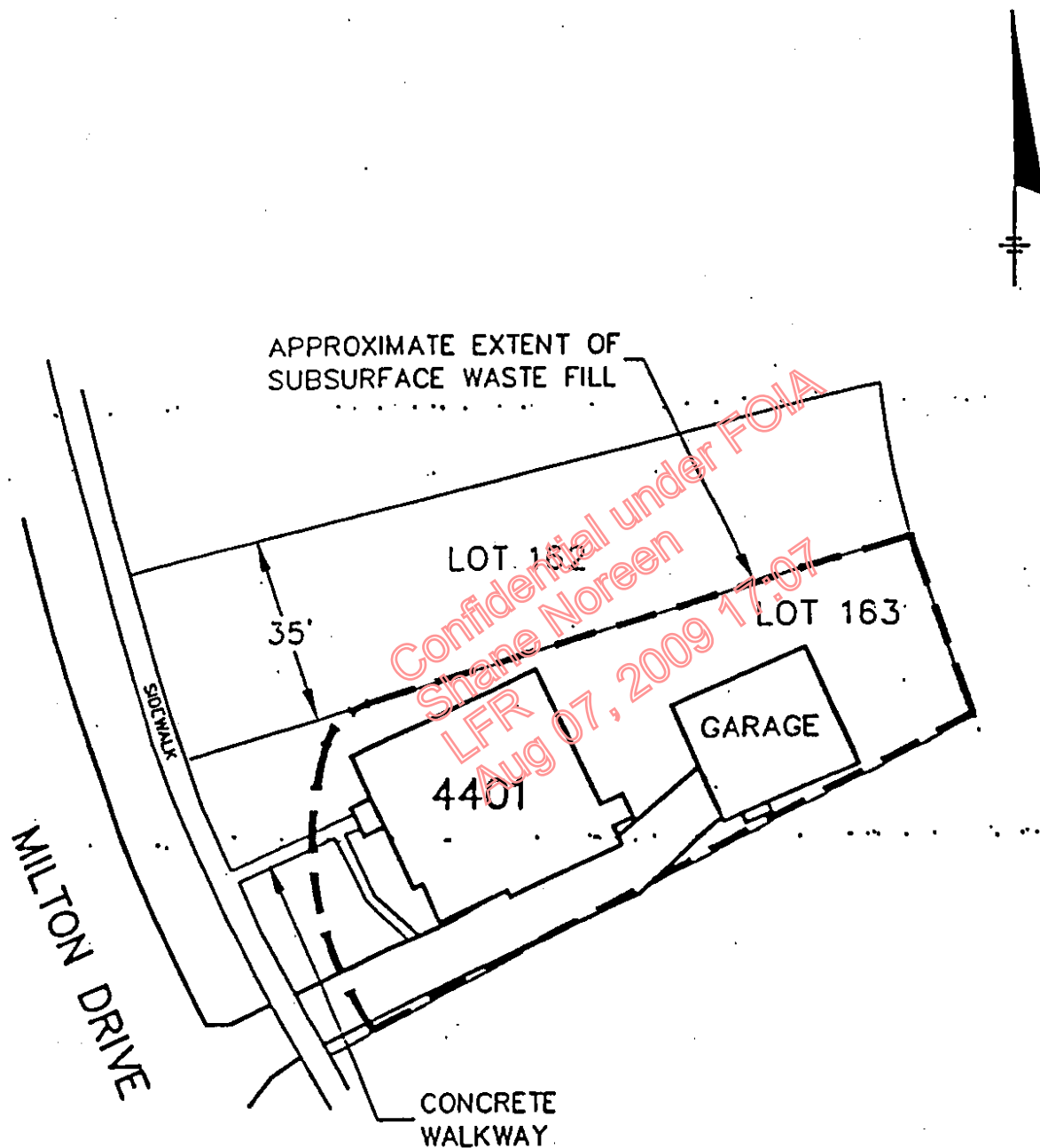
FIGURE 2

LEGEND
PARK PROPERTY
LFR
Aug 07, 2009 17:07

WINDGATE PARK AREA
FLINT, MICHIGAN
OPERATION AND
MAINTENANCE
SITE PLAN

125 0 125
APPROXIMATE SCALE IN FEET
FILE NO. 6009-015-026





4401 MILTON DRIVE
FLINT, MICHIGAN

30 0 30
APPROX. SCALE: 1"=30'

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07



CONSENT TO DECLARATION OF RESTRICTIVE COVENANT

Genille A. Brown, of 4401 Milton, Flint, Michigan, as owner of the Property commonly known as 4401 Milton and described in the attached Declaration of Restrictive Covenant (MDEQ Reference No.: RC-ERD-98012) hereby authorizes and empowers General Motors Corporation to execute and record this Declaration of Restrictive Covenant, consents to the recording of this Declaration of Restrictive Covenant with respect to the Property and agrees that from and after January 26, 1999 the terms, restrictions and conditions of this Declaration of Restrictive Covenant shall be binding upon me and my heirs, personal representatives, successors and assigns and shall run with the Property.

WITNESSES:

Leslie L. Little
Print Name: Leslie L. Little

Sue Shangle
Print Name: Sue Shangle

STATE OF MICHIGAN)

COUNTY OF GENESEE)

ss.

The foregoing instrument was acknowledged before me this 3 day of June, 1999,
by Genille A. Brown.

Arlene Dunn
Print Name: ARLENE DUNN
Notary Public, GENESEE County, Michigan
My Commission Expires: 9-28-03

DET_C1226981.1

**Topographic Survey Plan (with final
grade elevation and legal description
of Park)**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

**Remediation Agreement and
Covenant Not to Sue for Windiate
Park between the City of Flint and
General Motors Corporation, dated
October 26, 1995 and First
Amendment to Remediation
Agreement and Covenant Not to Sue
for Windiate Park between the City
of Flint and General Motors
Corporation, dated June 23, 1998**

Aug 07, 2009 17:07
REMEDIATION AGREEMENT AND COVENANT NOT TO SUE
FOR WINDIATE PARK

This Remediation Agreement and Covenant Not to Sue is executed on this date of Oct. 26, 1995, between the CITY OF FLINT (the "City") and the GENERAL MOTORS CORPORATION ("GM"). The City and GM shall collectively be referred to as the "Parties." This Agreement is made in reference to the following facts:

A. The City is the owner of property located between Pengally Street and Milton Drive in Flint, Michigan, commonly known as the Windiate Park (the "Park") the legal description of which is attached as Exhibit A.

B. Recent investigation has revealed that a landfill was formerly located in the Park.

C. Response activities have documented environmental impacts as a result of the presence of the landfill in the Park.

D. The Parties have a shared interest in having the Park fully remediated in a manner acceptable to the Michigan Department of Natural Resources and its successor, the Michigan Department of Environmental Quality (collectively, the "MDEQ").

E. It is the mutual intent of the Parties to expedite response activity necessary to remediate the Park.

F. GM, with the approval of the City, has proposed placement of a soil cap on the affected areas of the Park. This soil cap may become part of the final remedy.

THEREFORE, in consideration of the mutual promises and

Shane Noreen

covenants made in this Agreement, the Parties agree as follows:

1. GM will undertake at its expense the preparation and execution of a Remedial Action Plan ("RAP") for the Park consistent with the requirements of the Michigan Environmental Response Act, MCLA §§ 20101-20142 (Part 201) for submittal to the MDEQ for approval. This RAP may include placement of a permanent soil cap over the affected areas, but GM may proceed with placement of the soil cap prior to submission or approval of the RAP. The Parties acknowledge and agree that placement of the soil cap prior to submission or approval of the RAP does not constitute a warranty or representation of any kind that the work performed will result in the achievement of the remedial criteria as established by law.

2. The contents of the RAP and the choice of remedial action and cleanup criteria proposed therein shall be determined at the sole discretion of GM with reasonable opportunity for comment by the City. It is the intent of this Agreement that GM shall have full control over preparation of the RAP, and remedial selection and implementation, consistent with the current and projected use of the property for a park.

3. A Park Committee composed of interested area residents and representatives of GM and the City will be formed to coordinate preparation of a park renovation plan. The City will pay reasonable costs associated with preparation of the plan. If the park renovation plan is acceptable to the City and GM, GM will pay reasonable costs associated with implementation of the approved renovation project. The City will maintain at its expense the Park

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

and all related amenities in the future unless otherwise provided for in this Agreement.

Aug 07, 2009 17:07

4. The City will consent to and cooperate with GM in obtaining necessary state, federal and local governmental authorizations and permits necessary to implement the RAP. To the extent administratively possible, this consent includes issuance of all authorizations or permits necessary from the City free of cost to implement the RAP.

5. The City will fully cooperate with GM to obtain approval from the MDEQ of the RAP, including authorizing and implementing reasonable land use or exposure controls consistent with the current and projected use of the Park as a park, including title and/or deed restrictions, and zoning restrictions and/or variances consistent with the cleanup criteria proposed by GM and approved by the MDEQ, including, but not limited to, limitations on future use of the Park to uses that would not jeopardize the integrity of the soil cap, the erection and operation of monitoring and treatment wells, capping, and placement of permanent markers.

