



Remediation and Liability Management Company, Inc.

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FILE COPY

June 9, 2004

Mr. William L. Yocum
Environmental Quality Analyst
Waste and Hazardous Materials Division
Michigan Department of Environmental Quality
525 West Allegan Street
P.O. Box 30242
Lansing, Michigan 46909-7742

Dear Mr. Yocum:

Re: Response to MDEQ Letter Dated May 11, 2004 Regarding April 23, 2004 Inspection
Former Peregrine (US) Inc. Coldwater Road Facility
Genesee Township, Genesee County, Michigan
MIR 005 356 860

Remediation and Liability Management Company (REALM) is completing RCRA Closure of the former Drum Storage Area (DSA) located at the former Peregrine (US) Inc. Coldwater Road Facility in Genesee Township, Genesee County, Michigan. The Facility location is presented on Figure 1. A Facility plan showing the location of the former DSA is presented on Figure 2. The former DSA is being closed in conjunction with the RCRA Closure of the adjacent Landfill to the north, and in accordance with the "Closure Plan and Post-Closure Plan" (O'Brien & Gere, August 1989) and the "Work Plan, Former Drum Storage Area at the Former Peregrine, U.S., Inc. Property, Coldwater Road Facility" (O'Brien & Gere, February 2004). Soil at the former DSA was investigated and found to exceed MDEQ Generic Industrial Drinking Water Protection Criteria (IDWPC) for trichloroethene (TCE) of 100 µg/kg. Discontinuous perched water in the former DSA was also investigated and found to exceed MDEQ Generic Industrial Drinking Water Criteria (IDWC) for TCE of 5 µg/L and cis-1,2-dichloroethene (DCE) of 70 µg/L. Soil and perched water do not exceed MDEQ Generic Industrial Direct Contact Criteria/Groundwater Contact Criteria, respectively. REALM does not believe that the drinking water pathway is appropriate for shallow perched water at the Site, but in the interest of closing the former DSA, REALM proposed to the MDEQ to remove soil above IDWPC and perched water (if present) in the former DSA. The removal of the soil and perched water was done in conjunction with other soil removal activities being conducted at the Facility, and to avoid the necessity of deed restrictions for the DSA. Selected photographs of the DSA excavation are presented on Figure 3.

On April 23, 2004, you and Mr. Kevin Holdwick of the Michigan Department of Environmental Quality (MDEQ) observed the open excavation associated with the former DSA. At that time, soil exceeding MDEQ IDWPC had been excavated and disposed of off-Site as non-hazardous solid waste at the Republic Inc. Brent Run Landfill in Montrose, Michigan.

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The determination to send the soil from this area to a solid waste landfill had been made prior to excavation by the REALM team by evaluation of knowledge of historical waste stored on the pad and waste characterization and total soils analyses of samples collected in this area.

You sent a letter to REALM, dated May 11, 2004, identifying the following alleged violations:

1. *The facility had not adequately characterized trichloroethene contaminated soil excavated from under the former hazardous waste drum accumulation pad and sump, and disposed as solid waste. Site manifest records document generation of listed chlorinated solvent waste. RCRA Facility Investigation (RFI) reports, submitted by the facility, document historical operation of both production and maintenance degreasing machines, and the same RFI reports describe use of chlorinated solvent in the degreasers which would have generated listed hazardous waste. Furthermore, the soil was removed from an area used to manage listed hazardous waste through 1994. This violates Part 111, Rule 302(1)(a) and (b)(i) and (ii), 40 CFR 262.11 (a), (b), and (c), and Part 121, Section 12103(1)(a). Waste must be evaluated, either by analysis or by knowledge of the materials and processes used, to determine if the waste is hazardous or regulated as a liquid waste or used oil, and the evaluation must be documented with written records.*
2. *Documentation of waste evaluation required by Part 111, Rule 302(1) was not available at the time of inspection. The facility did not provide documentation supporting the characterization of soil contaminated with trichloroethene as solid waste. Specifically, the only characterization documentation provided to date consists of analytical reports for trichloroethene in soils verification samples and TCLP soil analyses. This violates Part 111, Rule 307(1) and 40 CFR 262.40(c). Records of test results, waste analysis, or other determinations must be kept for three years after the date the evaluated waste was last shipped off site. Given the information on record regarding chlorinated solvent use at the facility, waste characterization documentation must include a plausible written evaluation which explains why the soil contaminated with TCE need not be managed as a listed hazardous waste.*

The referenced rules are included as Attachment A.

Response to Alleged Violation #1

REALM evaluated soil from the former DSA prior to disposal and determined that Land Disposal Regulations (LDRs) are not applicable for the following reasons:

1. REALM has no documentation that TCE was stored in the former DSA. The documentation identifies storage of the spent solvents 1,1,1-trichloroethane (TCA) (F001) and xylene (F003) (MDEQ-approved "Closure Plan and Post-Closure Plan", O'Brien & Gere, August 1989, see Attachment B.1), neither of which has been detected in any of the samples from the former DSA soil and perched water. Even though TCE has been identified, it was also found at low concentrations in other remote areas of the Facility, suggesting that the presence of TCE could be related to other operations at the

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Facility which may have been conducted prior to construction of the DSA. REALM has no available information regarding the nature of historical operations in the area of the former DSA prior to its construction or during the property use by Peregrine (US) Inc. and no information to indicate that TCE had been used at the Facility as a degreaser.

2. REALM has no evidence that the sump contained TCE. Analytical results of the sludge removed from the sump during closure activities in July and August 1992 was classified as D005, D007, D008, and D009 waste, and not as listed waste.
3. REALM has no indication that any release occurred from the former DSA. The sump was observed to be in good condition during cleaning activities, as documented in the "Final Closure Certification Documentation" (Weston, June 1999).
4. Soil from directly beneath the former DSA sump was analyzed for TCLP VOC/SVOC/metals; Total PCBs; and RCI. All sample analyses identified that the material was non-hazardous waste.

Therefore, the excavation and disposal of soil from the former DSA as non-hazardous solid waste at the Brent Run Landfill was appropriate. A detailed evaluation is presented in Attachment B.

Response to Alleged Violation #2

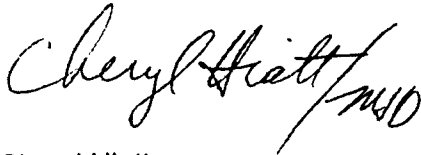
On April 23, 2004, you and Mr. Kevin Holdwick of MDEQ observed the open excavation associated with the former DSA. You requested verification sample results for the former DSA excavation, which were provided to you via e-mail later on April 23, 2004 by Mr. Tony Finch of O'Brien & Gere (OBG), and are included in Attachment B.6. You also requested characterization sample results for soil excavated from the former DSA, which were provided to you via facsimile later on April 23, 2004 by Ms. Sylvie Eastman of Conestoga-Rovers & Associates (CRA), and are included in Attachment B.5. As you may have observed during your visit, there are no longer any structures on the property to house records on-site and therefore, these records are being maintained at REALM's corporate offices for the required three years. As our decision to treat this soil as non-hazardous waste is based on the "Closure Plan and Post-Closure Plan" (OBG, August 1989), the "Final Closure Certification/ Documentation Report" (Weston, June 1999), and the waste characterization results, REALM did have the documentation in its files. MDEQ should also have a copy of the referenced reports on file.

Part 111, Rule 307(1) and 40 CFR 262.40(c) state that *"a generator must keep records of any test results, waste analyses, or other determinations for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal"*. These rules do not state that the documentation needs to be available on-site, rather Part 111, Rule 307(2) states that *"a generator who is requested by the director to submit evaluation results shall provide the required information within 30 days after receipt of the request"*. Evaluation results are included in Attachment C.

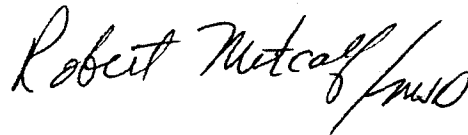
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If you should have any further questions concerning the disposal of material from the former DSA, or any of the attached documentation, please call Cheryl Hiatt at 248-753-5799 or Bob Metcalf at 810-236-0300.

Yours truly,



Cheryl Hiatt
REALM Project Manager
Former Peregrine Coldwater Road Facility



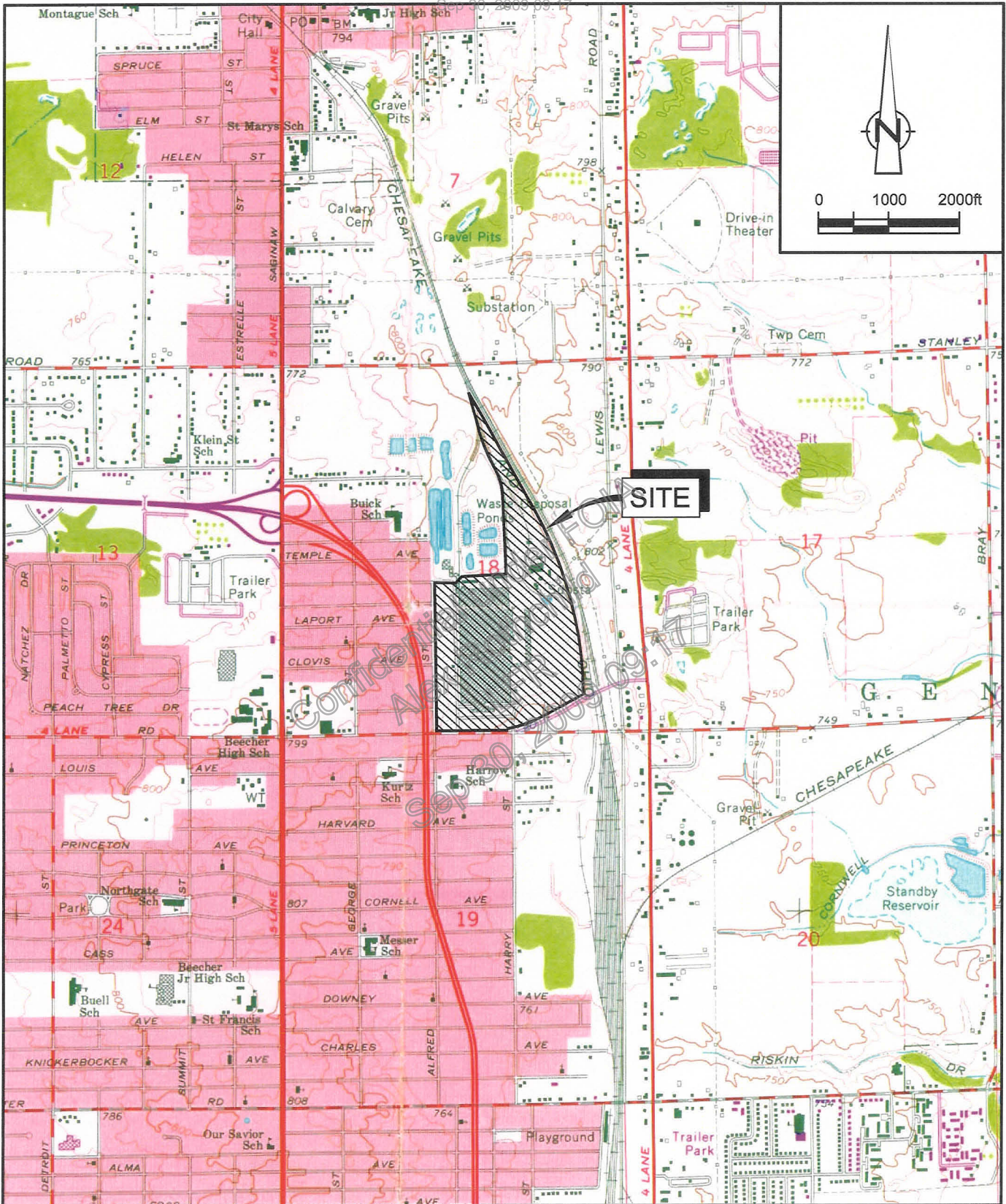
Robert Metcalf
REALM Project Manager
Coldwater Road Landfill Facility

SE/pw/12636/1
Encl.

c.c.: Kevin Holdwick, MDEQ
Marilyn Dedyne, REALM
Jean Caufield, REALM
Michelle Fisher, GM
Tony Finch, OBG
Glenn Turchan, CRA
Sylvie Eastman, CRA

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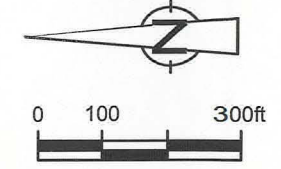