6. The City will provide the following in-kind services, at its sole expense, upon request by GM:

- A. The use of a survey crew as necessary to define private property boundaries inside and around the Park;
 - B. Curb removal and replacement;
 - C. GM will be responsible for tree removal and rubbish removal contemplated under the scope of this agreement.
- The City will match the monies spent by GM for tree

Shane Noreen

removal and rubbish removal, up to the amount of \$25,000.00, and said funds will be used for tree replacement and/or other Park amenities;

D. Grass cutting and general Park maintenance and care before and after completion of the RAP;

E. Installation of fencing during construction to prevent trespassing, vandalism, and potential exposure to construction and remediation hazards. This does not constitute a warranty or a guarantee that the such fencing will prevent trespassing, vandalism, and potential exposure to construction and remediation hazards;

F. Raising the four catch basins and sanitary manholes inside the Park to ensure proper drainage following placement of the soil cap;

G. Raising fire hydrants to the proper grade during construction of the soil cap;

H. Repair, replacement, and installation of sidewalks following completion of the soil cap;

I. To the extent allowed by law, use, at no cost to GM, of storm and/or sanitary sewers to dispose of surface or groundwater;

J. Purchase and installation of appropriate Park signage;

K. Daily street cleaning during construction; and

L. A water supply, to be used for dust suppression and

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

equipment cleansing.

Aug 07, 2009 17:07

7. The City will allocate \$50,000 over a two year period for a park project to be used for maintenance of Park amenities, mowing and for regular cap maintenance. Regular cap maintenance will consist of visual inspections, mowing, reseeding as necessary and filling in settled areas. The City will be responsible in perpetuity for the regular maintenance of the cap upon its completion.

8. To ensure that the foregoing services are provided on a timely basis, the City will designate David Ready as project coordinator for the City. GM will coordinate its activities with Mr. Ready to schedule the services listed in paragraph six of this Agreement.

9. The City does hereby grant GM access to the Park in perpetuity for the purpose of performing the RAP, monitoring the remedy, placement of the soil cap, long term operation and maintenance of the remedy and remediating any adjoining properties. In addition to the provisions of this agreement, such access shall be conducted pursuant to the following:

- A. GM will make all reasonable efforts to avoid damage to any asphalt or concrete surface;
- B. GM will cause any area of the Park which it disturbs after the soil cap is in place to be restored as close as reasonably possible to its condition which existed immediately prior to the activity causing the

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

disturbance; LFR

Aug 07, 2009 17:07
C. Unless the Parties agree in writing, upon permission of the MDEQ, GM shall forthwith close and remove any monitoring wells and plug the well holes. The removal of the monitoring wells and the plugging of any well holes shall be done in accordance with all applicable requirements of federal, state and local statutes, ordinances, rules and regulations and City construction specifications;

D. In all undertakings by either Party to procure any samples from the Park, the other Parties representative shall have the right upon notice to representatives of the Party procuring the samples, to obtain a split sample of such sampling. The Party seeking to split the samples will provide sampling containers for its samples and will be solely responsible for any tests conducted on those samples; and

E. Both Parties agree to deliver to the other, a copy of all data generated under the scope of this Agreement within five (5) business days after its validation by any applicable quality control process.

10. The parties understand and agree that this Agreement (or actions referred to in or required by this Agreement) is not, and shall not be construed as, an admission by either of the Parties of any liability, wrongdoing, or violation of local, state or federal law.

Shane Noreen

11. (a) Subject to paragraph 19, and except as provided in subparagraph (b) below, each of the Parties, on behalf of it and its respective departments, agencies, successors, predecessors, subsidiaries, assigns, agents, employees, officers and directors, does hereby release and covenant not to sue the other from and with respect to all claims related to the existence of contamination in the Park, or associated with the remediation of the Park.

(b) Except for claims for damages or injuries caused by performance of any work under this Agreement, this release does not encompass contribution or indemnification actions between the parties arising from claims brought by third parties against GM or the City, and in that regard each of the Parties hereby waives any defenses it may have against the other Party based on any alleged failure to comply with or under the Contribution Among Joint Tortfeasors Act, MCLA 600.2925 a-d. Nothing in this section, 11(b), shall abrogate the indemnification rights of the Parties under paragraph 19.

12. GM shall be responsible for the timely performance of the RAP including, but not limited to, the design, construction, monitoring, oversight, execution of all security bonds, performance bonds, or any other "financial mechanisms" required by the MDEQ to ensure performance of the RAP except as otherwise provided in this Agreement.

13. This Agreement shall apply to and shall be binding upon the City, its successors and assigns, and upon GM, its successors and assigns. No change or changes in the ownership or corporate

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

status of GM shall in any way alter GM's responsibilities under this Agreement. GM shall remain and be responsible for compliance with this Agreement and for insuring that its contractors, subcontractors, laboratories and consultants perform all work in conformance with the terms and conditions of this Agreement.

14. The signatories to this Agreement certify that they are authorized to execute and legally bind the Parties they represent.

15. In the event that either Party discovers the existence of groundwater contamination in excess of Generic Residential Cleanup Criteria, as promulgated under Part 201 of the Natural Resource and Environmental Protection Act, 1994 PA 451, off-site and caused by migration of hazardous substances located in the Park, the Party who discovers the existence of groundwater contamination shall immediately notify the herein designated Official of the other Party of the existence and location of such environmental contamination.

16. Upon written request by a designated representative of the City, GM will provide the City with copies of all non-privileged documents generally designated for which the City can show a demonstrable need and within GM's possession or control relating to the implementation of the cap and other response activities conducted on the Park pursuant to this Agreement.

17. GM and the City will provide each other, or their designated representatives, with copies of all correspondence, analytical reports, work plans, or RAP's provided to the MDEQ as related to the Park. GM will notify the MDEQ to put Kevin Lavalley,

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

as representative of the City, on the meeting list for all future meetings between the MDEQ and GM involving the Park.

18. The City and GM shall initially negotiate informally any dispute that arises under this Agreement. Such informal negotiation shall end ten days after GM or the City advises the other in writing that the dispute still exists unless the Parties agree otherwise in writing. If GM and the City cannot informally resolve a dispute under this Agreement, then either of the Parties may request arbitration.

19. With respect to the scope of this Agreement, GM is solely responsible for the safe performance of its employees, agents, contractors and any persons acting on its behalf in any activities performed pursuant to this Agreement. In this regard, GM shall indemnify and hold harmless the City, its successors and assigns, from any and all claims or causes of action arising from any negligence, recklessness or intentional misconduct by GM, its contractors or its agents in the construction of the soil cap or execution of the RAP, to the extent such claims or causes of action do not result from any negligence, recklessness or intentional misconduct by the City, its contractors or its agent, or do not result from the performance of the services described in paragraph 6 and 7 above.

With respect to the scope of this Agreement, the City is solely responsible for the safe performance of its employees, agents, contractors and any persons acting on its behalf in any activities performed pursuant to this Agreement. In this regard,

Shane Noreen

the City shall indemnify and hold harmless GM, its successors and assigns, from any and all claims or causes of action arising from any negligence, recklessness or intentional misconduct by the City, its contractors or its agents in the performance of the services described in paragraph 6 and 7 above, to the extent such claims or causes of action do not result from any negligence, recklessness or intentional misconduct by GM, its contractors or its agents.

20. Neither the City nor GM waive any claims or rights they may have against any person or entity not a party to this Agreement, each expressly reserving the right to assert any and all claims each Party may have against any other party not a party to this Agreement.

21. All notices required or desired to be given hereunder shall be sent by first class mail,

if to GM, to:

James P. Walle
General Motors Building-12th floor
3044 West Grand Boulevard
MC 482-112-149
Detroit, MI 48202

if to the City, to:

Chief Legal Officer
City Attorney's Office
City Hall
1101 S. Saginaw St.
Flint, MI 48502

Any notice required or desired to be given hereunder may also be delivered personally by one party hereto to the other, in which case receipt is effective upon completion of such delivery.

22. Neither the terms of this Agreement nor the performance of any actions thereunder is intended to directly or indirectly

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

benefit any person or entity not a party to the Agreement and no interest or right is conferred upon any third party by the Agreement.

23. GM will be solely responsible for the proper disposal of any hazardous waste removed by GM from the Park, if any, including manifesting and disclosure requirements, relating to placement of the soil cap.

24. In performance of any task included under the scope of this Agreement, each consultant or contractor hired by GM shall maintain a policy of general comprehensive liability insurance in such amounts as GM agrees to be proper but in no event less than \$1,000,000.

25. In performance of all activities under the scope of this Agreement, GM hereby designates Bob Metcalf as project coordinator with whom representatives of the City can make immediate contact if such a need arises.

26. Any contract GM enters into with a consultant, contractor or subcontractor employed for the performance and the implementation of any activity under the scope of this Agreement shall require that the consultant, contractor or subcontractor comply with all laws, including (but not limited to) applicable health and safety laws and regulations as well as the health and safety plan prepared for this project by General Motors.

27. This Agreement shall be modified only upon the written agreement of GM as evidenced by signature of GM legal counsel and of the City by signature of legal counsel for the City or a duly

Shane Noreen

LFR

Aug 07, 2009 17:07

PRESENTED: OCT 23 '95

ADOPTED: OCT 23 '95

Aug 07, 2009 17:07

**Resolution Authorizing Remediation Agreement and Covenant Not to Sue
between the City of Flint and General Motors Corporation
for Windiate Park**

BY THE MAYOR:

WHEREAS, the City of Flint owns Windiate Park located between Pengally Street and Milton Drive in the City of Flint, and

WHEREAS, recent investigation by the City, GM and the State of Michigan revealed the presence of contaminated soils on the site requiring remediation activities, and

WHEREAS, GM, with City approval, has approved proposed placement of a soil cap on affected areas of the Park as an interim step to protect area residents, and the State of Michigan is considering this as a possible final remediation, subject to public hearings and approvals by the Michigan Department of Environmental Quality, and

WHEREAS, representatives of the City and GM have negotiated a proposed agreement to establish the rights and responsibilities of the parties in connection with going forward with the Remedial Action Plan, (while protecting the legal position and defenses each may have) to allow the Remedial Action Plan to be implemented forthwith,

NOW, THEREFORE, BE IT RESOLVED, that the appropriate City officials are hereby authorized to enter into the Remediation Agreement and Covenant Not to Sue for Windiate Park.

APPROVED AS TO FORM:



Michael T. Joliat
Chief Legal Officer

**APPROVED BY
CITY CCUNCIL**

m1023.13

OCT 23 1995



Shane Noreen

authorized representative of the City.

28. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

THE CITY OF FLINT

By Woodrow Stanley

Its _____

GENERAL MOTORS CORPORATION

By _____

Its _____

c:\env\windprk.red

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Louis S. Hawkins
City Clerk

APPROVED AS TO FORM

Michael T. Joliat
City Attorney

Shane Noreen

authorized representative of the City.

28. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

THE CITY OF FLINT

By _____

Its _____

GENERAL MOTORS CORPORATION

By William J. McFarland

Its Manager, Remediation Projects

c:\env\windprk.red

APPROVED AS TO FORM

Michael T. Joliat
City Attorney

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noren

LFR

Aug 07, 2009 17:07

**First Amendment to Remediation Agreement
and Covenant Not to Sue for Windiate Park**

This First Amendment to the Remediation Agreement and Covenant Not to Sue for Windiate park is executed on this date of 6-23, 1998 between the CITY OF FLINT (the "City") and the GENERAL MOTORS CORPORATION ("GM").

Background

A. GM and the City entered into a "Remediation Agreement and Covenant Not to Sue for Windiate Park" dated October 26, 1995 (the "Remediation Agreement"). This Amendment will refer to certain terms defined in the Remediation Agreement.

B. Under the Remediation Agreement, GM prepared and executed a RAP that included placement of a permanent soil cap over certain areas of Windiate Park (the "Park"). GM has completed placement of the soil cap and other remedial activity under the RAP.

C. Under the Remediation Agreement GM agreed to pay the reasonable costs for the renovation of a public recreation area. GM and the City desire to amend the Agreement to provide detail concerning implementation of the Public Park Renovation Plan (the "Plan") prepared by M. C. Smith and Associates, dated June 1997.

The Parties agree as follows:

Agreement

1. GM will pay the City \$600,000.00 to meet GM's obligation to pay the reasonable costs of implementing the park renovation pursuant to Section 3 of the Remediation Agreement. GM will pay the amount no later than twenty-one (21) days after the execution of this Agreement.

2. The City acknowledges that GM's payment satisfies GM's obligation to pay the reasonable costs for the Plan except as provided in paragraph 4. GM will retain review rights for implementation of the Plan design and construction to maintain the integrity of the Park soil cover system. GM will make its environmental consultant available to the City to provide technical assistance to the City on matters of design and construction to maintain the integrity of the Park cover system during the Park construction and will expeditiously notify the City of any environmental problems they may observe. GM will provide, at its expense, and assign a qualified contractor to the City's contractor who shall be responsible to excavate and dispose of impacted materials.

3. The City will follow the Plan as closely as is reasonably practical and as long as any changes do not detrimentally impact the general design of the Park soil cover system.

4. The City will manage and coordinate the construction pursuant to the Plan. The City and GM agree to share, on an equal basis, cost construction overruns that increase the costs

Shane Noreen

LFR

Aug 07, 2009 17:07

above \$600,000.00. Should the Plan be completed for less than \$600,000.00, then any unexpended funds shall be applied to the ongoing maintenance of the Park.

5. The City will complete construction, including landscaping, of the Plan as soon as reasonably practicable but no later than August 1, 1999.

6. Except as modified herein, the Agreement remains in full force and affect.

7. This Amendment may be executed in two or more counterparts. Each counterpart will be deemed an original.

THE CITY OF FLINT

By: Woodrow Stanley
Woodrow Stanley
Title: Mayor

GENERAL MOTORS

By: _____
William J. McFarland
Title: Manager Remediation Projects

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

Aug 07, 2009 17:07

PRESENTED: JUN 22 1998

ADOPTED: JUN 22 1998

**Resolution Authorizing First Amendment to Remediation Agreement and Covenant
with the City of Flint and General Motors Corporation for Windiate Park and
Establishment of a General Fund Project**

BY THE MAYOR:

WHEREAS, on October 13, 1995 a resolution was adopted authorizing the appropriate City Officials to enter into a Remediation Agreement and Covenant Not to Sue for Windiate Park, and

WHEREAS, pursuant to the terms of the above stated Remediation Agreement, General Motors Corporation had certain obligations for the development of Windiate Park, including paying the reasonable costs associated with the implementation of the approved renovation project, and

WHEREAS, representatives of the City and GM have negotiated a proposed amendment to the Remediation Agreement whereby GM will pay the City \$600,000.00 to meet GM's obligation to pay the reasonable costs of implementing the park renovation project, and

WHEREAS, under the proposed amendment, the City and GM agree to share, on an equal basis, cost construction overruns that increase the implementation costs above \$600,000.00, and

WHEREAS, under the proposed amendment, should the construction costs be less than \$600,000.00, then any unexpended funds shall be applied to the ongoing maintenance of the Park, and

WHEREAS, the City has received a fixed price not to exceed bid for construction of the Park for \$571,864.00.

NOW, THEREFORE, BE IT RESOLVED, that the appropriate City Officials be and are hereby authorized to enter into the First Amendment to the Remediation Agreement and Covenant Not to Sue for Windiate Park.

BE IT FURTHER RESOLVED, that a General Fund Project be set up with estimated revenues and appropriations of \$600,000.00.

APPROVED AS TO FORM:

Karen E. McDonald
Karen E. McDonald
Chief Legal Officer

APPROVED BY
CITY COUNCIL

JUN 22 1998

Yusuf D. Davis

Reviewed by Budget:

Matthew A. Grady III
Matthew A. Grady III
Date: 6/22/98

m0622.8

(Purchasing No. 98000069)

PRESENTED: JUN 22 1998

ADOPTED: JUN 22 1998

BY THE MAYOR

RESOLUTION

WHEREAS, the Director of Purchases & Supplies has solicited bids for furnishing, installing and maintaining playground equipment for Windiate Park as requested by the Department of Public Works & Utilities, and

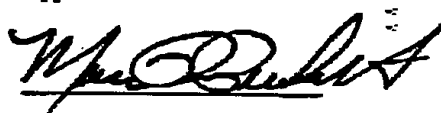
WHEREAS, Unity Construction, 3045 E. Hemphill Rd., Burton, Michigan, was the low bidder from thirteen solicitations for said requirements.

NOW, THEREFORE, BE IT RESOLVED, that the Proper City Officials are hereby authorized to enter into a contract with Unity Construction for furnishing, installing and maintaining playground equipment for Windiate Park, in the amount not to exceed \$571,864.00. (General Fund)

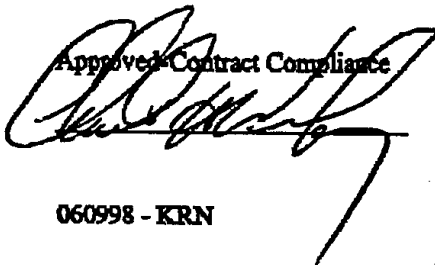
Approved-Purchasing Department



Approved as to Funds



Approved-Contract Compliance

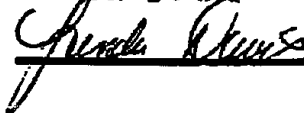


Approved as to Form

APPROVED BY
CITY COUNCIL

060998 - KRN

JUN 22 1998



**O'Brien & Gere's Monitoring Well
Abandonment Letter to MDEQ
(regarding four quarters of ground
water sampling non-detect results),
dated July 2, 1998**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07



O'BRIEN & GERE
ENGINEERS, INC.

July 2, 1998

Mr. Eric L. Van Riper
Geologist
Michigan Department of Environmental Quality
Environmental Response Division
10650 S. Bennett Drive
Morrice, MI 48857

Re: Monitoring Well Abandonment -
Windiate Park
Flint, Michigan

File: 6009.007 #5

Dear Mr. Van Riper:

On behalf of General Motors Corporation (GM), attached is a copy of the validated analytical results, consisting of a summary table and laboratory report sheets, for the ground water samples collected on May 28, 1998, at Windiate Park, Flint, Michigan. The ground water sampling was conducted by the Michigan Department of Environmental Quality (MDEQ) with split-samples collected by O'Brien & Gere Engineers.