SOURCE: USGS QUADRANGLE MAP;
FLINT NORTH, MICHIGAN

figure 1

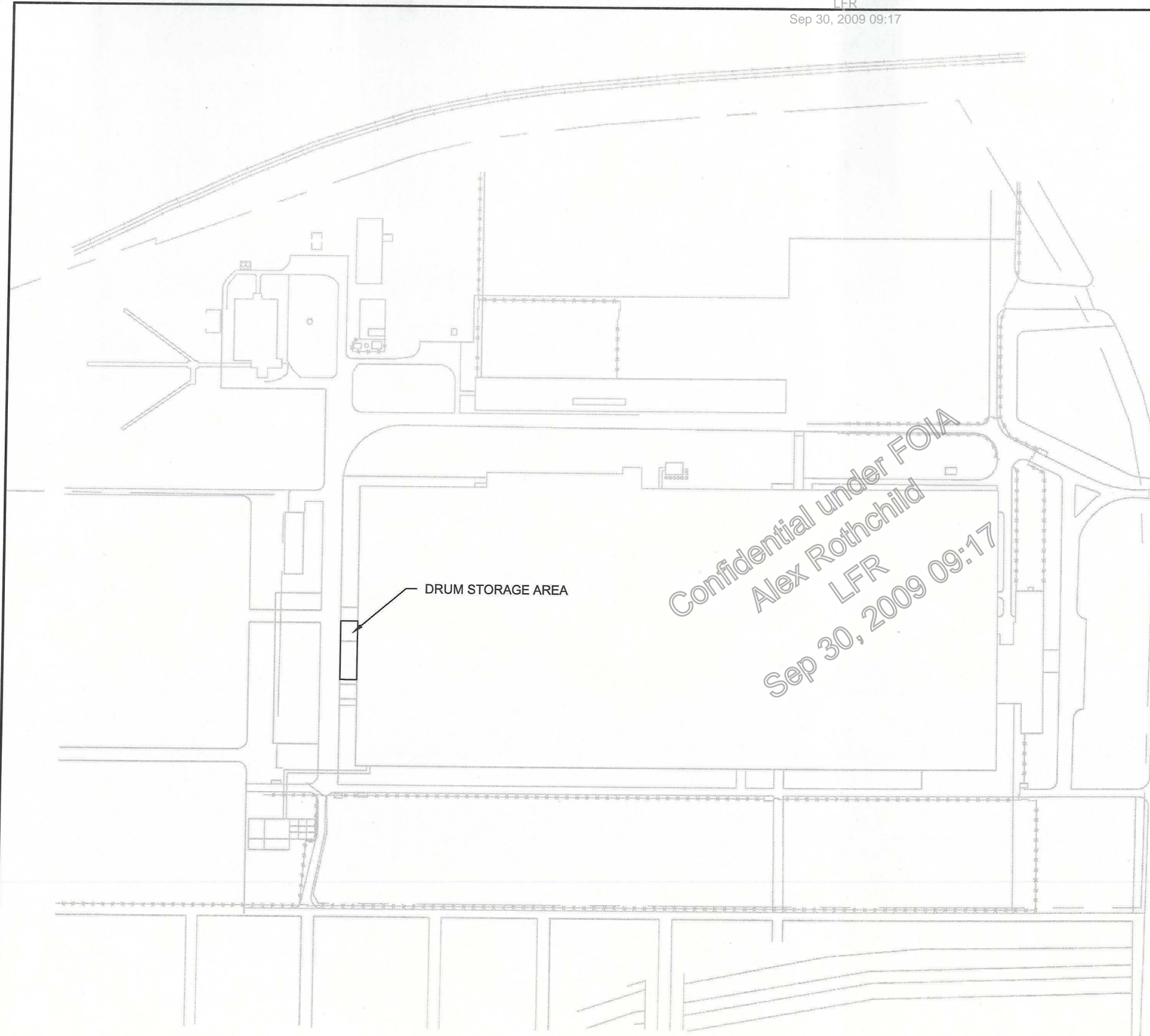
FACILITY LOCATION
FORMER PEREGRINE (US), INC. COLDWATER ROAD FACILITY
Genesee Township, Michigan





LEGEND

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DRUM STORAGE AREA

NOTES

1. THIS DRAWING IS FOR REFERENCE ONLY AND IS NEITHER COMPLETE NOR TO EXACTING SCALE.
2. DRAWING No. 1795W BUICK MOTOR DIVISION SHEET No. 1M WAS USED AS A REFERENCE DRAWING.

figure 2

FACILITY PLAN AND DSA LOCATION
FORMER PEREGRINE (US), INC. COLDWATER ROAD FACILITY
Genesee Township, Michigan





NORTH WALL - DSA EXCAVATION



SOUTH WALL - DSA EXCAVATION

figure 3

**NORTH AND SOUTH WALL - DSA EXCAVATION
FORMER PEREGRINE (US), INC. COLDWATER ROAD FACILITY
*Genesee Township, Michigan***



ATTACHMENT A
REFERENCED REGULATIONS

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NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT)
Act 451 of 1994

324.12103 Generator; duties.

Sec. 12103. (1) A generator shall do all of the following:

(a) Characterize the waste in accordance with the requirements of part 111, and rules promulgated under that part, and maintain records of the characterization.

(b) Obtain and utilize a site identification number assigned by the United States environmental protection agency or the department. Beginning on October 1, 2002 and until March 31, 2008, the department shall assess a site identification number user charge of \$50.00 for each site identification number it issues. The department shall not issue a site identification number under this subdivision unless the site identification number user charge and the tax identification number for the person applying for the site identification number have been received. Money collected under this subdivision shall be forwarded to the state treasurer for deposit into the environmental pollution prevention fund created in section 11130 and credited to the hazardous waste and liquid industrial waste users account created in section 11130(5).

(c) If transporting by highway, engage, employ, or contract for the transportation of liquid industrial waste only with a transporter registered and permitted under the hazardous materials transportation act.

(d) Except as otherwise provided in this part, utilize and retain a separate manifest for each shipment of liquid industrial waste transported to a designated facility. The department may authorize the use of a consolidated manifest, for waste loads that are multiple pickups of uniform types of wastes that constitute a single shipment of waste. In this case, a receipt shall be obtained from the transporter documenting the transporter's company name, driver's signature, date of pickup, type and quantity of waste accepted from the generator, the consolidated manifest number, and the designated facility. A generator of brine may complete a single manifest per transporter of brine, per disposal well, each month.

(e) Submit a copy of the manifest to the department by the tenth day after the end of the month in which a load of waste is transported.

(f) Certify that at the time the transporter picks up liquid industrial waste the information contained on the manifest is factual by signing the manifest. This certification is to be by the generator or his or her authorized representative.

(g) Provide to the transporter the signed copies of the manifest to accompany the liquid industrial waste to the designated facility.

(h) If a copy of the manifest, with a handwritten signature of the owner or operator of the designated facility, is not received within 35 days after the date the waste was accepted by the initial transporter, contact the transporter or owner or operator of the designated facility, or both, to determine the status of the waste.

(i) Submit an exception report to the department if a copy of the manifest is not received with the handwritten signature of the owner or operator or his or her authorized representative of the designated facility within 45 days after the date the waste was accepted by the initial transporter. The exception report shall include both of the following:

(i) A legible copy of the manifest for which the generator does not have confirmation of delivery.

(ii) A cover letter signed by the generator explaining the efforts taken to locate the waste and the results of those efforts.

(2) A generator who also operates an on-site reclamation, treatment, or disposal facility shall keep records of all liquid waste produced and reclaimed, treated, or disposed of at his or her facility.

(3) A generator shall retain all records required pursuant to this part for a period of at least 3 years, and shall make those records readily available for review and inspection by the department or a peace officer. The retention period required by this subsection is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as otherwise required by the department.

(4) A generator transporting its own waste in quantities of 55 gallons or less is not subject to manifest requirements if all of the following conditions are met:

(a) The waste is accompanied by a record showing the source and quantity of the waste and the designated facility where the waste is being transported.

(b) The generator obtains a signature from the designated facility acknowledging receipt of the waste and provides a copy of the record of shipment to the designated facility.

(c) The generator retains a copy of the record of shipment as part of the generator records.

(d) The designated facility is managed in accordance with this part.

History: 1994, Act 451, Eff. Mar. 30, 1995;—Am. 1998, Act 140, Eff. Sept. 1, 1998;—Am. 2001, Act 165, Imd. Eff. Nov. 7, 2001.

Compiler's note: For transfer of authority, powers, duties, functions, and responsibilities of the Waste Management Division to the Director of the Michigan Department of Environmental Quality, see E.R.O. No. 1995-16, compiled at § 324.99901 of the Michigan Compiled Laws.

Popular name: Act 451

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324.12103

Generator; duties.

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Rule 204. (1) The following materials are not wastes for the purpose of part 111 of the act and these rules:

(a) Domestic sewage and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment. Domestic sewage means untreated sanitary wastes that pass through a sewer system.

(b) Industrial wastewater discharges that are point source discharges subject to regulation pursuant to the provisions of section 402 of the federal clean water act, as amended, except for discharges to injection wells.

(c) Irrigation return flows.

(d) Source, special nuclear, or by-product material as defined by the atomic energy act of 1954, as amended, 42 U.S.C. §2011 et seq.

(e) Materials which are subjected to in-situ mining techniques and which are not removed from the ground as part of the extraction process.

(f) Pulping liquors that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless the liquors are accumulated speculatively, as defined in R 299.9107(y).

(g) Spent sulfuric acid that is used to produce virgin sulfuric acid, unless the spent acid is accumulated speculatively, as defined in R 299.9107(y).

(h) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated and where they are reused in the production process, if all of the following provisions apply:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance.

(ii) The reclamation does not involve controlled flame combustion, such as occurs in boilers, industrial furnaces, or incinerators.

(iii) The secondary materials are not accumulated in such tanks for more than 12 months without being reclaimed.

(iv) The reclaimed material is not used to produce a fuel and is not used to produce products that are used in a manner that constitutes disposal.

(i) Spent wood preserving solutions which have been reclaimed and which are reused for their original intended purpose.

(j) Wastewaters from the wood preserving process which have been reclaimed and which are reused to treat wood.

(k) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, if the residue, if shipped, is shipped, in containers and is not land disposed before recovery.

(l) Oil-bearing hazardous secondary materials such as sludges, by-products, and spent materials, that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911), including distillation, catalytic cracking, fractionation, or thermal cracking units, unless the material is placed on the land, or accumulated speculatively before being so recycled. Materials inserted into thermal cracking units are excluded under this subdivision if the coke product does not exhibit a characteristic of a hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another refinery, and still be excluded under this subdivision. Except as provided for in subdivision (m) of this subrule, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry are not excluded under this subdivision. Residuals generated from processing or recycling materials excluded under this subdivision, where such materials as generated would have otherwise met a listing under R 299.9213 or R 299.9214, are designated as F037 wastes when disposed of or intended for disposal.

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(m) Recovered oil that is recycled in the same manner and with the same conditions as described in subdivision (l) of this subrule. Recovered oil is oil that has been reclaimed from secondary materials, including wastewater, generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4789, 4922, 4923, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in part 2 of these rules. However, oil recovered from oil-bearing hazardous wastes listed in part 2 of these rules may be considered recovered oil. Recovered oil also does not include used oil as defined in R 299.9109.

(n) U.S. EPA hazardous waste numbers K060, K087, K141, K142, K143, K144, K145, K147, and K148 and any wastes from the coke by-products processes that are hazardous only because they exhibit the toxicity characteristic specified in R 299.9212 when, subsequent to generation, the materials are recycled to coke ovens or to the tar recovery process as a feedstock to produce coal tar or are mixed with coal tar before the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point that the wastes are generated to the point that they are recycled to coke ovens or tar recovery or refining processes or are mixed with coal tar.

(o) Materials which are reclaimed from used oil and which are used beneficially if the materials are not burned for energy recovery or used in a manner that constitutes disposal of the materials.

(p) Excluded scrap metal that is being recycled

(q) Shredded circuit boards that are being recycled if both of the following requirements are met:

(i) The shredded circuit boards are stored in containers sufficient to prevent a release to the environment before recovery.

(ii) The shredded circuit boards are free of mercury switches, mercury relays, and nickel-cadmium batteries and lithium batteries.

(r) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 C.F.R. §63.446(e). This exemption applies only to combustion at the mill generating the condensates.

(s) Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams, provided both the following requirements are met:

(i) The oil is hazardous only because it exhibits the characteristic of ignitability as defined in R 299.9212 or toxicity for benzene as defined in R 299.9212 and R 299.9217.

(ii) The oil generated by the organic chemical manufacturing facility is not placed on the land or speculatively accumulated before being recycled into the petroleum refining process.

(t) Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land or speculatively accumulated.

(u) Before reuse, the wood preserving wastewaters and spent wood preserving solutions described in subdivisions (i) and (j) of this subrule if all of the following requirements are met:

(i) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended use.

(ii) Before reuse, the wastewaters and spent wood preserving solutions are managed to prevent releases to either the land or groundwater or both.

(iii) Units used to manage wastewaters or spent wood preserving solutions before reuse can be visually or otherwise determined to prevent releases to either land or groundwater.

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(iv) Drip pads used to manage the wastewaters or spent wood preserving solutions before reuse are in compliance with the provisions of 40 C.F.R. part 265, subpart W regardless of whether the plant generates a total of less than 1,000 kilograms per month of hazardous waste.

(v) Before operating pursuant to this exclusion, the plant owner or operator complies with all of the following requirements otherwise the exclusion shall not apply:

(A) Submits a onetime notification to the director stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulations."

(B) The owner or operator maintains a copy of the onetime notification required pursuant to subparagraph (v) of this subdivision in its on-site records for a period of not less than 3 years from the date specified in the notice.

(C) If the plant voids the exclusion by not complying with the exclusion conditions and wishes to have its wastes excluded again, it shall apply to the director for reinstatement. The director may reinstate the exclusion upon finding that the plant has returned to compliance with all of the conditions and that violations are not likely to recur.

(v) Secondary materials, other than hazardous waste listed under R 299.9213 or R 299.9214, that are generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation if all of the following requirements are met:

(i) The secondary material is legitimately recycled to recover minerals, acids, cyanide, water, or other values.

(ii) The secondary material is not speculatively accumulated.

(iii) Except as provided under subparagraph (iv) of this subdivision of this subrule, the secondary material is stored in tanks, containers, or buildings which meet the following requirements as applicable:

(A) If using a building, the building shall be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support, except smelter buildings which may have partially earthen floors provided that the secondary material is stored on the non-earthen portion, have a roof which is suitable for diverting rainwater away from the foundation, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(B) If using a tank, the tank shall be free standing, not meet the definition of a surface impoundment, be manufactured of a material suitable for containment of its contents, be operated in a manner which controls fugitive dust if the tank contains any particulate which may be subject to wind dispersal, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(C) If using a container, the container shall be free standing and be manufactured of a material suitable for containment of its contents, be operated in a manner which controls fugitive dust if the tank contains any particulate which may be subject to wind dispersal, and be designed, constructed, and operated to prevent significant releases of the material to the environment.