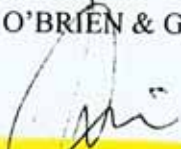
As requested by the MDEQ, samples were analyzed for the presence of volatile organic compounds by EPA Method 8260. Validated analytical results indicate concentrations of substances below the MDEQ Residential Drinking Water Criteria (April 1998).

With completion of four quarters of sampling the park monitoring wells, in accordance with the MDEQ letter dated July 19, 1996, in addition to the May 28, 1998 sampling results (attached), the monitoring wells in the park (MW001 through MW008) will be removed, along with upgradient monitoring well MW009. Furthermore, analytical results from the four quarters of sampling (as well as the latest sampling event on May 28, 1998) indicated concentrations below the MDEQ Residential Drinking Water Criteria. Please confirm your concurrence with this in writing as soon as possible so monitoring well removal activities can be completed prior to start-up of park development and construction activities (scheduled to begin July 13, 1998).

Please call either Bob Metcalf at (810) 236-0300, or Mike Robison or me at (248) 426-8970 if you have any questions.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.


Scott L. Cormier, P.E.
Managing Engineer

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07



O'Brien & Gere Engineers, Inc., an O'Brien & Gere Company
39830 Grand River Avenue / Suite B-2 / Novi, MI 48375
(248) 426-8970 / FAX (248) 426-8997 • <http://www.obg.com>
... and offices in major U.S. cities

Mr. Eric L. Van Riper
July 2, 1998
Page 2

Shane Noreen

LFR

Aug 07, 2009 17:07

Enclosure

cc: Mr. Robert S. Metcalf, P.E. - General Motors WFG, Flint, MI (w/enc.)
Mr. Edward E. Peterson - General Motors WFG, Detroit, MI (w/o enc.)
Mr. Kevin A. Lavalle, Esq. - Gault & Davison, Flint, MI (w/enc.)
Mr. Scott J. Adamowski, P.E. - O'Brien & Gere Engineers, Novi, MI (w/o enc.)
Mr. Michael B. Robison - O'Brien & Gere Engineers, Novi, MI (w/enc.)

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



O'BRIEN & GERE
ENGINEERS, INC.

Table 1
Windiate Park
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Res. Drinking Water Criteria (April 1998) ug/L	RDWC/Target MDL Highest Value ug/L	MW001 05/28/98 ug/L	MW002 05/28/98 ug/L	MW003 05/28/98 ug/L	MW004 05/28/98 ug/L	MW005 05/28/98 ug/L	MW006 05/28/98 ug/L
1,1,1-Trichloroethane	1	200	200	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	1	4.3	4.3	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	1	880	880	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	1	7	7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	1	6	6	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
2-Butanone (MEK)	5	13000	13000	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	5	1000	1000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5	1800	1800	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	25	730	730	1.0 U	1.0 U	2.8 J	3.4 J	1.0 U	3.2 J
Benzene	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromodichloromethane	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromomethane	1	10	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	5	800	800	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Carbon tetrachloride	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlorobenzene	1	100	100	0.50 U	0.50 U	0.50 U	0.17 J	0.50 U	0.50 U
Chloroethane	5	220	220	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chloromethane	1	66	66	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethylbenzene	1	74	74	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Methylene chloride	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Styrene	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

NOTES: Data qualifier definitions are included at the end of the table.

Target Detection Limits taken from Target Detection Limits Detection Monitoring Programs, MDEQ Operational Memo Gen-8, Rev. 3, April 15, 1998.
Residential Drinking Water Criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, April 1998
[] Exceeds Higher of Target MDL/Residential Drinking Water Criteria. MDEQ collected samples and split with O'Brien & Gere Engineers, Inc.



O'BRIEN & GERE
ENGINEERS, INC.

Table 1
Windiate Park
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Res. Drinking Water Criteria (April 1998) ug/L	RDWC/Target MDL Highest Value ug/L	MW001 05/28/98 ug/L	MW002 05/28/98 ug/L	MW003 05/28/98 ug/L	MW004 05/28/98 ug/L	MW005 05/28/98 ug/L	MW006 05/28/98 ug/L
Tetrachloroethene	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Toluene	1	790	790	0.50 U	0.50 U	0.50 U	0.15 J	0.50 U	0.50 U
Trichloroethene	1	5	5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl chloride	5	2	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	1	280	280	0.50 U	0.50 U	0.23 J	2.7	0.50 U	0.50 U
cis-1,2-Dichloroethene	1	70	70	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	1	100	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

NOTES: Data qualifier definitions are included at the end of the table.

Target Detection Limits taken from Target Detection Limits Monitoring Programs, MDEQ Operational Memo Gen-8, Rev. 3, April 15, 1998.
Residential Drinking Water Criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, April 1998
[] Exceeds Higher of Target MDL/Residential Drinking Water Criteria. MDEQ collected samples and split with O'Brien & Gere Engineers, Inc.



O'BRIEN & GERE
ENGINEERS, INC.

Table 1
Windiate Park
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Analyte	Target Method Detection Limit ug/L	Res. Drinking Water Criteria (April 1998) ug/L	RDWC/Target MDL Highest Value ug/L	MW007 05/28/98 ug/L	MW008 05/28/98 ug/L	MW009 05/28/98 ug/L
1,1,1-Trichloroethane	1	200	200	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	1	4.3	4.3	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	1	5	5	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	1	880	880	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	1	7	7	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	1	6	6	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	1	5	5	0.50 U	0.50 U	0.50 U
2-Butanone (MEK)	5	13000	13000	10 U	10 U	10 U
2-Pentane	5	1000	1000	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5	1800	1800	5.0 U	5.0 U	5.0 U
Acetone	25	730	730	3.9 U	10 U	10 U
Benzene	1	5	5	0.50 U	0.50 U	0.50 U
Bromodichloromethane	1	100	100	0.50 U	0.50 U	0.50 U
Bromoform	1	100	100	0.50 U	0.50 U	0.50 U
Bromomethane	1	10	10	1.0 U	1.0 U	1.0 U
Carbon disulfide	5	800	800	0.50 U	0.50 U	0.50 U
Carbon tetrachloride	1	5	5	0.50 U	0.50 U	0.50 U
Chlorobenzene	1	100	100	0.50 U	0.50 U	0.50 U
Chloroethane	5	220	220	1.0 U	1.0 U	1.0 U
Chloroform	1	100	100	0.50 U	0.50 U	0.50 U
Chloromethane	1	66	66	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1	100	100	0.50 U	0.50 U	0.50 U
Ethylbenzene	1	74	74	0.50 U	0.50 U	0.50 U
Methylene chloride	1	5	5	0.50 U	0.50 U	0.50 U
Styrene	1	100	100	0.50 U	0.50 U	0.50 U

NOTES: Data qualifier definitions are included at the end of the table.

Target Detection Limits taken from Target Detection Limits Detection Monitoring Programs, MDEQ Operational Memo Gen-8, Rev. 3, April 15, 1998.
Residential Drinking Water Criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, April 1998

[] Exceeds Higher of Target MDL/Residential Drinking Water Criteria. MDEQ collected samples and split with O'Brien & Gere Engineers, Inc.



O'BRIEN & GERE
ENGINEERS, INC.

Table 1
Windiate Park
Ground Water Analytical Results
SW8260 Volatile Organic Compound Data

Confidential under FOIA						
Shane Noreen						
LFR						
Aug 07, 2009 17:07						
Analyte	Target Method Detection Limit ug/L	Res. Drinking Water Criteria (April 1998) ug/L	RDWC/Target MDL Highest Value ug/L	MW007 05/28/98 ug/L	MW008 05/28/98 ug/L	MW009 05/28/98 ug/L
Tetrachloroethene	1	5	5	0.50 U	0.50 U	0.50 U
Toluene	1	790	790	0.50 U	0.50 U	0.50 U
Trichloroethene	1	5	5	0.50 U	0.50 U	0.50 U
Vinyl chloride	5	2	5	1.0 U	1.0 U	1.0 U
Xylene (total)	1	280	280	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	1	70	70	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	1	100	100	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	1	4.7	4.7	0.50 U	0.50 U	0.50 U
Confidential under FOIA						
Shane Noreen						
LFR						
Aug 07, 2009 17:07						
CONFIDENTIAL						
NOTES: Data qualifier definitions are included at the end of the table.						
Target Detection Limits taken from Target Detection Limits Detection Monitoring Programs, MDEQ Operational Memo Gen-8, Rev. 3, April 15, 1998.						
Residential Drinking Water Criteria taken from MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, April 1998						
[] Exceeds Higher of Target MDL/Residential Drinking Water Criteria. MDEQ collected samples and split with O'Brien & Gere Engineers, Inc.						
Page 2 of 2 CONTINUED						
File Number 6009 007						

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Analytical Results

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7406
Samp. Description: MW001
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	<1.0	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	<.50	1	06/08/98
Carbon disulfide	J .20	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	<.50	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	<.50	1	06/08/98

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7406
Samp. Description: MW001
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	<.50		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	101.%	90-118	1	06/08/98	
Toluene-d8 (surrogate)	92.%	90-116	1	06/08/98	
Bromofluorobenzene (surrogate)	96.%	82-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7407
Samp. Description: MW002
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog	Limits	Dilution	Analyzed	Notes
Chloromethane	<1.0			1	06/08/98	
Vinyl chloride	<1.0			1	06/08/98	
Bromomethane	<1.0			1	06/08/98	
Chloroethane	<1.0			1	06/08/98	
Acetone	J 2.0			1	06/08/98	
1,1-Dichloroethene	<.50			1	06/08/98	
Methylene chloride	<.50			1	06/08/98	
Carbon disulfide	J .30			1	06/08/98	
trans-1,2-Dichloroethene	<.50			1	06/08/98	
1,1-Dichloroethane	<.50			1	06/08/98	
2-Butanone	<10.			1	06/08/98	
cis-1,2-Dichloroethene	<.50			1	06/08/98	
Chloroform	<.50			1	06/08/98	
1,2-Dichloroethane	<.50			1	06/08/98	
1,1,1-Trichloroethane	<.50			1	06/08/98	
Carbon tetrachloride	<.50			1	06/08/98	
Benzene	<.50			1	06/08/98	
1,2-Dichloropropane	<.50			1	06/08/98	
Trichloroethene	<.50			1	06/08/98	
Bromodichloromethane	<.50			1	06/08/98	
cis-1,3-Dichloropropene	<.50			1	06/08/98	
4-Methyl-2-pentanone	<5.0			1	06/08/98	
trans-1,3-Dichloropropene	<.50			1	06/08/98	
1,1,2-Trichloroethane	<.50			1	06/08/98	
Toluene	<.50			1	06/08/98	
Dibromochloromethane	<.50			1	06/08/98	
2-Hexanone	<5.0			1	06/08/98	
Tetrachloroethene	<.50			1	06/08/98	
Chlorobenzene	<.50			1	06/08/98	

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7407
Samp. Description: MW002
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	<.50		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	102.%	90-118	1	06/08/98	
Toluene-d8 (surrogate)	96.%	90-115	1	06/08/98	
Bromofluorobenzene (surrogate)	97.%	92-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7408
Samp. Description: MW003
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Chloromethane	<1.0		1	06/08/98	
Vinyl chloride	<1.0		1	06/08/98	
Bromomethane	<1.0		1	06/08/98	
Chloroethane	<1.0		1	06/08/98	
Acetone	J .20		1	06/08/98	
1,1-Dichloroethene	<.50		1	06/08/98	
Methylene chloride	<.50		1	06/08/98	
Carbon disulfide	J .20		1	06/08/98	
trans-1,2-Dichloroethene	<.50		1	06/08/98	
1,1-Dichloroethane	<.50		1	06/08/98	
2-Butanone	<10.		1	06/08/98	
cis-1,2-Dichloroethene	<.50		1	06/08/98	
Chloroform	<.50		1	06/08/98	
1,2-Dichloroethane	<.50		1	06/08/98	
1,1,1-Trichloroethane	<.50		1	06/08/98	
Carbon tetrachloride	<.50		1	06/08/98	
Benzene	<.50		1	06/08/98	
1,2-Dichloropropane	<.50		1	06/08/98	
Trichloroethene	<.50		1	06/08/98	
Bromodichloromethane	<.50		1	06/08/98	
cis-1,3-Dichloropropene	<.50		1	06/08/98	
4-Methyl-2-pentanone	<5.0		1	06/08/98	
trans-1,3-Dichloropropene	<.50		1	06/08/98	
1,1,2-Trichloroethane	<.50		1	06/08/98	
Toluene	<.50		1	06/08/98	
Dibromochloromethane	<.50		1	06/08/98	
2-Hexanone	<5.0		1	06/08/98	
Tetrachloroethene	<.50		1	06/08/98	
Chlorobenzene	<.50		1	06/08/98	

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

O'Brien & Gere Laboratories, Inc.

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7408
Samp. Description: MW003
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	J .23		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	102.%	90-118	1	06/08/98	
Toluene-d8 (surrogate)	93.%	90-115	1	06/08/98	
Bromofluorobenzene (surrogate)	96.%	82-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci

Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7409
Samp. Description: MW004
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	<3.0	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	<.50	1	06/08/98
Carbon disulfide	J .13	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	J .15	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	J .17	1	06/08/98

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: June 16, 1998

Monika Santucci

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7409
Samp. Description: MW004
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	2.7		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	99.4	90-118	1	06/08/98	
Toluene-d8 (surrogate)	93.4	90-116	1	06/08/98	
Bromofluorobenzene (surrogate)	94.4	82-123	1	06/08/98	

Notes:

Estimated result: Naphthalene 23 ug/L

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*

Date: June 16, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7410
Samp. Description: MW005
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
% Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	<1.0	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	<.50	1	06/08/98
Carbon disulfide	J .32	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	<.50	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	<.50	1	06/08/98

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7410
Samp. Description: MW005
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	<.50		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	99.8	90-118	1	06/08/98	
Toluene-d8 (surrogate)	99.8	90-116	1	06/08/98	
Bromofluorobenzene (surrogate)	93.8	82-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7411
Samp. Description: Dup
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98

Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	J .15	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	<.50	1	06/08/98
Carbon disulfide	J .15	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	J .15	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	J .11	1	06/08/98

- Outside control limits J-Estimated value

Authorized: Monika Santucci

Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7411
Samp. Description: Dup
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
% Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	2.4		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	98.4	90-118	1	06/08/98	
Toluene-d8 (surrogate)	100.4	90-118	1	06/08/98	
Bromofluorobenzene (surrogate)	94.4	82-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998 Monika Santucci

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7412
Samp. Description: MW006
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
% Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/09/98
Vinyl chloride	<1.0	1	06/09/98
Bromomethane	<1.0	1	06/09/98
Chloroethane	<1.0	1	06/09/98
Acetone	J .32	1	06/09/98
1,1-Dichloroethene	<.50	1	06/09/98
Methylene chloride	<.50	1	06/09/98
Carbon disulfide	J .17	1	06/09/98
trans-1,2-Dichloroethene	<.50	1	06/09/98
1,1-Dichloroethane	<.50	1	06/09/98
2-Butanone	<10.	1	06/09/98
cis-1,2-Dichloroethene	<.50	1	06/09/98
Chloroform	<.50	1	06/09/98
1,2-Dichloroethane	<.50	1	06/09/98
1,1,1-Trichloroethane	<.50	1	06/09/98
Carbon tetrachloride	<.50	1	06/09/98
Benzene	<.50	1	06/09/98
1,2-Dichloropropane	<.50	1	06/09/98
Trichloroethene	<.50	1	06/09/98
Bromodichloromethane	<.50	1	06/09/98
cis-1,3-Dichloropropene	<.50	1	06/09/98
4-Methyl-2-pentanone	<5.0	1	06/09/98
trans-1,3-Dichloropropene	<.50	1	06/09/98
1,1,2-Trichloroethane	<.50	1	06/09/98
Toluene	<.50	1	06/09/98
Dibromochloromethane	<.50	1	06/09/98
2-Hexanone	<5.0	1	06/09/98
Tetrachloroethene	<.50	1	06/09/98
Chlorobenzene	<.50	1	06/09/98

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7412
Samp. Description: MW006
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/09/98	
Bromoform	<.50		1	06/09/98	
Xylene (total)	<.50		1	06/09/98	
Styrene	<.50		1	06/09/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/09/98	
Dibromofluoromethane (surrogate)	100.%	90-118	1	06/09/98	
Toluene-d8 (surrogate)	99.%	90-116	1	06/09/98	
Bromofluorobenzene (surrogate)	96.%	82-123	1	06/09/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci

Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7413
Samp. Description: MW007
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98

Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Units Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/09/98
Vinyl chloride	<1.0	1	06/09/98
Bromomethane	<1.0	1	06/09/98
Chloroethane	<1.0	1	06/09/98
Acetone	J .59	1	06/09/98
1,1-Dichloroethene	<.50	1	06/09/98
Methylene chloride	<.50	1	06/09/98
Carbon disulfide	J .48	1	06/09/98
trans-1,2-Dichloroethene	<.50	1	06/09/98
1,1-Dichloroethane	<.50	1	06/09/98
2-Butanone	<10.	1	06/09/98
cis-1,2-Dichloroethene	<.50	1	06/09/98
Chloroform	<.50	1	06/09/98
1,2-Dichloroethane	<.50	1	06/09/98
1,1,1-Trichloroethane	<.50	1	06/09/98
Carbon tetrachloride	<.50	1	06/09/98
Benzene	<.50	1	06/09/98
1,2-Dichloropropane	<.50	1	06/09/98
Trichloroethene	<.50	1	06/09/98
Bromodichloromethane	<.50	1	06/09/98
cis-1,3-Dichloropropene	<.50	1	06/09/98
4-Methyl-2-pentanone	<5.0	1	06/09/98
trans-1,3-Dichloropropene	<.50	1	06/09/98
1,1,2-Trichloroethane	<.50	1	06/09/98
Toluene	<.50	1	06/09/98
Dibromochloromethane	<.50	1	06/09/98
2-Hexanone	<5.0	1	06/09/98
Tetrachloroethene	<.50	1	06/09/98
Chlorobenzene	<.50	1	06/09/98

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7413
Samp. Description: MW007
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/09/98	
Bromoform	<.50		1	06/09/98	
Xylene (total)	J .16		1	06/09/98	
Styrene	<.50		1	06/09/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/09/98	
Dibromofluoromethane (surrogate)	100.%	90-118	1	06/09/98	
Toluene-d8 (surrogate)	99.%	90-116	1	06/09/98	
Bromofluorobenzene (surrogate)	96.%	90-123	1	06/09/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci

Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7414
Samp. Description: MW008
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate Limits	Dilution	Analyzed	Notes
Chloromethane	<1.0		1	06/09/98	
Vinyl chloride	<1.0		1	06/09/98	
Bromomethane	<1.0		1	06/09/98	
Chloroethane	<1.0		1	06/09/98	
Acetone	<1.0		1	06/09/98	
1,1-Dichloroethene	<.50		1	06/09/98	
Methylene chloride	<.50		1	06/09/98	
Carbon disulfide	J .40		1	06/09/98	
trans-1,2-Dichloroethene	<.50		1	06/09/98	
1,1-Dichloroethane	<.50		1	06/09/98	
2-Butanone	<10.		1	06/09/98	
cis-1,2-Dichloroethene	<.50		1	06/09/98	
Chloroform	<.50		1	06/09/98	
1,2-Dichloroethane	<.50		1	06/09/98	
1,1,1-Trichloroethane	<.50		1	06/09/98	
Carbon tetrachloride	<.50		1	06/09/98	
Benzene	<.50		1	06/09/98	
1,2-Dichloropropane	<.50		1	06/09/98	
Trichloroethene	<.50		1	06/09/98	
Bromodichloromethane	<.50		1	06/09/98	
cis-1,3-Dichloropropene	<.50		1	06/09/98	
4-Methyl-2-pentanone	<5.0		1	06/09/98	
trans-1,3-Dichloropropene	<.50		1	06/09/98	
1,1,2-Trichloroethane	<.50		1	06/09/98	
Toluene	<.50		1	06/09/98	
Dibromochloromethane	<.50		1	06/09/98	
2-Hexanone	<5.0		1	06/09/98	
Tetrachloroethene	<.50		1	06/09/98	
Chlorobenzene	<.50		1	06/09/98	

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998 Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7414
Samp. Description: MW008
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/09/98	
Bromoform	<.50		1	06/09/98	
Xylene (total)	<.50		1	06/09/98	
Styrene	<.50		1	06/09/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/09/98	
Dibromofluoromethane (surrogate)	98.8	90-118	1	06/09/98	
Toluene-d8 (surrogate)	99.2	90-116	1	06/09/98	
Bromofluorobenzene (surrogate)	94.8	82-123	1	06/09/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7415
Samp. Description: MW009
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate	Limit	Dilution	Analyzed	Notes
Chloromethane	<1.0			1	06/09/98	
Vinyl chloride	<1.0			1	06/09/98	
Bromomethane	<1.0			1	06/09/98	
Chloroethane	<1.0			1	06/09/98	
Acetone	<10.			1	06/09/98	
1,1-Dichloroethene	<.50			1	06/09/98	
Methylene chloride	<.50			1	06/09/98	
Carbon disulfide	J .11			1	06/09/98	
trans-1,2-Dichloroethene	<.50			1	06/09/98	
1,1-Dichloroethane	<.50			1	06/09/98	
2-Butanone	<10.			1	06/09/98	
cis-1,2-Dichloroethene	<.50			1	06/09/98	
Chloroform	<.50			1	06/09/98	
1,2-Dichloroethane	<.50			1	06/09/98	
1,1,1-Trichloroethane	<.50			1	06/09/98	
Carbon tetrachloride	<.50			1	06/09/98	
Benzene	<.50			1	06/09/98	
1,2-Dichloropropane	<.50			1	06/09/98	
Trichloroethene	<.50			1	06/09/98	
Bromodichloromethane	<.50			1	06/09/98	
cis-1,3-Dichloropropene	<.50			1	06/09/98	
4-Methyl-2-pentanone	<5.0			1	06/09/98	
trans-1,3-Dichloropropene	<.50			1	06/09/98	
1,1,2-Trichloroethane	<.50			1	06/09/98	
Toluene	<.50			1	06/09/98	
Dibromochloromethane	<.50			1	06/09/98	
2-Hexanone	<5.0			1	06/09/98	
Tetrachloroethene	<.50			1	06/09/98	
Chlorobenzene	<.50			1	06/09/98	

- Outside control limits J-Estimated value

Authorized: Monika Santucci

Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7415
Samp. Description: MW009
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/09/98
Matrix: Water
QC Batch: 060998W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/09/98	
Bromoform	<.50		1	06/09/98	
Xylene (total)	<.50		1	06/09/98	
Styrene	<.50		1	06/09/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/09/98	
Dibromofluoromethane (surrogate)	99.%	90-118	1	06/09/98	
Toluene-d8 (surrogate)	99.%	90-118	1	06/09/98	
Bromofluorobenzene (surrogate)	97.%	90-123	1	06/09/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Sanrucci
Date: June 11, 1998

Monika Sanrucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7416
Samp. Description: Equipment Blank
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate (Limits Dilution)	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	<1.0	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	J .19	1	06/08/98
Carbon disulfide	J .16	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	<.50	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	<.50	1	06/08/98

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7416
Samp. Description: Equipment Blank
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: 05/28/98
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
% Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	<.50		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	101.4	90-118	1	06/08/98	
Toluene-d8 (surrogate)	100.4	90-118	1	06/08/98	
Bromofluorobenzene (surrogate)	97.4	90-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

O'Brien & Gere Laboratories, Inc.

LFR

Aug 07, 2009 17:07

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7417
Samp. Description: QC Trip Blank
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected: Matrix: Water
Received: 05/29/98 QC Batch: 060898W2
Prepared: 06/08/98 %Solids:
Purge volume: 25 mL

Parameter	Result	Surrogate Limits Dilution	Analyzed Notes
Chloromethane	<1.0	1	06/08/98
Vinyl chloride	<1.0	1	06/08/98
Bromomethane	<1.0	1	06/08/98
Chloroethane	<1.0	1	06/08/98
Acetone	<1.0	1	06/08/98
1,1-Dichloroethene	<.50	1	06/08/98
Methylene chloride	J .15	1	06/08/98
Carbon disulfide	1.5	1	06/08/98
trans-1,2-Dichloroethene	<.50	1	06/08/98
1,1-Dichloroethane	<.50	1	06/08/98
2-Butanone	<10.	1	06/08/98
cis-1,2-Dichloroethene	<.50	1	06/08/98
Chloroform	<.50	1	06/08/98
1,2-Dichloroethane	<.50	1	06/08/98
1,1,1-Trichloroethane	<.50	1	06/08/98
Carbon tetrachloride	<.50	1	06/08/98
Benzene	<.50	1	06/08/98
1,2-Dichloropropane	<.50	1	06/08/98
Trichloroethene	<.50	1	06/08/98
Bromodichloromethane	<.50	1	06/08/98
cis-1,3-Dichloropropene	<.50	1	06/08/98
4-Methyl-2-pentanone	<5.0	1	06/08/98
trans-1,3-Dichloropropene	<.50	1	06/08/98
1,1,2-Trichloroethane	<.50	1	06/08/98
Toluene	<.50	1	06/08/98
Dibromochloromethane	<.50	1	06/08/98
2-Hexanone	<5.0	1	06/08/98
Tetrachloroethene	<.50	1	06/08/98
Chlorobenzene	<.50	1	06/08/98

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8260

Client: General Motors Corporation
Project: Flint, Michigan
Proj. Desc: Windiate Park Area

Job No.: 6009.004.517
Certification NY No.: 10155R

Sample: H7417
Samp. Description: QC Trip Blank
Instrument: HP5970 GC/MS#2
Units: ug/L
Number of analytes: 37

Collected:
Received: 05/29/98
Prepared: 06/08/98
Matrix: Water
QC Batch: 060898W2
%Solids:
Purge volume: 25 mL

Parameter	Result	Surrog Limits	Dilution	Analyzed	Notes
Ethylbenzene	<.50		1	06/08/98	
Bromoform	<.50		1	06/08/98	
Xylene (total)	<.50		1	06/08/98	
Styrene	<.50		1	06/08/98	
1,1,2,2-Tetrachloroethane	<.50		1	06/08/98	
Dibromofluoromethane (surrogate)	102.%	90-118	1	06/08/98	
Toluene-d8 (surrogate)	102.%	90-116	1	06/08/98	
Bromofluorobenzene (surrogate)	98.%	82-123	1	06/08/98	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: June 11, 1998

Monika Santucci

Confidential under FOIA

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

Shane Noreen

LFR

Aug 07, 2009 17:07

**MDEQ Monitoring Well
Abandonment Approval Letter,
dated July 13, 1998**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

DNR SHIA. DIST. HQ.

Fax: 1-517-625-5000

Jul 14 '98

9:27

P. 02/02

STATE OF MICHIGAN

Aug 07, 2009 17:07



JOHN ENGEL, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48209-7973

INTERNET: <http://www.deq.state.mi.us>

RUSSELL J. HARDING, Director

REPLY TO:

SHIAWASSEE DISTRICT OFFICE
10850 BENNETT DRIVE
MORRIS MI 48857-5792

July 13, 1998

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Ave.
Flint, MI 48550-8504

Dear Mr. Metcalf:

SUBJECT: Monitoring Well Abandonment, Windiate Park/Dixieland Subdivision Landfill, Flint, Genesee County, Michigan

The Michigan Department of Environmental Quality (MDEQ) has reviewed the July 2, 1998 correspondence and associated groundwater analytical results from O'Brien & Gere Engineers, Inc. regarding the above referenced site. Based on the results of the groundwater samples collected, including all previous results, the MDEQ concurs that the nine monitoring wells installed to investigate potential groundwater contamination at the site may be abandoned. Please note that all wells should be abandoned according to the procedures described in the Michigan Water Well Construction and Pump Installation Code, Part 127 of 1978; P.A. 368 as amended.