(iv) The secondary materials are placed on pads if all of the following requirements are met:

(A) The solid mineral processing secondary materials do not contain any free liquid.

(B) The pad is designed, constructed, and operated to prevent significant

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releases of the secondary material into the environment.

(C) The pad provides the same degree of containment afforded by non-RCRA tanks, containers, and buildings eligible for this exclusion.

(D) The pad is designed of non-earthen material that is compatible with the chemical nature of the mineral processing secondary material.

(E) The pad is capable of withstanding physical stresses associated with placement and removal.

(F) The pad has run-on/run-off controls.

(G) The pad is operated in a manner which controls fugitive dust.

(H) The integrity of the pad is ensured through inspections and maintenance programs.

(I) The director makes a site-specific determination that the materials may be placed on a pad rather than in tanks, containers, or buildings. In making such a determination, the director shall consider whether storage on a pad poses the potential for significant releases via groundwater, surface water, and air exposure pathways. When assessing the groundwater, surface water, and air exposure pathways, the director shall consider the volume and physical and chemical properties of the secondary material, including its potential for migration off of the pad, the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway, and the possibility and extent of harm to human and environmental receptors via each exposure pathway. Before making such a determination, the director shall provide notice and the opportunity for comment to all persons potentially interested in the determination. Notice may be accomplished by placing notice of the action in major local newspapers or broadcasting notice over local radio stations.

(v) The owner or operator provides a notice to the director which identifies the following information and is updated when there is a change in the type of materials recycled or the location of the recycling process:

(A) The types of materials to be recycled.

(B) The type and location of storage units and recycling processes.

(C) The annual quantities expected to be placed in non land-based units.

(vi) For the purposes of the exclusion under R 299.9204(2)(h), mineral processing secondary materials shall be the result of mineral processing and may not include any hazardous wastes listed under R 299.9213 or R 299.9214. Listed hazardous wastes and characteristic hazardous waste generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of waste.

(w) Comparable fuels or comparable syngas fuels that meet the requirements of R 299.9230.

(2) The following wastes are not hazardous wastes for the purposes of part 111 of the act and these rules:

(a) Household waste, including household waste that has been collected, transported, stored, treated, disposed of, recovered, or reused.

Household waste means any waste material, including garbage, trash, and sanitary wastes in septic tanks, that is derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas. A resource recovery facility that manages municipal waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation pursuant to the provisions of these rules if the facility is in compliance with both of the following provisions:

(i) Receives and burns only household waste from single and multiple dwellings, hotels, motels, and other residential sources and waste from commercial or industrial sources that does not contain hazardous waste.

(ii) Does not accept hazardous wastes and the owner or operator of the facility has established contractual requirements or other appropriate

notification or inspection procedures to assure that hazardous wastes are not received at or burned in the facility.

(b) Wastes which are generated by either of the following and which are returned to the soil as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(c) Mining overburden that is returned to the mine site.

(d) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste that is generated primarily from the combustion of coal or other fossil fuels, except as provided by 40 C.F.R. §266.112 for facilities that burn or process hazardous waste.

(e) Drilling fluids, produced waters, and other wastes that are associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.

(f) Wastes which fail the test for the toxicity characteristic because chromium is present or wastes that are listed in R 299.9213 or R 299.9214 due to the presence of chromium, which do not fail the test for the toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that all of the following provisions are met:

(i) The chromium in the waste is exclusively, or nearly exclusively, trivalent chromium.

(ii) The waste is generated from an industrial process that uses trivalent chromium exclusively, or nearly exclusively, and the process does not generate hexavalent chromium.

(iii) The waste is typically and frequently managed in nonoxidizing environments.

(g) The following specific wastes that are in compliance with the standard in subdivision (f) of this subrule, if the wastes do not fail the test for the toxicity characteristic for any other constituent and do not fail the test for any other characteristic:

(i) Chrome (blue) trimmings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beamhouse.

(E) Through-the-blue.

(F) Shearling.

(ii) Chrome (blue) shavings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beamhouse.

(E) Through-the-blue.

(F) Shearling.

(iii) Buffing dust generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

(C) Retan/wet finish.

(D) No beamhouse.

(E) Through-the-blue.

(iv) Sewer screenings generated by any of the following subcategories of the leather tanning and finishing industry:

(A) Hair pulp/chrome, tan/retan/wet finish.

(B) Hair save/chrome, tan/retan/wet finish.

- (C) Retan/wet finish.
- (D) No beamhouse.
- (E) Through-the-blue.
- (F) Shearling.

(v) Wastewater treatment sludges generated by any of the following subcategories of the leather tanning and finishing industry:

- (A) Hair pulp/chrome, tan/retan/wet finish.
- (B) Hair save/chrome, tan/retan wet finish.
- (C) Retan/wet finish.
- (D) No beamhouse.
- (E) Through-the-blue.
- (F) Shearling.

(vi) Wastewater treatment sludges generated by any of the following subcategories of the leather tanning and finishing industry:

- (A) Hair pulp/chrome, tan/retan/wet finish.
- (B) Hair save/chrome, tan/retan/wet finish.
- (C) Through-the-blue.

(vii) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(viii) Wastewater treatment sludges from the production of TiO2 pigment using chromium-bearing ores by the chloride process.

(h) Waste from the extraction, beneficiation, and processing of ores and minerals, including coal, phosphate rock, and overburden from the mining of uranium ore, except as provided in 40 C.F.R. §266.112 for facilities that burn or process hazardous waste. For purposes of this subdivision of this subrule, the following provisions apply:

(i) Beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water or carbon dioxide, or both; roasting, autoclaving, or chlorination, or any combination thereof, in preparation for leaching, except where the roasting/leaching or autoclaving/leaching or chlorination/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing; gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in-situ leaching.

(ii) Waste from the processing of ores and minerals will include only the following wastes as generated:

- (A) Slag from primary copper processing.
- (B) Slag from primary lead processing.
- (C) Red and brown muds from bauxite refining.
- (D) Phosphogypsum from phosphoric acid production.
- (E) Slag from elemental phosphorus production.
- (F) Gasifier ash from coal gasification.
- (G) Process wastewater from coal gasification.
- (H) Calcium sulfate wastewater treatment plant sludge from primary copper processing.
- (I) Slag tailings from primary copper processing.
- (J) Fluorogypsum from hydrofluoric acid production.
- (K) Process wastewater from hydrofluoric acid production.
- (L) Air pollution control dust/sludge from iron blast furnaces.
- (M) Iron blast furnace slag.
- (N) Treated residue from roasting/leaching of chrome ore.
- (O) Process wastewater from primary magnesium processing by the anhydrous process.
- (P) Process wastewater from phosphoric acid production.
- (Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production.

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(R) Basic oxygen furnace and open hearth furnace slag from carbon steel production.

(S) Chloride process waste solids from titanium tetrachloride production.

(T) Slag from primary zinc processing.

(iii) Residues derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remain excluded under subrule (2) of this rule if the owner or operator meets both of the following requirements:

(A) Processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials.

(B) Legitimately reclaims the secondary mineral processing materials.

(i) Mixtures of a waste that is excluded from regulation pursuant to the provisions of subdivision (h) of this subrule and any other waste that exhibits a hazardous waste characteristic pursuant to the provisions of R 299.9212 and that is not listed pursuant to the provisions of R 299.9213 or R 299.9214, such that the resultant mixture does not exhibit any hazardous waste characteristic that would have been exhibited by the non-excluded waste alone if the mixture had not occurred.

(j) Cement kiln dust waste, except as provided in 40 C.F.R. §266.112 for facilities that burn or process hazardous waste.

(k) Waste which consists of discarded arsenical-treated wood or wood products, which fails the test for the toxicity characteristic for hazardous waste numbers D004 through D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

(l) Petroleum-contaminated media and debris that fail the test for the toxicity characteristic pursuant to the provisions of R 299.9212 for hazardous waste numbers D018 through D043 only and are subject to the corrective action regulations pursuant to the provisions of 40 C.F.R. part 280.

(m) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, if the refrigerant is reclaimed for further use.

(n) Non-terne plated used oil filters that are not mixed with wastes that are identified in R 299.9213 or R 299.9214, or both, if the oil filters have been gravity hot-drained using one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining.

(ii) Hot-draining and crushing.

(iii) Dismantling and hot-draining.

(iv) Any other equivalent hot-draining method that will remove used oil.

(o) Leachate or gas condensate collected from landfills where certain wastes have been disposed of provided that all of the following requirements are met:

(i) The wastes disposed would meet one or more of the listing descriptions for hazardous waste numbers K169, K170, K171, and K172 if these wastes had been generated after February 8, 1999.

(ii) The wastes described in subparagraph (i) of this subdivision were disposed before February 8, 1999.

(iii) The leachate or gas condensate do not exhibit any characteristic of a hazardous waste and are not derived from any other listed hazardous waste.

(iv) The discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a publicly owned treatment works by truck, rail, or dedicated pipe, is subject to

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regulations under sections 307(b) or 402 of the federal clean water act.

(v) After February 13, 2001, the leachate or gas condensate shall no longer be exempt if it is stored or managed in a surface impoundment before discharge unless all of the following requirements are met:

(A) The surface impoundment is used to store leachate or gas condensate in response to an emergency situation.

(B) The surface impoundment has a double liner system.

(C) The leachate or gas condensate is removed from the surface impoundment and continues to be managed in compliance with the conditions of this subdivision after the emergency ends.

(3) The following hazardous wastes are not subject to regulation pursuant to parts 3 to 10 of these rules:

(a) A hazardous waste that is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or a manufacturing process unit or an associated nonwaste treatment manufacturing unit. This exemption does not apply in any of the following circumstances:

(i) Once the waste exits the unit in which it was generated.

(ii) If the unit is a surface impoundment.

(iii) If the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for the manufacturing, storage, or transportation of product or raw materials.

(b) Waste pesticides and pesticide residues which are generated by a farmer from his or her own use and which are hazardous wastes if the pesticide residues are disposed of on the farmer's own farm in a manner that is consistent with the disposal instructions on the pesticide container label and if the farmer empties or cleans each pesticide container in accordance with the provisions of R 299.9207.

(4) Except as provided in subrule (5) of this rule, a sample of waste or a sample of water, soil, or air that is collected for the sole purpose of testing to determine its characteristics or composition is not subject to part 111 of the act and these rules if 1 of the following provisions is met:

(a) The sample is being transported to a laboratory for the purpose of testing.

(b) The sample is being transported back to the sample collector after testing.

(c) The sample is being stored by the sample collector before transport to a laboratory for testing.

(d) The sample is being stored in a laboratory before testing.

(e) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.

(f) The sample is being stored temporarily in the laboratory after testing for a specific purpose, such as until conclusion of a court case or enforcement action where further testing of the sample might be necessary.

(5) To qualify for the exemption specified in subrule (4) of this rule, a sample collector that ships samples to a laboratory and a laboratory that returns samples to a sample collector shall comply with DOT, United States postal service, or any other applicable shipping requirements. The sample collector shall only ship a volume that is necessary for testing and analysis and, if the sample collector determines that DOT, United States postal service, or other shipping requirements do not apply to the shipment of the sample, the sample collector shall package the sample so that it does not leak, spill, or vaporize from its packaging and assure that all of the following information accompanies the sample:

(a) The sample collector's name, mailing address, and telephone number.

(b) The laboratory's name, mailing address, and telephone number.

(c) The quantity of the sample.

protect human health and the environment or deny the petition.

(c) If the waste is treated, stored, or disposed of as part of closure or partial closure of a treatment, storage, or disposal facility or if the waste is contaminated soil deemed hazardous under R 299.9203(1) or R 299.9214 due to its mixture with a hazardous waste, petition the director to exclude the waste at the particular facility from regulation under these rules. The petition shall contain that information specified in 40 C.F.R. SS260.20(b) and 260.22. After receiving a complete petition under subrule (3) of this rule, the director shall do all of the following:

(i) Make a tentative decision to grant or deny the petition based on the criteria specified in 40 C.F.R. S260.22.

(ii) Public notice the tentative decision and provide 30 days for public comment.

(iii) After evaluating all public comments, make a final decision on the petition. The director shall grant the petition if the criteria specified in 40 C.F.R. S260.22 are met.

(2) Noncompliance with any conditions imposed under subrule (1) of this rule or any change of constituents, physical state, conditions of the generating process, or other variation which would increase the hazardous characteristics of the waste is a basis for the director to amend or revoke the delisting under act 306.

(3) Wastes for which petitions are under consideration shall be managed as required by these rules until such time that a redesignation is granted.

(4) The provisions of 40 C.F.R. SS260.20, 260.22, 260.31, and 261.11(a)(3) are adopted by reference in R 299.11003, with the exception that the word "director" shall replace the word "administrator."

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989.

R 299.9212 Characteristics of hazardous waste.

Rule 212. (1) A waste exhibits the characteristic of ignitability and is identified by the hazardous waste number D001 if a representative sample of the waste has any of the following properties:

(a) It is a liquid, other than an aqueous solution produced by a kraft pulp or paper mill that contains less than 24% alcohol by volume or an aqueous solution that contains less than 24% alcohol, by volume, as defined by section 211.117(a)(5) to (7) of the Internal Revenue Code, 27 U.S.C. S211.117(a)(5) to (7), including distilled spirits, wine, and malt beverages, and has a flash point less than 60 degrees Centigrade (140 degrees Fahrenheit),

as determined by any of the following test methods:

(i) A Pensky-Martens closed cup tester using the test method specified in ASTM standard D-93-79 or D-93-80, both of which are adopted by reference in R 299.11001.

(ii) A setaflash closed cup tester using the test method specified in ASTM standard D-3278-78, which is adopted by reference in R 299.11001.

(iii) An equivalent test method approved by the director, or his or her designee, pursuant to procedures set forth in the provisions of 40 C.F.R. SS260.20 and 260.21, which are adopted by reference in R 299.11003.

(b) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

(c) It is an ignitable compressed gas as defined in the provisions of 49 C.F.R. S173.115, which is adopted by reference in R 299.11004, and as

determined by the test methods described in the provisions of 49 C.F.R. S173.115 or equivalent test methods approved by the director pursuant to the provisions of 40 C.F.R. SS260.20 and 260.21.

(d) It is an oxidizer as defined in the provisions of 49 C.F.R. S173.127, which is adopted by reference in R 299.11004.

(2) A waste exhibits the characteristic of corrosivity and is identified by the hazardous waste number D002 if a representative sample of the waste has either of the following properties:

(a) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using method 9040 in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods;" which is adopted by reference in R 299.11005.

(b) It is a liquid and corrodes steel (SAE 1020) at a rate of more than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees Centigrade (130 degrees Fahrenheit) as determined by the test method specified in the national association of corrosion engineers (NACE) standard TM-01-69, as standardized in method 5.3 of the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," which is adopted by reference in R 299.11005.

(3) A waste exhibits the characteristic of reactivity and is identified by the hazardous waste number D003 if a representative sample of the waste has any of the following properties:

(a) It is normally unstable and readily undergoes violent change without detonating.

(b) It reacts violently with water.

(c) It forms potentially explosive mixtures with water.

(d) When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.

(e) It is a cyanide or sulfide-bearing waste that, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.

(f) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(g) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(h) It is a forbidden explosive as defined in the provisions of 49 C.F.R. S173.54, or it meets the definition of a class 1/division 1.1, 1.2, or 1.3 explosive as defined in the provisions of 49 C.F.R. S173.50, which are adopted by reference in R 299.11004.

(4) A waste exhibits the toxicity characteristic if, using the toxicity characteristic leaching procedure, test Method 1311 in the publication entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,"

which is adopted by reference in R 299.11005, the extract from a representative

sample of the waste contains any of the contaminants listed by the administrator

or the director and identified in table 201a of these rules at a concentration

equal to or greater than the respective values given in the tables. If the waste contains less than 0.5% filterable solids, then the waste itself, after filtering using the methodology outlined in method 1311, is considered to be the

extract for the purposes of this rule.

(5) A waste exhibits the characteristic of severe toxicity if the waste contains 1 part per million or more of a severely toxic substance listed in table 202.

(6) A hazardous waste that is identified by a characteristic in this rule shall be assigned every hazardous waste number that is applicable. The

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hazardous waste number or numbers shall be used in complying with the notification, recordkeeping, and reporting requirements of these rules. The hazardous waste numbers are as follows:

(a) For wastes determined to be hazardous pursuant to the provisions of subrules (4) and (5) of this rule, the hazardous waste number listed in table 201a or table 202 of these rules.

(b) For a waste that exhibits the characteristic of ignitability, the hazardous waste number D001.

(c) For a waste that exhibits the characteristic of corrosivity, the hazardous waste number D002.

(d) For a waste that exhibits the characteristic of reactivity, the hazardous waste number D003.

(7) For the purposes of this rule, the director, or his or her designee, will consider a sample that is obtained using any of the applicable sampling methods specified in the provisions of 40 C.F.R. part 261, appendix I, which is adopted by reference in R 299.11003, to be a representative sample.

(8) The following test methods shall be used:

(a) For aflatoxin, the test methods set forth in subsection 26, natural poisons, of the publication entitled "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th edition, 1980, which is adopted by reference in R 299.11006.

(b) For chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans in chemical wastes, including still bottoms, filter aids, sludges, spent carbon, and reactor residues, and in soil, EPA method 8280, which is contained in the provisions of 40 C.F.R. part 261, appendix X, and which is adopted by reference in R 299.11003.

(c) Alternate procedures as approved by the director or his or her designee.

(9) The provisions of 40 C.F.R. ??260.20 and 260.21 are adopted by reference in R 299.11003.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9213 Lists of hazardous wastes from nonspecific and specific sources.

Rule 213. (1) The following wastes are hazardous wastes unless excluded pursuant to the provisions R 299.9211:

(a) Wastes from nonspecific sources listed by the administrator and identified in table 203a of these rules.

(b) Wastes from nonspecific sources listed by the director and identified in table 203b of these rules.

(c) Wastes from specific sources listed by the administrator and identified in table 204a of these rules.

(d) Wastes from specific sources listed by the director and identified in table 204b of these rules.

(2) Each hazardous waste that is listed in subrule (1) of this rule is assigned a hazardous waste number which precedes the name of the waste on the table in which it is listed. The number shall be used in complying with the notification requirements and the recordkeeping and reporting requirements of these rules.

(3) The EPA hazardous waste numbers F020, F021, F022, F023, F026, and F027 are subject to the exclusion limits for acutely hazardous wastes established in R 299.9205.

(4) For the purposes of the EPA hazardous waste numbers F037 and F038 listings, aggressive biological treatment units are defined as those units that employ 1 of the following 4 treatment methods:

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- (a) Activated sludge.
- (b) Trickling filter.
- (c) Rotating biological contactor for the continuous accelerated biological oxidation of wastewaters.

(d) High-rate aeration. High-rate aeration is a system of surface impoundments or tanks in which intense mechanical aeration is used to completely mix the wastes and enhance biological activity. High-rate aeration systems shall be composed of units that employ a minimum of 6 horsepower per million gallons of treatment volume and either the hydraulic retention time of the unit is no longer than 5 days, or the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is hazardous waste by the toxicity characteristic.

(5) Generators and facility owners and operators shall demonstrate that their sludges are not subject to being listed as F037 or F038, or both, wastes pursuant to the provisions of subrule (4) of this rule. Generators and facility owners and operators shall maintain, in their operating or other on-site records, documents and data sufficient to demonstrate that the unit is an aggressive biological treatment unit as defined in subrule (4) of this rule and that the sludges sought to be exempted from the definitions of F037 or F038, or both, wastes were actually generated in the aggressive biological treatment unit.

(6) For the purposes of the EPA hazardous waste number F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(7) For the purposes of the EPA hazardous waste number F038 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement, and floats are considered to be generated at the moment they are formed in the top of the unit.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994.

R 299.9214 Discarded commercial chemical products, off-specification species, containers, container residues, and spill residues as hazardous wastes.

Rule 214. (1) The following materials or items are hazardous wastes when they are discarded or intended to be discarded as described in R 299.9202(1)(a), when they are burned for energy recovery instead of their original intended use, when they are used to produce fuels instead of their intended use, when they are applied to the land instead of their intended use, or when they are contained in products that are applied to the land instead of their original intended use:

(a) Any commercial chemical product or manufacturing chemical intermediate having the generic name in tables 205a, 205b, and 205c of these rules.

(b) Any off-specification commercial chemical product or manufacturing intermediate which, if it met specifications, would have the generic name listed in tables 205a, 205b, and 205c of these rules.

(c) Any residue that remains in a container or in an inner liner which is removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic names listed in tables 205a, 205b, and 205c of these rules, unless the container is empty as defined in R 299.9207.

(d) Any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into any water or on any land of any commercial chemical product, a manufacturing chemical intermediate having

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the generic name listed in tables 205a, 205b, and 205c of these rules, any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into any water or on any land of any off-specification chemical product, and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in tables 205a, 205b, and 205c of these rules.

(2) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed by the administrator and identified in table 205a are acutely hazardous wastes (H) and are subject to the small quantity exclusion defined in R 299.9205.

(3) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed by the administrator and identified in table 205b are toxic wastes (T) and are subject to the small quantity exclusion defined in R 299.9205.

(4) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products listed in table 205c of these rules have been determined to be hazardous by the director, are identified as toxic wastes (T), and are subject to the small quantity exclusion defined in R 299.9205(1).

(5) As used in subrule (1) of this rule, the phrases "commercial chemical product," "manufacturing chemical intermediate," "off-specification commercial chemical product," and "manufacturing chemical intermediate" refer to materials that are manufactured or formulated for commercial or manufacturing use. The phrases do not refer to materials, such as manufacturing process wastes, that contain any of the substances listed in table 205a, 205b, or 205c of these rules.

(6) Each hazardous waste listed in subrule (1) of this rule is assigned the hazardous waste number in table 205a, 205b, or 205c of these rules that corresponds to the constituent which caused the waste to be hazardous. With regard to a mixture of hazardous wastes, a number shall be assigned in the following priority order based upon the wastes or constituents present:

(a) Acutely hazardous, from table 205a.

(b) Toxic, from table 205b.

(c) Toxic, from table 205c of these rules. If the constituents are listed in the same table, the number assigned shall correspond to the constituents present in the greatest amount on a weight basis.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1991 MR 10, Eff. Nov. 14, 1991; 1996 MR 9, Eff. Oct. 16, 1996.

R 299.9215 Petitions for equivalent testing or analytical methods.

Rule 215. (1) Any person seeking to add a testing or analytical method to these rules may petition the director for a rules change under this rule. To be successful, the person shall demonstrate, to the satisfaction of the director, that the proposed method is equal to or superior to the corresponding method prescribed in the provisions of 40 C.F.R. part 261, 264, or 265 of these rules in terms of its sensitivity, accuracy, and precision.

(2) Each petition under this rule shall contain that information required by the provisions of 40 C.F.R. SS260.20(b) and 260.21(b).

(3) After receiving a petition for an equivalent method, the director, or his or her designee, shall, within 120 days of receiving the petition, request any additional information on the proposed method which he or she may reasonably require to evaluate the method. If the petition is granted, the director shall initiate rule change procedures under act 306.

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(2) The provisions of R 299.9205(5) shall be used to determine the applicability of the requirements of this part that are dependent on calculations of the quantity of hazardous waste generated each calendar month.

(3) A generator who treats, stores, or disposes of hazardous waste on-site shall comply with all of the following requirements with respect to that waste:

(a) The provisions of R 299.9302, R 299.9303, R 299.9306, R 299.9307(1) and (5), and R 299.9308(4).

(b) The applicable requirements of parts 5, 6, 7, and 8 of these rules for the treatment, storage, and disposal.

(c) The provisions of R 299.9204(3)(b), if applicable.

(4) Any person who imports hazardous waste into the United States shall comply with the standards in this part that are applicable to generators.

(5) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility shall comply with the generator standards established in this part.

(6) In addition to complying with the provisions of this part, a generator who uses his or her own vehicle to transport hazardous waste shall comply with the applicable requirements of part 4 of these rules.

(7) Any person who exports or imports federal hazardous waste subject to the manifesting requirements of part 3 of these rules or subject to the universal waste provisions of R 299.9228, to or from the countries listed in 40 C.F.R. §262.58(a)(1) for the purpose of recovery shall comply with the provisions of R 299.9312.

(8) Persons responding to an explosives or munitions emergency in accordance with R 299.9503(2) are not required to comply with the standards in this part.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9302 Hazardous waste determination and level of management.

Rule 302. (1) A person who generates a waste as defined in R 299.9202 shall determine if that waste is a hazardous waste using the following method:

(a) Determine if the waste is excluded from regulation pursuant to the provisions of R 299.9204(1) or (2). If the waste is not excluded, the generator shall determine if the waste is listed as hazardous pursuant to the provisions of R 299.9213 and R 299.9214.

(b) For the purposes of complying with the provisions of 40 C.F.R. part 268, or if the waste is not listed as a hazardous waste, the generator shall determine if the waste meets 1 of the characteristics of hazardous waste pursuant to the provisions of R 299.9212 by doing either of the following:

(i) Testing the waste according to the methods set forth in the provisions of R 299.9212 or according to an equivalent method approved by the director pursuant to the provisions of R 299.9215.

(ii) Applying knowledge of the hazardous characteristics of the waste in light of the materials or processes used.

(2) If the waste is determined to be hazardous, the generator shall refer to parts 2 to 6 and 8 of these rules for possible exclusions or restrictions that pertain to the management of his or her specific waste.

(3) In cases where the general character of a waste changes due to changes in the materials or processes involved in its generation, the evaluation pursuant to the provisions of subrule (1) of this rule shall be repeated immediately by the generator.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988;
1994 MR 6, Eff. June 21, 1994.

R 299.9303 United States EPA identification numbers.

Rule 303. (1) A generator shall not treat or store, dispose of, or transport or offer for transportation, hazardous waste without having received

an EPA identification number from the regional administrator or the regional administrator's designee.

(2) A generator who has not received an EPA identification number may obtain one by applying to the regional administrator or the regional administrator's designee. Upon receiving the request, the administrator shall assign an EPA identification number to the generator.

(3) A generator shall not offer his or her hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

(4) Applications for EPA identification numbers shall be made on state form EQP5150 and signed in accordance with the provisions of 40 C.F.R. SS270.11(a)(1)-(3).

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996;
1998 MR 9, Eff. Sep. 21, 1998.

R 299.9304 Manifest requirements.

Rule 304. (1) A hazardous waste generator who transports, or offers for transportation, a hazardous waste for off-site treatment, storage, or disposal shall do all of the following:

(a) Prepare a manifest before transporting the waste off-site.

(b) Designate on the manifest 1 facility that is licensed to handle the waste described on the manifest. A generator may also designate on the manifest 1 alternate facility that is licensed to handle his or her waste if an emergency prevents delivery of the waste to the primary designated facility.

(c) Use a transporter or be a transporter, if a generator transports his or her own hazardous waste, who is registered and permitted in accordance with act 138 pursuant to the requirements of part 4 of these rules.

(d) If the transporter is unable to deliver the hazardous waste to the designated facility, the generator shall either designate another facility or instruct the transporter to return the waste. For a total or partial rejected shipment, the generator shall comply with the subrule (7) of this rule.

(2) Except as otherwise provided by subrule (3) of this rule, the generator shall use a manifest form which is approved by the director and which contains all of the following information:

(a) A manifest document number.

(b) The generator's name, mailing address, telephone number, and EPA identification number.