If you have any questions, please feel free to contact me at (517) 625-4621.

Sincerely,

Eric L. Van Riper
Shiawassee District Office
Environmental Response Division

EV:jah

cc: Kevin Lavalle, Gault, Davison P.C.

**MDEQ Soil Cover IRM Agreement
Letter, dated September 25, 1995**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

ATURAL RESOURCES
COMMISSION
JERRY C. BARTNIK
KEITH J. CHARTERS
LARRY DEVUYST
PAUL EISELE
JAMES P. HILL
DAVID HOLLI
JOEY M. SPANO

STATE OF MICHIGAN

Shane Noreen

LFR

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

Shiawassee District Headquarters
10650 Bennett Dr., Morrice, MI 48857-9792

September 25, 1995

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Ave.
Flint, MI 48550-8504

Dear Mr. Metcalf:

SUBJECT: Windiate Park/Dixieland Subdivision Landfill, Flint, Genesee County

This letter is written in response to a request by General Motors Corporation (GM) and the City of Flint to the Michigan Department of Natural Resources (MDNR) to construct a soil cap over the park area of the Windiate Park/Dixieland Subdivision Landfill. The cap is being proposed as an interim response measure to minimize any potential direct contact threat of hazardous substances in the park area of the landfill.

While the MDNR cannot grant final approval of the cap until the Remedial Investigation (RI) is complete and a remedial action plan (RAP) is submitted and approved by the department, the concept of the proposed cap has been reviewed and the MDNR is in agreement that the proposed cap appears to be consistent with the likely remedial action for the site. Please be advised that as further information becomes available, the cap may require modification. Please also note that a final RAP for the site must be prepared to meet all relevant requirements under Part 201 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994 and must address the entire site of contamination, including any contamination emanating from it.

If you have any questions or would like to discuss this matter further, please contact Mr. Eric Van Riper at 517-625-4621.

Sincerely,

Kathleen Shiner

for Rodney Mosier
Shiawassee District Supervisor
Environmental Response Division
517-625-4615

cc: Mr. Eric Van Riper, MDNR
Mr. John Pettit, Genesee County Health Department
Mr. James Bedford, Michigan Department of Public Health
Mr. Robert Metcalf, GM
Mr. Kevin Lavalley, Gault Davison, P.C.

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

**O'Brien & Gere's Summary Letter
regarding residential property IRMs,
dated January 21, 1997**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07



January 21, 1997

Mr. Eric L. VanRiper
Geologist
Michigan Department of Environmental Quality
Environmental Response Division
10650 S. Bennett Drive
Morrice, MI 48857

Re: Residential Properties in the Windiate
Park Area - Flint, Michigan

File: 6009.007 #2

Dear Mr. VanRiper:

As you know, we are currently preparing the Residential Remedial Action Plan (RAP) for 22 residential properties in the vicinity of Windiate Park that will have been remediated by interim remedial measures (IRMs). As discussed, the Residential RAP submittal will also include the Remedial Investigation (RI)/Feasibility Study (FS) Report. We anticipate submittal of the Residential RI/FS and RAP in early February 1997. Figure 1 (attached) is a site plan identifying the 22 properties.

GM was preparing to implement the Residential RAP in the fall of 1996; however, due to the early winter weather, the work will be postponed until early spring 1997. As we understand, approval of the Residential RAP by MDEQ may take up to 6 months. However, GM's goal is to implement remediation at the residential properties in the spring of 1997 in order to expedite response actions in the neighborhood. Therefore, GM may implement remedial actions prior to final MDEQ approval of the Residential RAP.

The outline below summarizes the proposed interim actions to be implemented by GM's selected contractor. These interim actions were developed based on previous sampling which horizontally and vertically delineated subsurface waste fill material and lead in surface soil.

General construction activities at the properties include:

- Implementing dust control program;
- Traffic control;
- Utility clearance;
- Implementing construction water management program;
- Implementing soil erosion and sedimentation control program;
- Noise control; and
- Work area security.

Mr. Eric L. VanRiper
January 21, 1997
Page 2

Property Specific Summary:

1. 4625 Milton Drive - Surface Soil

It is proposed to excavate impacted surface soil in one specific area to a depth of 1 ft below existing grade and collect verification samples for lead analysis. Replace excavated materials with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

2. 4621 Milton Drive - Surface Soil

It is proposed to excavate impacted surface soil in three specific areas to a depth of 1 ft below existing grade and collect verification samples for lead analysis. Replace excavated materials with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

3. 4605 Milton Drive - Surface Soil

It is proposed to excavate impacted surface soil in one specific area to a depth of 1 ft below existing grade and collect verification samples for lead analysis. Replace excavated materials with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil. This activity was completed in the fall of 1996.

4. 4537 Milton Drive - Fill Material

It is proposed to place soil cover material with a minimum of 6 inches of top soil over existing grade in back yard, as necessary to match grades on adjacent properties since 18 inches of soil cover exists over the fill material. Install sod over newly placed top soil.

5. 4531 Milton Drive - Fill Material

It is proposed to excavate fill material in the back yard to a depth of approximately 4 ft below existing grade and collect verification samples for lead analysis. Replace excavated material with soil cover material. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades on adjacent properties. Install sod over newly placed top soil.

6. 4525 Milton Drive - Fill Material

It is proposed to excavate fill material in the back yard to a depth of approximately 3.5 ft below existing grade and collect verification samples for lead analysis. Replace excavated material with soil cover material. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades on adjacent properties. Install sod over newly placed top soil.

i:\novi\projects\6009007\2_correa\deq\tr.wpd

Mr. Eric L. VanRiper
January 21, 1997
Page 3

Shane Noreen

LFR

Aug 07, 2009 17:07

7. 4519 Milton Drive - Surface Soil and Fill Material

It is proposed to excavate fill material in the back yard to a depth of approximately 3.5 ft below existing grade and collect verification samples for lead analysis. Excavate surface soil to a depth of 1 ft below existing grade in remaining area in the back yard and front yard and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Replace excavated fill material with soil cover material. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades on adjacent properties. Install sod over newly placed top soil.

8. 4513 Milton Drive - Surface Soil and Fill Material

It is proposed to excavate surface soil to a depth of 1 ft below existing grade from the back of the garage to Milton Drive and collect verification samples for lead analysis. Replace excavated material with 6 inches of soil cover material and 6 inches of top soil. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades on adjacent properties and maintain a minimum of 24 inches of soil cover over the fill material. Install sod over newly placed top soil.

9. 4507 Milton Drive - Surface Soil and Fill Material

It is proposed to excavate surface soil to a depth of 1 ft below existing grade from back of house to Milton Drive to maintain consistency with adjacent properties. Replace excavated material with 6 inches of soil cover material and 6 inches of top soil. Remove and replace gravel driveway. Remove and dispose of shed including foundation, located in the back yard. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades on adjacent properties and maintain a minimum of 24 inches of soil cover over the fill material. Install sod over newly placed top soil.

10. 4501 Milton Drive - Surface Soil and Fill Material

It is proposed to excavate surface soil to a depth of 1 ft below existing grade from retaining wall to Milton Drive and collect verification samples for lead analysis. Replace excavated materials with 6 inches of soil cover material and 6 inches of top soil. Place additional soil cover material with 6 inches of top soil over back yard, as necessary to match grades shown on adjacent properties and maintain a minimum of 24 inches of soil cover over the fill material. Install sod over newly placed top soil.

11. 4407 Milton Drive - Surface Soil, Fill Material and Ground Water Removal

It is proposed to excavate surface soil to a depth of 1 ft below existing grade in the front yard and collect verification samples for lead analysis. Excavate fill material in back yard to a depth of approximately 10 ft below existing grade to allow for collection and removal of ground water. The ground water will be containerized, tested for lead and BTEX, and disposed in accordance with the City of Flint's requirements for the sanitary sewer system. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Replace excavated fill material with soil cover material. Place additional soil cover material with 6 inches of top soil in the back yard, as necessary to match grades on adjacent properties and maintain a minimum of 24 inches of soil cover over the fill material. Install sod over newly placed top soil.

Shane Noreen

O'BRIEN & GERE ENGINEERS

LFR

Aug 07, 2009 17:07

Mr. Eric L. VanRiper
January 21, 1997
Page 4

12. 4401 Milton Drive - Surface Soil and Fill Material

It is proposed to excavate surface soil to a depth of 1 ft below existing grade for the front yard of the property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil. Maintain existing 2 ft to 12 ft soil cover over fill material.

13. 4317 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 1 ft below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

14. 4313 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 1 ft below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

15. 4309 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 1 ft below existing grade and collect verification samples for lead analysis. Excavate and replace gravel driveway. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

16. 4221 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 1 ft below existing grade, including Shelly Lane and the adjacent sidewalk, and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

17. 4217 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 1 ft below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

18. 4522 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 6 inches below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of top soil. Install sod over newly placed top soil.