(c) The name and EPA identification number of each transporter.

(d) The name, address, and EPA identification number of the designated facility and an alternate facility, if any.

(e) The description of the waste required by regulations of the DOT in the provisions of 49 C.F.R. §§172.101, 172.202, and 172.203, which are adopted by reference in R 299.11004.

(f) The total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle.

surface water or groundwater, then the generator shall immediately notify the department's pollution emergency alerting system - telephone number 800-292-4706. For releases that could threaten human health outside the individual site of generation and spills that have reached surface waters, the generator shall also immediately notify the national response center at its 24-hour, toll-free number - 800-424-8802. The notifications shall include all of the following information:

- (A) The name and telephone number of the person who is reporting the incident.
 - (B) The name, address, telephone number, and EPA identification number of the generator.
 - (C) The date, time, and type of incident.
 - (D) The name and quantity of the material or materials involved and released.
 - (E) The extent of injuries, if any.
 - (F) The estimated quantity and disposition of recovered materials that resulted from the incident, if any.
 - (G) An assessment of actual or potential hazards to human health or the environment.
 - (H) The immediate response action taken.
 - (j) The generator ensures that the area where the waste is accumulated is protected from weather, fire, physical damage, and vandals.
 - (k) The generator ensures that hazardous waste accumulation is conducted so hazardous waste or hazardous waste constituents cannot escape by gravity into the soil, directly or indirectly, into surface or groundwaters, or into drains or sewers and so that fugitive emissions are not in violation of the provisions of part 55 of the act.
- (5) A generator who generates more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month and who must transport his or her waste, or offer his or her waste for transportation, over a distance of 200 miles or more for off-site treatment, storage, or disposal may accumulate hazardous waste on-site for 270 days or less without an operating license or without being an existing facility pursuant to the provisions of R 299.9502, if he or she complies with the requirements of subrule (4) of this rule.
- (6) A generator who generates more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month and who accumulates hazardous waste in quantities of more than 6,000 kilograms or accumulates hazardous waste for more than 180 days, or for more than 270 days if he or she must transport the waste, or offer the waste for transportation, over a distance of 200 miles or more, is an operator of a storage facility and is subject to the requirements of parts 5 and 6 of these rules, unless he or she has been granted an extension to the 180 day or, if applicable, 270-day period. The director or his or her designee may grant an extension if hazardous waste must remain on-site for more than 180 days or 270 days, if applicable, due to unforeseen, temporary, and uncontrollable circumstances. The director or his or her designee may grant an extension of up to 30 days on a case-by-case basis.
- (7) The provisions of 40 C.F.R. §§264.175 and 265.16 and part 265, subparts C, D, I, and J, are adopted by reference in R 299.11003. For purposes of the adoption of 40 C.F.R. §265.56(j), the word "director" shall replace the words "regional administrator."

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9307 Generator recordkeeping.

Rule 307. (1) A generator shall keep records of any test results, waste analyses, or other determinations made in accordance with R 299.9302 for not less than 3 years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(2) A generator who is requested by the director to submit evaluation results shall provide the required information within 30 days after receipt of the request.

The records shall include all of the following information:

(a) The type of waste and the source or process from which it was produced.
(b) The chemical composition of the waste and the anticipated fluctuations in its chemical composition.

(c) If tests were conducted in the evaluation, all of the following information shall be included:

(i) The sampling procedure and the reasons for determining that the sample is representative of the waste.

(ii) The results of all tests conducted.

(iii) The accuracy and precision of any tests conducted.

(3) A generator shall keep a copy of each manifest signed in accordance with R 299.9304(4) for 3 years or until he or she receives a signed copy from the designated facility which received the waste. This signed copy shall be retained

as a record for not less than 3 years from the date the waste was accepted by the initial transporter.

(4) A generator shall keep a copy of each biennial report, exception report, or other report required by the director, or his or her designee, for a period of not less than 3 years from the due date of the report.

(5) A generator shall keep the documentation required pursuant to the provisions of R 299.9503(1)(i)(ix) for not less than 3 years from the date that the waste was treated.

(6) The periods of retention referred to in this rule are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director.

(7) A generator who generates more than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month is exempt from the recordkeeping requirements of subrules (2) and (4) of this rule.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9308 Generator reporting.

Rule 308. (1) A generator of more than 1,000 kilograms who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States shall prepare and submit a single copy of a biennial report to the director or the director's designee by March 1 of each even numbered year. The biennial report shall be submitted on a form and in a format specified by the director or the director's designee. The report shall cover generator activities during the previous calendar year and shall include all of the information specified in 40 C.F.R. §262.41(a)(1) to (8).

(2) Any generator of more than 1,000 kilograms who treats, stores, or disposes of hazardous waste on-site shall submit a biennial report covering those wastes in accordance with parts 5 and 6 of these rules. Reporting for exports of hazardous waste is not required on the biennial report form. A separate annual report requirement is set forth in the

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400 Colleges of: Agriculture and Life Sciences, Arts and Sciences, Medicine, and Engineering and Mathematics; and Schools of: Nursing, Allied Health Sciences, and Natural Resources.

(2) Each University shall have the right to change its respective departments or the on-site location of its hazardous waste accumulation areas listed in Table 1 of this section upon written notice to the Regional Administrator for EPA-Region I and the appropriate state agency. Such written notice will be provided at least ten days prior to the effective date of any such changes.

(k) Generators in the Commonwealth of Massachusetts may comply with the State regulations regarding Class A recyclable materials in 310 C.M.R. 30.200, when authorized by the EPA under 40 CFR part 271, with respect to those recyclable materials and matters covered by the authorization, instead of complying with the hazardous waste accumulation requirements of §262.34, the reporting requirements of §262.41, the storage facility operator requirements of 40 CFR parts 264 and 265 and the permitting requirements of 40 CFR part 270. Such generators must also comply with any other applicable requirements, including any applicable authorized State regulations governing hazardous wastes not being recycled and any applicable Federal requirements which are being directly implemented by the EPA within Massachusetts pursuant to the Hazardous and Solid Waste Amendments of 1984.

Note 1:

The provisions of §262.34 are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of §262.34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

Note 2:

A generator who treats, stores, or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in 40 CFR parts 264, 265, 266, 268, and 270.

[45 FR 33142, May 19, 1980, as amended at 45 FR 86970, Dec. 31, 1980; 47 FR 1251, Jan. 11, 1982; 48 FR 14294, Apr. 1, 1983; 53 FR 27164, July 19, 1988; 56 FR 3877, Jan. 31, 1991; 60 FR 25541, May 11, 1995; 61 FR 16309, Apr. 12, 1996; 62 FR 6651, Feb. 12, 1997; 64 FR 52392, Sept. 28, 1999; 69 FR 11813, Mar. 12, 2004]

§ 262.11 Hazardous waste determination.

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A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:

(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4.

(b) He must then determine if the waste is listed as a hazardous waste in subpart D of 40 CFR part 261.

Note:

Even if the waste is listed, the generator still has an opportunity under 40 CFR 260.22 to demonstrate to the Administrator that the waste from his particular facility or operation is not a hazardous waste.

(c) For purposes of compliance with 40 CFR part 268, or if the waste is not listed in subpart D of 40 CFR part 261, the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either:

(1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or

(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

(d) If the waste is determined to be hazardous, the generator must refer to parts 261, 264, 265, 266, 268, and 273 of this chapter for possible exclusions or restrictions pertaining to management of the specific waste.

[45 FR 33142, May 19, 1980, as amended at 45 FR 76624, Nov. 19, 1980; 51 FR 40637, Nov. 7, 1986; 55 FR 22684, June 1, 1990; 56 FR 3877, Jan. 31, 1991; 60 FR 25541, May 11, 1995]

§ 262.12 EPA identification numbers.



(a) A generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Administrator.

(b) A generator who has not received an EPA identification number may obtain one by applying to the Administrator using EPA form 8700-12. Upon receiving the request the Administrator will assign an EPA identification number to the generator.

(c) A generator must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

certification that a facility that is permitted (or operating under interim status) under part 270 of this chapter to receive these wastes is not available within 200 miles of the generating facility; and

(k) If hazardous wastes must remain on-site at a Performance Track member facility for longer than 180 days (or 270 days, if applicable) due to unforeseen, temporary, and uncontrollable circumstances, an extension to the extended accumulation time period of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis.

(1) If a generator who is a member of the Performance Track Program withdraws from the Performance Track Program, or if the Regional Administrator terminates a generator's membership, the generator must return to compliance with all otherwise applicable hazardous waste regulations as soon as possible, but no later than six months after the date of withdrawal or termination.

[47 FR 1251, Jan. 11, 1982, as amended at 48 FR 14294, Apr. 1, 1983; 49 FR 49571, Dec. 20, 1984; 51 FR 10175, Mar. 24, 1986; 51 FR 25472, July 14, 1986; 55 FR 22684, June 1, 1990; 55 FR 50483, Dec. 6, 1990; 56 FR 3877, Jan. 31, 1991; 56 FR 30195, July 1, 1991; 57 FR 37264, Aug. 18, 1992; 59 FR 62926, Dec. 6, 1994; 61 FR 4911, Feb. 9, 1996; 61 FR 59950, Nov. 25, 1996; 64 FR 3388, Jan. 21, 1999; 64 FR 25414, May 11, 1999; 64 FR 56471, Oct. 20, 1999; 65 FR 12397, Mar. 8, 2000; 69 FR 21753, Apr. 22, 2004]

Subpart D—Recordkeeping and Reporting

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§ 262.40 Recordkeeping.

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(a) A generator must keep a copy of each manifest signed in accordance with §262.23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.

(c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with §262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(d) The periods or retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

[45 FR 33142, May 19, 1980, as amended at 48 FR 3981, Jan. 28, 1983]

ATTACHMENT B
DETAILED REMEDIATION WASTE EVALUATION

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Determination on Whether Remediation Waste from the Former Drum Storage Area (DSA) is Hazardous under Resource Conservation and Recovery Act (RCRA) Regulations Former Peregrine (US) Inc. Coldwater Road Facility - Genesee Township, Michigan

B.1 Part 111, Rule 302(1)(a) and 40 CFR 262.11 (a)

The waste is not excluded from regulation under R299.9204(1) or (2), or 40 CFR 261.4. Therefore, available documentation was evaluated to determine whether the waste was listed as hazardous.

B.2 Part 111, Rule 302(1)(a) and 40 CFR 262.11 (b)

B.2.1 Applicability of LDRs

A memorandum, dated October 14, 1998, from Mr. Timothy Fields, Jr. (Acting Assistant Administrator for Solid Waste and Emergency Response) to the RCRA/CERCLA Senior Policy Managers states the following concerning the determination of when contamination is caused by listed waste:

"Where a facility owner/operator makes a good faith effort to determine if a material is a listed hazardous waste but cannot make such a determination because documentation regarding a source of contamination, contaminant, or waste is unavailable or inconclusive, EPA has stated that one may assume the source, contaminant or waste is not listed hazardous waste and, therefore, provided the material in question does not exhibit a characteristic of hazardous waste, RCRA requirements do not apply."

This approach was also expressed in the Proposed National Oil and Hazardous Substances Pollution Contingency Plan (NCP) preamble (53 FR 51444, December 21, 1988). It notes that it is often necessary to know the source of a waste (or contaminant) to determine whether a waste is a listed hazardous waste under RCRA and also notes that, "at many CERCLA sites no information exists on the source of the wastes." The proposed NCP preamble recommends that the lead agency use available site information such as manifests, storage records and vouchers, in an effort to ascertain the sources of wastes or contaminants, but that when this documentation is not available or inconclusive the lead agency may assume that the wastes (or contaminants) are not listed RCRA hazardous wastes. This approach was confirmed in the final NCP preamble (55 FR 8758, March 13, 1990).

B.2.2 Historical Operations

The Former Peregrine (US) Inc. Site land had originally been purchased by GM in 1951 from several private properties. GM sold the Site to Peregrine (US) Inc. in December 1996. Peregrine (US) Inc. ceased operations in 1998 and REALM re-acquired the property in August 1999.

The former DSA consists of a concrete pad approximately 120 x 50 feet (6,000 square feet) in size. Two sumps approximately 8 feet deep were located near the southwest corner of the former DSA pad. The sumps were backfilled during plant demolition. The former DSA pad was

- REALM has no evidence that the sump contained TCE. Analytical results of the sludge removed from the sump during closure activities was classified as D005, D007, D008, and D009 waste.
- REALM has no indication that any release occurred from the former DSA. The sump was observed to be in good condition during cleaning activities, as documented in the "Final Closure Certification Documentation" (Weston, June 1999).

Therefore, historical sample results were evaluated and waste characterization sampling was conducted to determine whether the waste was characteristically hazardous.

B.3 PART 111, RULE 302(1)(b)(ii), and 40 CFR 262.11 (c)(2)

As discussed in Section B.2.3, numerous samples have been collected from the area and analyzed for total TCE, and all results have been below MDEQ Generic Industrial Direct Contact Criteria and 20x TCLP limits. If the total waste concentration is less than 20 times the TCLP regulatory level, the waste cannot be characterized hazardous waste (53 FR 51444, December 21, 1988). The only area not previously sampled was directly beneath the sump, because it was not possible to complete a soil boring through the concrete sump bottom. In addition, if a release had occurred from the sump, which was not considered likely because no evidence of a breach was observed during cleaning activities, this sample would provide "worst case" concentrations. Therefore, it was decided to collect samples for waste characterization from directly beneath the sump.

B.4 PART 111, RULE 302(1)(b)(i), and 40 CFR 262.11 (c)(1)

B.4.1 Work Plan, Former Drum Storage Area at the Former Peregrine, U.S., Inc. Property, Coldwater Road Facility, O'Brien & Gere, February 10, 2004 (February 2004 Work Plan)

The February 2004 Work Plan was submitted to MDEQ on February 10, 2004. The February 2004 Work Plan was approved by fax on February 27, 2004. The February 2004 Work Plan identified the following activities:

- Excavating soil from two adjacent areas, one surrounding the sumps approximately 40 x 25 x 20 ft deep and one north of the sumps approximately 30 x 15 x 12 ft deep;
- Staging the soil on-Site pending waste characterization for disposal; and
- Collecting verification samples from three locations on the floor and eight locations on the sidewalls of the excavation.

An excerpt from the February 2004 Work Plan is included in Attachment B.4. As identified in the February 2004 Work Plan, characterization sampling was performed to determine appropriate disposal. To minimize the amount of soil material to be staged pending characterization, it was decided to sample the material in situ.

B.4.2 Is the waste characteristically hazardous based on testing in accordance with R299.9212?

The sump was broken out and removed on March 30, 2004. The majority of the soil surrounding the sump was gray-brown clay. A representative sample of this material was collected. In addition, green-stained clay was observed in the northeast corner of the sump, black sand was observed in the northeast corner of the sump, and black/green stained clay was observed in the northwest corner of the sump. A sample was also collected of each of these three materials. The samples were analyzed for TCLP VOC/SVOC/metals; Total PCBs; and Reactivity, Corrosivity, and Ignitability (RCI). All samples identified that the material was non-regulated waste. All samples were non-detect for TCE at 10 µg/L, and the only chemical detected was barium in all samples at concentrations ranging from 260 to 780 µg/L, well below the TCLP limit of 100,000 µg/L. Characterization sample results for soil are presented in Attachment B.5.

B.5 Verification Sampling

Verification of soil remediation (VSR) samples were collected from the Drum Storage excavation in accordance with the MDEQ-approved February 2004 Work Plan. Soil samples were collected in accordance with the MDEQ Sampling Strategies and Statistics Training Materials (ST³) under Act 451, Part 201. A total of three floor and two sidewall samples combined with previous subsurface soil samples served as the required number of samples under the MDEQ ST³ document.

An initial VSR soil sample result from a sidewall location (DSA-North SW-1) indicated a concentration of TCE (400 ug/kg) above the MDEQ Generic Industrial Drinking Water Protection criterion. Therefore, additional soil was removed from this sidewall and a VSR sidewall sample (DSA-North SW-3) from the approximate same elevation and a VSR sample (DSA-North SW-4) below NASW-1 at the base of the sidewall was collected and analyzed for the presence of TCE. The results for this sampling indicated a detected concentration of TCE (470 ug/kg) at sample NASW-3. Therefore, this process was performed once again with additional soil removed from this sidewall. The results of this analysis indicated no detections of TCE in the two samples collected (DSA-North SW-5 at the approximate same elevation as DSA North SW-3 and at DSA North SW-6, at the base of the sidewall below DSA-North SW-5). Verification sample results are presented in Attachment B.6.

B.6 PART 121, Section 12103(1)

Once the excavation was open, water from a discharge line utility corridor seeped into the excavation. This water was removed on April 14, 2004. The excavation was allowed to remain open in an attempt to remove potentially impacted perched water. The excavation was checked daily to assess whether water was seeping into the excavation. On April 23, 2004 the excavation was checked for water and very little water was observed. Based on no appreciable amount of water collecting in the excavation over a period of ten days, REALM made a decision to terminate perched water recovery and backfill the excavation.

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ATTACHMENT B.1
EXCERPT FROM "CLOSURE PLAN AND POST-CLOSURE PLAN"
(OBG, AUGUST 1989)

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Settling Lagoon (by way of a trench) on one occasion in the early 1970s. It is shown on Figure 8.

2.03.05 Sludge Lakes

The five Sludge Lakes were used as wastewater settling lagoons at one time in the late 1960s. Wastewater was discharged to the Sludge Lakes from the waste treatment plant through a pipe. The Sludge Lakes numbered 1-5 are shown and in Figures 1 and 9. The lakes currently contain varying amounts of standing water surrounded by boggy areas contained within berms. These berms define the lake perimeters.

2.03.06 Area North of Sludge Lakes

The area north of the Sludge lakes (Figures 1 and 9) is suspected to have received waste resulting from breaks and overflows from the Sludge Lakes.

2.03.07 Drum Storage Area

Wastes handled at the Drum Storage area are generated by parts finishing and washing, maintenance cleaning, and paint dip operations. The major waste streams are:

<u>Waste Stream</u>	<u>Hazardous Waste Identification Numbers</u>
Spent 1,1,1-trichloroethane	F001
Spent xylene	F003
Spent paint thinner sludge	D001

Other wastes temporarily stored on a one-time basis include corrosive materials (D002), reactive materials (D003) and chromium wastes (D007).

A facility plan of the Drum Storage Area is included as Figure 10 (Drawing TF-34-4740 by The Chester Engineers). The area in which drums are stored is located outdoors and is surrounded by an 8-foot high fence. The fenced area has dimensions of 42 ft x 72 ft (3,024 sq. ft) and can store 648 55-gallon drums.

Secondary containment is provided by a 4-inch high concrete curb around the perimeter of the containment system. Vehicular access into the Drum Storage Area is over a ramp along the north side of the area. Drainage in the area flows toward the east, west, and south edges of the containment area, and then to a sump located in the southwest corner of the containment area. The sump has two chambers, each 6 ft x 6 ft x 8 ft deep. Any spilled or leaked materials, as well as precipitation, flow into the first chamber. The first chamber discharges into the second, then a submersible pump in the second chamber discharges the accumulated liquid to the on-site waste treatment plant. If necessary, accumulated liquid can be segregated from other plant wastewaters and treated at the treatment plant.

2.03.08 Decontamination Pits

The four Decontamination Pits are used to store contaminated equipment, such as pumps, tanks or flooring, after it is removed from the plant. The equipment is decontaminated by rinsing with natural precipitation or water, or by other cleaning methods as

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ATTACHMENT B.2
EXCERPT FROM "FINAL CLOSURE CERTIFICATION/DOCUMENTATION REPORT"
(WESTIN, JUNE 1999)

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The Drum Storage Area sump consisted of two chambers, each with dimensions of 6 feet by 6 feet by 8 feet deep. The chamber to the east contained approximately 10 cubic yards of gritty, oily sludge. The chamber to the west contained 2 feet of standing water with a trace of sludge present. The water was pumped directly to the WWTP by the existing pump.



The remaining sludge was sampled and analyzed. Analytical results indicated that the sludge was classified as D005, D007, D008, and D009 wastes. This sludge was then solidified, drummed and transported to the licensed Chemical Waste Management, Inc. hazardous waste disposal facility in Emelle, Alabama. The sumps were also triple-washed and scrubbed with detergent. Documentation of this off-site hazardous waste disposal at a licensed disposal facility is presented in Appendix A.

The existing pump and associated piping were also decontaminated and flushed with tap water. Samples of the final rinse water were obtained from the sumps (east and west sumps) of the Drum Storage Area, and from the rinsewater of the existing pump and associated piping (8-inch pipe, 4-inch pipe, and 3-inch pipe discharge) in accordance with the approved closure plan. Subsection 3.1 presents a summary of the verification sampling and analysis.

2.2 WASTE PILE PAD

A small amount of miscellaneous nonhazardous debris was removed from the pad prior to the pad cleaning. This debris was transported for disposal at the Richfield landfill in Genessee County, Michigan. The surface of the Waste Pile Pad was decontaminated by triple rinsing with high pressure water, and scrubbing with detergent, and a final rinse. Wastewater was collected within the concrete trench (sump), transferred to drums, and transported to and treated at the on-site WWTP. The water from the final rinse was sampled and analyzed in accordance with the approved Closure Plan. Subsection 3.2 presents a summary of the verification sampling and analysis.

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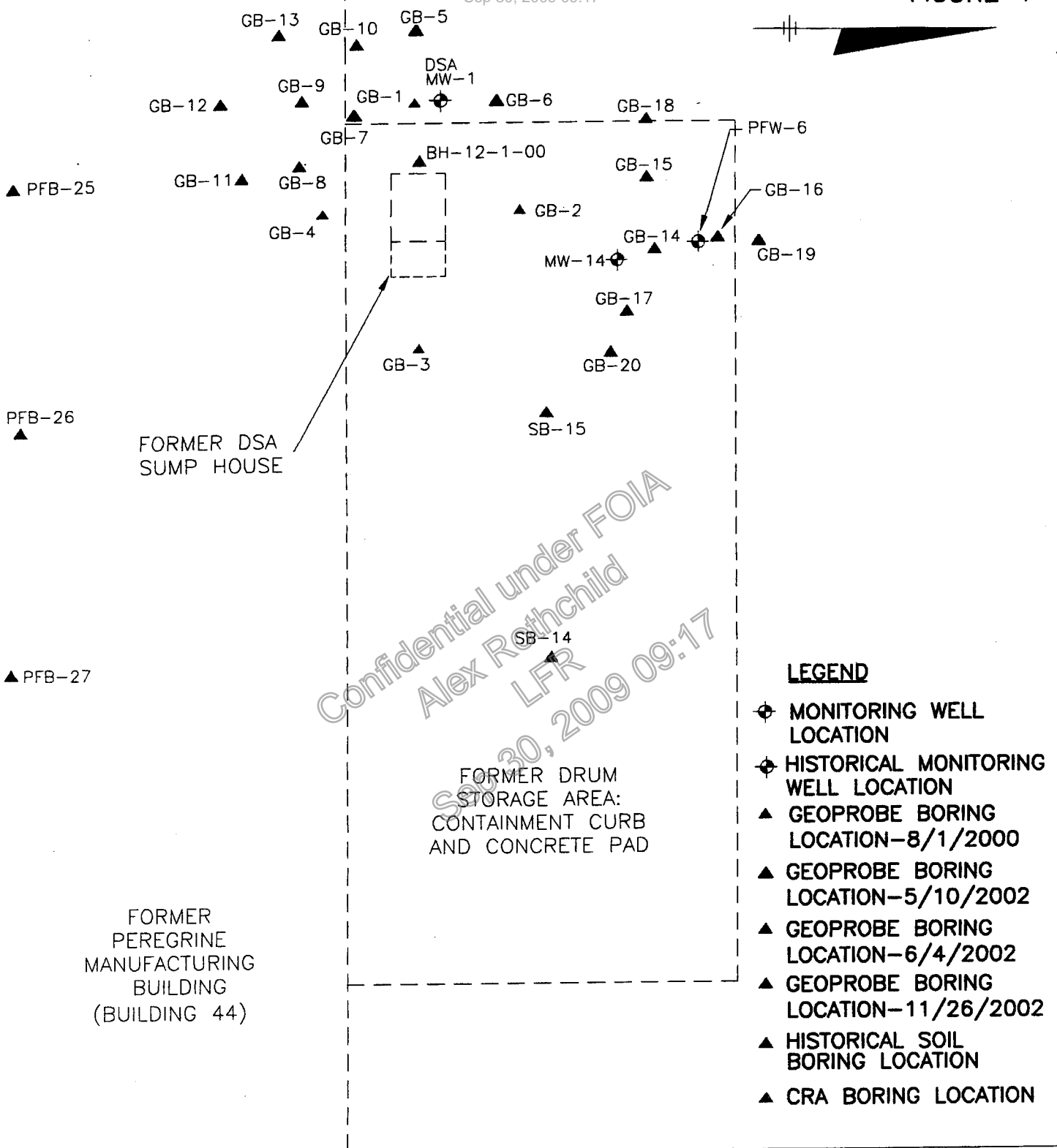
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ATTACHMENT B.3
DSA INVESTIGATION SAMPLE LOCATIONS AND SAMPLE RESULTS

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FIGURE 1



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LEGEND

- ⊕ MONITORING WELL LOCATION
- ⊕ HISTORICAL MONITORING WELL LOCATION
- ▲ GEOPROBE BORING LOCATION-8/1/2000
- ▲ GEOPROBE BORING LOCATION-5/10/2002
- ▲ GEOPROBE BORING LOCATION-6/4/2002
- ▲ GEOPROBE BORING LOCATION-11/26/2002
- ▲ HISTORICAL SOIL BORING LOCATION
- ▲ CRA BORING LOCATION

**SAMPLE LOCATION MAP
FORMER DRUM STORAGE AREA
COLDWATER ROAD FACILITY
FLINT, MICHIGAN**



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Table 1
Former Drum Storage Area
Soil Analytical Results - August 2000
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/Kg)