Mr. Eric L. VanRiper
January 21, 1997
Page 5

Shane Noreen

LFR

Aug 07, 2009 17:07

19. 4518 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 6 inches below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of top soil. Install sod over newly placed top soil.

20. 4510 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 6 inches below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of top soil. Install sod over newly placed top soil.

21. 4502 Milton Drive - Surface Soil

It is proposed to excavate surface soil to a depth of 6 inches below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of soil cover material and 6 inches of top soil. Install sod over newly placed top soil.

22. 201 Browning Avenue - Surface Soil

It is proposed to excavate surface soil to a depth of 6 inches below existing grade for the entire property and collect verification samples for lead analysis. Replace excavated surface soil with 6 inches of top soil. Install sod over newly placed top soil.

Verification sampling of each excavation area will be conducted in accordance with the MDEQ Guidance Document, "Verification of Soil Remediation". Sample analyses will be completed using an on-site X-ray fluorescence (XRF) analyzer. The use of XRF analysis will be described in a forthcoming work plan for your review and approval.

Please call either Bob Metcalf at (810) 236-0300 or me at (810) 426-8970 if you have any questions or comments.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.


Scott L. Cormier, P.E.
Managing Engineer

SLC/tss

cc: Mr. Robert S. Metcalf, P.E. - General Motors WFG, Flint, MI
Mr. Edward E. Peterson - General Motors WFG, Detroit, MI
Mr. Swiatoslav W. Kaczmar, PhD, CIH - O'Brien & Gere Engineers, Syracuse, NY

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

**MDEQ Letter dated November 3,
1995 (topsoil and silty sand
deemed adequate for usage
as a soil cover)**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

** TOTAL PAGE.02 **

LFR

Aug 07, 2008 17:07
STATE OF MICHIGAN



JOHN ENGLER, Governor
DEPARTMENT OF ENVIRONMENTAL QUALITY
HOLLISTER BUILDING, P.O. BOX 30473, LANSING MI 48209-7973
RUSSELL J. HARDING, Director

REPLY TO:
SHAWASSEE DISTRICT HEADQUARTERS
10850 S BENNETT
MORRIS MI 48867-0702

November 3, 1995

Mr. Robert Metcalf
General Motors Corporation
CLCD North
902 E. Hamilton Ave.
Flint, MI 48550-8504

Dear Mr. Metcalf:

SUBJECT: Windiate Park/Dixieland Subdivision Landfill, Flint, Genesee County

The Michigan Department of Environmental Quality (MDEQ) has reviewed the analytical results for the silty sand and topsoil to be used as a protective cap for the Windiate Park/Dixieland Subdivision landfill. Specifically, one soil sample was collected from the silty sand and five samples were collected from the topsoil. All samples were analyzed for the Michigan ten metals. In addition, one sample from the silty sand and one sample from the topsoil were also analyzed for TCLP metals.

While the MDEQ cannot make a determination as to the adequacy of all the material to be used, the results of the samples submitted do indicate the soil to be below the soil direct contact criteria and protective of groundwater for the Michigan ten metals.

If you have any questions or would like to discuss this matter further, please contact Mr. Eric Van Riper at 517-625-4621.

Sincerely,

Rodney Mosier
(for) Rodney Mosier
Shiawassee District Supervisor
Environmental Response Division
517-625-4615

cc: Mr. Eric Van Riper, MDEQ
Mr. Kevin Lavalley, Gault Davison, P.C.

Shane Noreen

LFR

Aug 07, 2008 17:07

**Consent Agreement between GM
and the Genesee County Drain
Commission, dated January 24-31,
1996**

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

CONSENT AGREEMENT

Aug 07, 2009 17:07

THIS CONSENT AGREEMENT is made between General Motors Corporation a Delaware corporation, ("GM") whose address is 3044 West Grand Boulevard, Detroit, Michigan and Genesee County Drain Commission ("County"), whose address is 932 Beach Street, Flint, Michigan.

RECITALS

A. The City of Flint ("City") with offices at 1101 South Saginaw Street, Flint, Michigan, is the owner of a certain parcel of property located in the City of Flint, State of Michigan ("Property"), as more particularly described on Exhibit A attached hereto and by reference made a part hereof.

B. City has granted permission to GM to enter onto the Property in order to conduct activities in furtherance of an environmental remediation plan to address surface and subsurface contamination on the Property.

C. City conveyed to County a Release of Right of Way ("Release"), dated July 30, 1990, and recorded at Deed Liber 2401, Page 08, Genesee County Records, pursuant to which County has the right to construct and maintain a certain drain on a portion of the Property ("Easement Area"), as more particularly described on Exhibit B attached hereto and by reference made a part hereof, together with rights appurtenant to the construction and maintenance of such drain.

D. GM desires to place approximately one-to-four feet of sand and topsoil and to plant sod on the surface of the Property (the "Covered Area"), to raise the elevation of catch basins and manholes located in the Easement Area, and to conduct certain other related activities in furtherance of its remediation activity.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the parties hereby agree as follows:

1. County consents to GM and City, their representatives, agents, employees, consultants, contractors and subcontractors, entering upon the Easement Area and conducting the following activities: (i) raising the elevation of any catch basins and any manholes located in the Easement Area; (ii) raising the elevation of the Easement Area approximately one-to-four feet by placing sand, topsoil and planting sod on the surface of the Covered Area; (iii) conducting from time to time surface and subsurface soil testing of the Covered Area; (iv) repairing and maintaining the sand, topsoil and sod; and (v) entering other portions of the Easement Area, in addition to the Covered Area, to the extent that entering such other portions of the Easement Area is reasonably necessary to exercise GM's or City's rights under this Consent Agreement. The parties understand and agree that GM or City may also need to perform certain other work on the Easement Area in addition to the work described herein, and that if it becomes necessary for

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

GM or City to do such additional work, County consents thereto so long as such other work does not interfere with the easement rights granted to County pursuant to the Release.

2. Following the placement of sand and topsoil and the planting of sod on the Covered Area, if County conducts any excavation of, or earth moving activities on, any portion of the Covered Area, County shall notify GM and City prior to conducting such excavation or earth moving activities and shall restore the sand, topsoil and ground cover to the condition existing prior to such excavation or earth moving activities and in conformance with the original specifications for the remediation activities, a copy of which specifications has been delivered by General Motors to County. County shall conduct any such excavation or earth moving activities in accordance with applicable laws.

3. Any notice required to be given under this Consent Agreement must be in writing and shall be deemed to have been given upon receipt by the addressee, and shall be sent by United States certified mail, return receipt requested, postage prepaid or by a nationally recognized overnight delivery service to the following addresses:

If to General Motors:

James P. Walle, Esq.
Office of the General Counsel
General Motors Corporation
New Center One Building
3031 West Grand Boulevard
Detroit, Michigan 48232

If to City:

If to County:

Genesee County Drain Commissioner
Anthony Ragnone
4610 Beecher Road
Flint, Michigan
48532

Shane Noreen

LFR

Aug 07, 2009 17:07

Shane Noreen

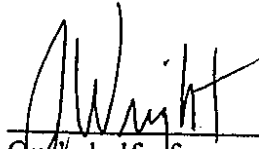
LFR

Aug 07, 2009 17:07

4. This Consent Agreement shall be effective from the date of County's signature.

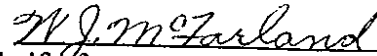
The parties or their duly authorized representatives have signed this Consent Agreement on the date specified below.

By:



On behalf of
GENESEE COUNTY DRAIN
COMMISSION
JEFFREY WRIGHT

By:



On behalf of
GENERAL MOTORS CORPORATION, a
Delaware corporation

Title: DEPUTY COMMISSIONER

Title: Manager, Remediation Projects

Date:

1-24-96

Date:

1-31-96

DET0568610.2

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

LFR

Aug 07, 2009 17:07

EXHIBIT A

Aug 07, 2009 17:07

Legal Description

A parcel of land located in the City of Flint, Genesee County, Michigan, described as:

The Common of "Dixie Land", as contained in Plat Liber 11, Page 7, Genesee County Records; and

Lot 139 to 142, inclusive, and Lots 475 to 485, inclusive, of "Dixie Land", according to the recorded plat thereof, as recorded in Plat Liber 11, Pages 5 and 6, Genesee County records.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Shane Noreen

LFR

EXHIBIT B

Aug 07, 2009 17:07

Easement Area

Property located in the City of Flint, Genesee County, Michigan, described as:

A parcel of land 30' wide described as beginning at the Northerly corner of lot 475; then Northwesterly 50 feet along the Southwesterly line of Pengelly Road; then Southwesterly at right angles 30 feet; then Southeasterly parallel to Pengelly Road to lot 475; then Northeasterly 30 feet to the point of beginning. Also 10 feet each side of a line beginning on the Southwesterly line of lot 481 which is Northeasterly 5 feet from the Southwesterly corner of lot 481, then South 14° 13' 00" East 645 feet; then South 28° 43' 00" East 210 feet to a point on the North line of Milton Drive which is 25 feet Westerly of the Southeasterly corner of lot 173, not including that part lying in lot 173.

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

DET05\70647.1

B-1

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07

Confidential under FOIA
Shane Noreen
LFR
Aug 07, 2009 17:07

Confidential under FOIA

Shane Noreen

LFR

Aug 07, 2009 17:07