Sample Location	MDEQ Part 201 Generic Cleanup Criteria					Industrial Drinking Water Protection Criteria
	GB-1 (9-11)	GB-2 (2-11)	DUP (GB-2) (2-11)	GB-3 (9-11)	GB-4 (14-16)	
Date Collected	8/1/00	8/1/00	8/1/00	8/1/00	8/1/00	
Parameter						
Benzene	50 U	50 U	50 U	50 U	50 U	100
Bromobenzene	50 U	50 U	50 U	50 U	50 U	1,500
Bromo-chloromethane	50 U	50 U	50 U	50 U	50 U	NA
Bromo-dichloromethane	50 U	50 U	50 U	50 U	50 U	2,000 (W)
Bromofluoromethane	50 U	50 U	50 U	50 U	50 U	2,000 (W)
Bromomethane	50 U	50 U	50 U	50 U	50 U	580
n-Butylbenzene	50 U	50 U	50 U	50 U	50 U	4,600
sec-Butylbenzene	50 U	50 U	50 U	50 U	50 U	4,600
tert-Butylbenzene	50 U	50 U	50 U	50 U	50 U	4,600
Carbon tetrachloride	50 U	50 U	50 U	50 U	50 U	100
Chlorobenzene	50 U	50 U	50 U	50 U	50 U	2,000
Chloroethane	50 U	50 U	50 U	50 U	50 U	34,000
Chloroform	50 U	50 U	50 U	50 U	50 U	2,000 (W)
Chloromethane	50 U	50 U	50 U	50 U	50 U	22,000
Dibromochloromethane	50 U	50 U	50 U	50 U	50 U	2,000 (W)
1,2-Dibromo-1-chloropropane	50 U	50 U	50 U	50 U	50 U	4.0 (M)
1,2-Dibromomethane	50 U	50 U	50 U	50 U	50 U	NA
Dibromomethane	50 U	50 U	50 U	50 U	50 U	4,600
1,2-Dichlorobenzene	50 U	50 U	50 U	50 U	50 U	14,000
1,3-Dichlorobenzene	50 U	50 U	50 U	50 U	50 U	480
1,4-Dichlorobenzene	50 U	50 U	50 U	50 U	50 U	1,700
Dichlorodifluoromethane	50 U	50 U	50 U	50 U	50 U	270.0E+3
1,1-Dichloroethane	50 U	50 U	50 U	50 U	50 U	50,000
1,2-Dichloroethane	50 U	50 U	50 U	50 U	50 U	100
1,1-Dichloroethylene	50 U	50 U	50 U	50 U	50 U	140
cis-1,2-Dichloroethene	820	50 U	50 U	50 U	50 U	1,400
trans-1,2-Dichloroethene	50 U	50 U	50 U	50 U	50 U	2,000
1,2-Dichloropropane	50 U	50 U	50 U	50 U	50 U	100
1,3-Dichloropropane	50 U	50 U	50 U	50 U	50 U	1,300
2,2-Dichloropropane	50 U	50 U	50 U	50 U	50 U	NA
1,1-Dichloropropene	50 U	50 U	50 U	50 U	50 U	NA
cis-1,3-Dichloropropene	50 U	50 U	50 U	50 U	50 U	NA
Ethylbenzene	50 U	50 U	50 U	50 U	50 U	1,500
Hexachlorobutadiene	50 U	50 U	50 U	50 U	50 U	72,000
Isopropylbenzene	50 U	50 U	50 U	50 U	50 U	2.60E+05
p-Isopropyltoluene	50 U	50 U	50 U	50 U	50 U	NA
Methylene Chloride	300 U	300 U	300 U	300 U	300 U	100
Naphthalene	50 U	50 U	50 U	50 U	50 U	1.0E+05
n-Propylbenzene	50 U	50 U	50 U	50 U	50 U	4,600
Styrene	50 U	50 U	50 U	50 U	50 U	2,700
1,1,1,2-Tetrachloroethane	50 U	50 U	50 U	50 U	50 U	6,400
1,1,2,2-Tetrachloroethane	50 U	50 U	50 U	50 U	50 U	700
Tetrachloroethene	50 U	50 U	50 U	50 U	50 U	100
Toluene	50 U	50 U	50 U	50 U	50 U	16,000
1,2,3-Trichlorobenzene	50 U	50 U	50 U	50 U	50 U	NA
1,2,4-Trichlorobenzene	50 U	50 U	50 U	50 U	50 U	4,200
1,1,1-Trichloroethane	50 U	50 U	50 U	50 U	50 U	4,000
Trichloroethene	6720	50 U	50 U	50 U	50 U	100
Trichlorofluoromethane	50 U	50 U	50 U	50 U	50 U	1.50E+05
1,2,3-Trichloropropane	50 U	50 U	50 U	50 U	50 U	2,400
1,2,4-Trimethylbenzene	50 U	50 U	50 U	50 U	50 U	2,100
1,3,5-Trimethylbenzene	50 U	50 U	50 U	50 U	50 U	1,800
Vinyl Chloride	50 U	50 U	50 U	50 U	50 U	40
o-Xylene	50 U	50 U	50 U	50 U	50 U	5,600
m-Xylene	50 U	50 U	50 U	50 U	50 U	5,600
Acetone	500 U	500 U	500 U	500 U	500 U	42,000
2-Butanone (MEK)	500 U	500 U	500 U	500 U	500 U	7.60E+05
Carbon disulfide	500 U	500 U	500 U	500 U	500 U	46,000
2-Hexanone	500 U	500 U	500 U	500 U	500 U	58,000
4-Methyl-2-pentanone (MIBK)	500 U	500 U	500 U	500 U	500 U	1.00E+05

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Fire & Environmental Consulting Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "C" Value presented is a screening level based on the chemical-specific generic soil saturation concentration.
- 6) "M" Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- 7) "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- 8) "NA" indicates criteria not available.
- 9) Bold type indicates MDEQ Generic Industrial Drinking Water Protection Criterion exceedance.
- 10) "DUP" denotes duplicate sample.

Table 1

Former Drum Storage Area

Soil Analytical Results - August 2000

Metals by USEPA methods 6020, 7197, 7471M and Cyanide by USEPA Method 9010 (ug/Kg)

Sample Location	GP-1	GP-2	DUP (GP-2)	GP-3	GP-4	MDEQ Part 201 Generic Cleanup Criteria
Sample Depth	2' (9E11)	2' (9E11)	2' (9E11)	2' (9E11)	2' (9E11)	Industrial Drinking Water Protection Criteria
Date Collected	8/1/00	8/1/00	8/1/00	8/1/00	8/1/00	
Parameter						
Chromium VI	1000 U	1000 U	1000 U	1000 U	1000 U	30,000
Chromium III	11100 J	11900 J	12000 J	12500 J	11600 J	1.0E+9 (D)
Chromium (Total)	11100 J	11900 J	12000 J	12500 J	11600 J	1.0E+9 (D)
Lead	7,600	7,800	7,700	7,000	7,400	7.0E+05
Mercury	100 U	100 U	100 U	100 U	100 U	1,200
Cyanide	500 U	500 U	500 U	500 U	500 U	4,000 (P)

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Fire & Environmental Consulting Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected.
- 5) "J" denotes that the concentration should be considered approximate.
- 6) "P" Amenable or Method OIA-1677 analysis are used to quantify cyanide concentrations for compliance with all groundwater criteria.
- 7) "D" Calculated criterion exceeds 100%, hence it is reduced to 100% (i.e., 1.0E+9 ppb).
- 8) "DUP" denotes duplicate sample.

Table 2

**Former Drum Storage Area
Soil Analytical Results - May 2002
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/Kg)**

Sample Location	DSA MW-1	GE-5	GB-5	GE-6	DDR(GB-6)	GB-6	GB-7	GB-7	MDEQ Part 201 Generic Cleanup Criteria
	(24-25)	(14-15)	(19-20)	(14-15)	(14-15)	(19-20)	(14-15)	(19-20)	Industrial Drinking Water Protection Criteria
Date Collected	5/10/02	5/10/02	5/10/02	5/10/02	5/10/02	5/10/02	5/10/02	5/10/02	
Parameter									
Benzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
Bromobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1,500
Bromochloromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
Bromodichloromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000 (W)
Bromoform	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000 (W)
Bromomethane	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U	580
n-Butylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,600
sec-Butylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,600
tert-Butylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,600
Carbon tetrachloride	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
Chlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000
Chloroethane	60 UJ	60 UJ	60 UJ	60 UJ	60 UJ	60 UJ	60 UJ	60 UJ	34,000
Chloroform	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000 (W)
Chloromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	22,000
2-Chlorotoluene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
4-Chlorotoluene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
Dibromochloromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000 (W)
1,2-Dibromo-3-chloropropane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4.0 (M)
1,2-Dibromoethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
Dibromomethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,600
1,2-Dichlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	14,000
1,3-Dichlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	480
1,4-Dichlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1,700
Dichlorodifluoromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	270.0E+3
1,1-Dichloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	50,000
1,2-Dichloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
1,1-Dichloroethylene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	140
cis-1,2-Dichloroethene	60 U	60 U	60 U	60 U	60 U	60 U	300	60 U	1,400
trans-1,2-Dichloroethene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,000
1,2-Dichloropropane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
1,3-Dichloropropane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1,300
2,2-Dichloropropane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
1,1-Dichloropropene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
cis-1,3-Dichloropropene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
Ethylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1,500
Isopropylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2.60E+05
p-Isopropyltoluene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
Methylene Chloride	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U	100
Naphthalene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1.0E+05
n-Propylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,600
Styrene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,700
1,1,1,2-Tetrachloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	6,400
1,1,2,2-Tetrachloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	700
Tetrachloroethene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
Toluene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	16,000
1,2,3-Trichlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	NA
1,2,4-Trichlorobenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,200
1,1,1-Trichloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	4,000
1,1,2-Trichloroethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	100
Trichloroethene	60 U	60 U	60 U	60 U	60 U	60 U	1510	60 U	100
Trichlorofluoromethane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1.50E+05
1,2,3-Trichloropropane	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,400
1,2,4-Trimethylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	2,100
1,3,5-Trimethylbenzene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	1,800
Vinyl Chloride	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	40
o-Xylene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	5,600
p,m-Xylene	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	5,600
2-Butanone (MEK)	300 U	300 U	300 U	300 U	300 U	300 U	300 U	300 U	7.60E+05

Notes:

- Results and criteria are shown in parts per billion (ug/Kg).
- MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- "M" Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- "NA" indicates criteria not available.
- Bold type indicates MDEQ Generic Industrial Drinking Water Protection Criterion exceedance.
- DSA MW-1 is listed as MW-1 on the chain-of-custody document.
- "UJ" denotes the analyte reporting limit should be considered approximate.

Table 3

**Former Drum Storage Area
SPLP Analytical Results - May 2002
Trichloroethene SPLP by USEPA Method 8260B (ug/l)**

		MDEQ Part 201 Generic Cleanup Criterion
Sample Location	GH-7	Industrial Drinking
Sample Depth	(14'-15')	Water Criterion
Date Collected	5/10/02	
Parameter		
Trichloroethene	19	5 (A)

Notes:

- 1) Result and criterion are shown in parts per billion (ug/l).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criterion as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Sample analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "A" denotes the criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act No. 399 of the Public Acts of 1976.
- 5) Bold type indicates MDEQ Generic Industrial Drinking Water Criterion exceedence.

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Alex Rothchild
LFR
Sep 30, 2009 09:17

Table 4
Former Drum Storage Area
Ground Water Analytical Results - July 2002
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/L)

Sample Location	DSA MW-1	DUF (DSA MW-1)	MDEQ Part 201 Generic Cleanup Criteria
			Industrial Drinking Water Criteria
Date Collected	7/23/02	7/23/02	
Parameter			
Benzene	1 U	1 U	5 (A)
Bromobenzene	1 U	1 U	50
Bromochloromethane	1 U	1 U	NA
Bromodichloromethane	1 U	1 U	100 (A,W)
Bromoforn	1 U	1 U	100 (A,W)
Bromomethane	1 U	1 U	29
n-Butylbenzene	1 U	1 U	230
sec-Butylbenzene	1 U	1 U	230
tert-Butylbenzene	1 U	1 U	230
Carbon tetrachloride	1 U	1 U	5(A)
Chlorobenzene	1 U	1 U	100 (A)
Chloroethane	1 U	1 U	1,700
Chloroform	1 U	1 U	100 (A,W)
Chloromethane	1 U	1 U	1,100
1-Chloroethene	1 U	1 U	NA
1,2-Dichloroethene	1 U	1 U	NA
1,1-Dibromochloroethane	1 U	1 U	NA
1,1-Dibromo-1-chloropropane	1 U	1 U	100 (A,W)
Dibromomethane	1 U	1 U	230
1,2-Dichlorobenzene	1 U	1 U	600 (A)
1,4-Dichlorobenzene	1 U	1 U	19
1,2-Dichloroethane	1 U	1 U	75 (A)
Dichlorodifluoromethane	1 U	1 U	4,800
1,1-Dichloroethane	13	13	2,500
1,2-Dichloroethane	1 U	1 U	5 (A)
1,1-Dichloroethylene	3	3	7 (A)
1,1,2-Dichloroethane	650	800	70 (A)
trans-1,2-Dichloroethane	18	19	100 (A)
1,2-Dichloropropane	1 U	1 U	5 (A)
2,2-Dichloropropane	1 U	1 U	NA
1,1-Dichloropropane	1 U	1 U	NA
cis-1,3-Dichloropropene	1 U	1 U	NA
Ethylbenzene	1 U	1 U	74 (E)
Isopropylbenzene	1 U	1 U	2,300
Isopropyltoluene	1 U	1 U	NA
Methylene Chloride	5 U	5 U	5 (A)
Naphthalene	1 U	1 U	1,500
n-Propylbenzene	1 U	1 U	230
Styrene	1 U	1 U	100 (A)
1,1,1,2-Tetrachloroethane	1 U	1 U	320
1,1,1,2-Tetrachloroethane	1 U	1 U	35
Tetrachloroethene	1 U	1 U	5 (A)
Toluene	1 U	1 U	790 (E)
1,1,1-Trichloroethane	1 U	1 U	200 (A)
1,1,2-Trichloroethane	1 U	1 U	5.0(A)
Trichloroethene	1420 J	1830	5 (A)
Trichlorofluoromethane	1 U	1 U	7,300
1,2,3-Trichlorobenzene	1 U	1 U	NA
1,2,4-Trichlorobenzene	1 U	1 U	70(A)
1,2,3-Trichloropropane	1 U	1 U	120
1,2,4-Trimethylbenzene	1 U	1 U	63 (E)
1,3,5-Trimethylbenzene	1 U	1 U	72 (E)
Vinyl Chloride	1 U	1 U	2 (A)
o-Xylene	1 U	1 U	280 (E)
p-Xylene	1 U	1 U	280 (E)
2-Butanone (MEK)	50 U	50 U	38,000

Notes:

- Results and criteria are shown in parts per billion (ug/L).
- MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- "A" denotes the criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Michigan Safe Drinking Water Act.
- Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- "E" denotes criterion is the aesthetic drinking water value, as required by section 20120(1)(5).
- "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- "NA" indicates criteria not available.
- Bold type indicates MDEQ Generic Industrial Drinking Water Protection Criterion exceedence.
- DSA MW-1 is listed as DSP-1 on the chain-of-custody document.
- "J" denotes the analyte concentration should be considered approximate.

Table 5
Former Drum Storage Area
Soil Analytical Results - June 2002
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/Kg)

Sample Location	MDEQ Part 201 Generic Cleanup Criteria				Industrial Drinking Water Protection Criteria
	GB-8	GB-9	GB-10	DUP(GB-10)	
Sample Depth	(14'-15')	(14'-15')	(14'-15')	(14'-15')	
Date Collected	6/4/02	6/4/02	6/4/02	6/4/02	
Parameter					
Benzene	60 U	60 U	60 U	60 U	100
Bromobenzene	60 U	60 U	60 U	60 U	1,500
Bromochloromethane	60 U	60 U	60 U	60 U	NA
Bromodichloromethane	60 U	60 U	60 U	60 U	2,000 (W)
Bromoform	60 UJ	60 UJ	60 UJ	60 UJ	2,000 (W)
Bromomethane	300 U	300 U	300 U	300 U	580
n-Butylbenzene	60 U	60 U	60 U	60 U	4,600
sec-Butylbenzene	60 U	60 U	60 U	60 U	4,600
tert-Butylbenzene	60 U	60 U	60 U	60 U	4,600
2-Chlorotoluene	60 U	60 U	60 U	60 U	NA
4-Chlorotoluene	60 U	60 U	60 U	60 U	NA
Carbon tetrachloride	60 U	60 U	60 U	60 U	100
Chlorobenzene	60 U	60 U	60 U	60 U	2,000
Chloroethane	60 UJ	60 UJ	60 UJ	60 UJ	34,000
Chloroform	60 U	60 U	60 U	60 U	2,000 (W)
Chloromethane	60 U	60 U	60 U	60 U	22,000
Dibromochloromethane	60 U	60 U	60 U	60 U	2,000 (W)
1,2-Dibromo-3-chloropropane	60 UJ	60 UJ	60 UJ	60 UJ	4.0 (M)
1,2-Dibromoethane	60 U	60 U	60 U	60 U	NA
Dibromomethane	60 U	60 U	60 U	60 U	4,600
1,2-Dichlorobenzene	60 U	60 U	60 U	60 U	14,000
1,3-Dichlorobenzene	60 U	60 U	60 U	60 U	480
1,4-Dichlorobenzene	60 U	60 U	60 U	60 U	1,700
Dichlorodifluoromethane	60 U	60 U	60 U	60 U	270.0E+3
1,1-Dichloroethane	60 U	60 U	60 U	60 U	50,000
1,2-Dichloroethane	60 U	60 U	60 U	60 U	100
1,1-Dichloroethylene	60 U	60 U	60 U	60 U	140
cis-1,2-Dichloroethene	60 U	60 U	60 U	60 U	1,400
trans-1,2-Dichloroethene	60 U	60 U	60 U	60 U	2,000
1,2-Dichloropropane	60 U	60 U	60 U	60 U	100
1,3-Dichloropropane	60 U	60 U	60 U	60 U	1,300
2,2-Dichloropropane	60 U	60 U	60 U	60 U	NA
1,1-Dichloropropene	60 U	60 U	60 U	60 U	NA
cis-1,3-Dichloropropene	60 U	60 U	60 U	60 U	NA
Ethylbenzene	60 U	60 U	60 U	60 U	1,500
Isopropylbenzene	60 U	60 U	60 U	60 U	2.60E+05
p-Isopropyltoluene	60 U	60 U	60 U	60 U	NA
Methylene Chloride	300 U	300 U	300 U	300 U	100
Naphthalene	60 U	60 U	60 U	60 U	1.0E+05
n-Propylbenzene	60 U	60 U	60 U	60 U	4,600
Styrene	60 U	60 U	60 U	60 U	2,700
1,1,1,2-Tetrachloroethane	60 U	60 U	60 U	60 U	6,400
1,1,2,2-Tetrachloroethene	60 U	60 U	60 U	60 U	700
Tetrachloroethene	60 U	60 U	60 U	60 U	100
Toluene	60 U	60 U	60 U	60 U	16,000
1,2,3-Trichlorobenzene	60 U	60 U	60 U	60 U	NA
1,2,4-Trichlorobenzene	60 U	60 U	60 U	60 U	4,200
1,1,1-Trichloroethane	60 U	60 U	60 U	60 U	4,000
1,1,2-Trichloroethane	60 U	60 U	60 U	60 U	100
Trichloroethene	60 U	60 U	60 U	60 U	100
Trichlorofluoromethane	60 U	60 U	60 U	60 U	1.50E+05
1,2,3-Trichloropropane	60 U	60 U	60 U	60 U	2,400
1,2,4-Trimethylbenzene	60 U	60 U	60 U	60 U	2,100
1,3,5-Trimethylbenzene	60 U	60 U	60 U	60 U	1,800
Vinyl Chloride	60 U	60 U	60 U	60 U	40
o-Xylene	60 U	60 U	60 U	60 U	5,600
p,m-Xylene	60 U	60 U	60 U	60 U	5,600
2-Butanone (MEK)	300 U	300 U	300 U	300 U	7.60E+05

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "M" Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- 6) "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- 7) "NA" indicates criteria not available.
- 8) "UJ" denotes the analyte reporting limit should be considered approximate.
- 9) "DUP" denotes duplicate sample.

Table 6

**Former Drum Storage Area
Soil Analytical Results - November 2002
TCE by USEPA Method 5035/8260 (ug/Kg)**

Sample Location	GB-14	DUP(GB-14)	GB-15	GB-16	GB-17	MDEQ Part 201 Generic Cleanup Criteria
Sample Depth	(10'-12')	(10'-12')	(5'-7')	(5'-7')	(5'-7')	Industrial Drinking Water Protection Criteria
Date Collected	11/26/02	11/26/02	11/26/02	11/26/02	11/26/02	
Parameter						
Trichloroethene	60 U	60 U	60 U	60 U	60 U	100

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "DUP" denotes duplicate sample.

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ATTACHMENT B.4
EXCERPT FROM "WORK PLAN, FORMER DRUM STORAGE AREA"
(OBG, FEBRUARY 2004)

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Sep 30, 2009 09:17

4. Work plan for verification sampling

Based on concrete and soil removal activities to be performed at various areas at the former Peregrine (US), Inc. property, REALM has elected to implement an IRM at the former Drum Storage Area by removal of the source area including the concrete sumps and surrounding impacted subsurface soil to the north, as well as isolated impacted ground water, to accelerate site closure.

CRA and their subcontractor(s) will be responsible for soil and equipment removal and O'Brien & Gere will perform the verification of soil remediation and ground water sampling and analysis at the former Drum Storage Area. The sampling and analysis will be performed in accordance with the site specific Quality Assurance Project Plan (QAPP) for the Coldwater Road Landfill RCRA closure program, dated January 2000 and subsequent QAPP Addendum, dated May 2002. The results of the sampling will be presented in the Former Drum Storage Area Closure Certification Addendum that will be prepared by O'Brien & Gere.

4.1. Subsurface soil excavation

This section provides a brief summary of the excavation activities.

Excavation at the former Drum Storage Area will begin with the removal of the concrete sumps. The sumps consist of two 6 ft by 6 ft by 8-ft deep concrete vaults (east sump and west sump). As detailed in the June 1999 Final Closure Certification Report (Weston), the sumps and associated piping were previously cleaned in accordance with the approved 1989 Closure Plan. Based on the TCE soil impact being assessed, a soil excavation area of 40 ft by 25 ft and 20 ft deep has been approximated for the area immediately surrounding the sumps. A figure depicting the assessment boring locations and extent of soil to be removed is included as Figure 2.

Based on the historical detections of TCE in soil north of the sumps being assessed, a soil excavation area of 30 ft by 15 ft by 12 ft deep has been approximated for this area. A figure depicting the assessment borings, previous historical boring and well locations and the extent of soil to be removed is included as Figure 2.

Soil removed from the excavations will be temporarily staged on-site pending characterization for disposal.

4.2. Verification of soil remediation soil sampling

Following removal of the concrete sumps and surrounding soil, but prior to backfilling, verification of remediation soil samples will be collected from the excavation in accordance with the MDEQ Sampling Strategies and Statistics Training Materials (S³TM) for Part 201 Cleanup Criteria. Based on this document, verification of remediation soil samples are required from three locations from the floor and eight locations from the sidewalls of the sump excavation. The assessment sample from GB-7 (19-20 ft) will be used as a verification of remediation floor sample and two other sample locations will be collected from the excavation floor. The assessment samples from GB-2, GB-3, GB-4, GB-5, GB-6, GB-8, GB-9 and GB-10 will be used as the sidewall verification of remediation samples. If subsurface conditions exist within the open excavation which would likely be identified as a potential migration pathway, an additional verification sample may be collected for analysis to evaluate this pathway.

Following removal of the soil north of the sumps, but prior to backfilling, verification of remediation soil samples will be collected from the excavation in accordance with the MDEQ S³TM. Based on this document, verification of remediation soil samples are required from two locations from the floor and six locations from the sidewalls of the excavation north of the sumps. The assessment sample from GB-14 (10-12 ft) will be used as a verification of remediation floor sample and one other sample location will be collected from the excavation floor. The assessment samples from GB-2, GB-15, GB-16, and GB-17 will be used as sidewall verification of remediation samples with two additional sidewall samples collected from the excavation. If subsurface conditions exist within the open excavation, which would likely be identified as a potential migration pathway, an additional verification sample may be collected for analysis to evaluate this pathway.

The verification soil samples collected will be analyzed for the presence of TCE by USEPA Method 8260. Analytical methods used for analysis of verification of remediation samples will be in accordance with the QAPP for the Coldwater Road site. QA/QC samples including a duplicate, equipment blank, trip blank and MS/MSD samples will also be collected and analyzed in accordance with the QAPP. The samples will be labeled, placed in a cooler with ice and shipped via overnight transport to the laboratory. Chain-of-custody documentation will accompany each shipment of samples to the laboratory. The soil samples will be analyzed by Merit Laboratories, Inc. of East Lansing, Michigan. A Level III Data package will be requested from the laboratory for the samples analyzed. The data will be independently validated by O'Brien & Gere to assess the suitability of the measurement system for providing useful analytical data.

4.3. Ground water removal

Based on the results of the ground water sample collected from monitoring well DSA MW-1 and a historical sample collected from MW-14 indicating impact, an attempt will be made to remove impacted ground water that collects in the open excavations to attain closure. The volume of water removed from the excavations will be based upon the rate of recharge and an evaluation of the water quality from the excavations. Ground water removal operations will be discontinued, when the ground water quality has improved or it is evaluated that further water removal is ineffective. A verification sample will be collected as described in Section 4.2.1 to determine if ground water entering the excavations meets the MDEQ Generic Industrial Drinking Water criteria. After pumping is complete the excavations will be filled with clean fill material.

Based on the anticipated slow recharge of the water-bearing unit in this area, the excavations may be left open for as long as several weeks to facilitate the collection and removal of ground water. If the excavations are required to remain open, the excavations will have measures taken to prevent runoff and/or rainwater from entering them. Water removed from the excavations will be contained and temporarily staged on-site pending characterization for disposal.

4.4. Ground water verification of remediation sampling

Subsequent to removing ground water from the open excavations, a ground water sample will be collected from each. The ground water sample will be collected by lowering a length of polyethylene tubing with a weight at the open end connected to a peristaltic pump. Water samples will be collected directly into laboratory supplied containers and will be analyzed for the presence of TCE and cis-1,2-dichloroethene by EPA method 8260. Analytical methods used for analysis of ground water samples will be in accordance with the QAPP and subsequent QAPP Addendum. QA/QC samples including a duplicate, equipment blank, trip blank and MS/MSD samples will also be collected and analyzed in accordance with the QAPP and QAPP Addendum. The samples will be labeled, placed in a cooler with ice and shipped via overnight transport to the laboratory. Chain-of-custody documentation will accompany each shipment of samples to the laboratory.

Merit Laboratories, Inc. of East Lansing, Michigan will analyze the ground water samples. A Level III Data package will be requested from the laboratory for the samples analyzed. The data will be independently validated by O'Brien & Gere to assess the suitability of the measurement system for providing useful analytical data.

A 24-hr analytical turnaround time will be requested from the laboratory to assess whether impacted ground water has been removed. If ground

water analytical results indicate impacted ground water remains in the excavations above MDEQ Generic Industrial Drinking Water criteria, pumping of the water will continue and a subsequent ground water sample will be collected for laboratory analysis. If concentrations of TCE and/or cis-1,2-dichloroethene are again detected above the MDEQ Generic Industrial Drinking Water criteria, an evaluation will be made whether to continue to remove the impacted ground water with subsequent sampling or that it is not feasible to remove additional volumes of impacted ground water and the excavations will be backfilled.

4.5. Closure strategy

The verification of remediation soil and ground water samples collected after completion of the IRM will be compared against MDEQ generic closure criteria. If the soil and ground water analytical results are below appropriate MDEQ generic criteria, a Closure Report for the former Drum Storage Area will be prepared and closure for the former Drum Storage Area will be requested.

If soil verification of remediation sample results are present at levels above the MDEQ generic Industrial Drinking Water Protection criteria, additional excavation will be performed, if feasible, to remove this material and the area will be re-sampled.

If ground water closure sample results indicate concentrations of TCE and /or cis-1,2-dichloroethene are present at levels above the MDEQ Generic Industrial Drinking Water criteria, an evaluation will be performed to assess potential future efforts for DSA closure. A subsequent Work Plan would be prepared to address these issues and outline potential investigation methods and strategy for addressing ground water impact. This data would likely provide the required documentation to demonstrate that acceptable conditions exist for a generic industrial site closure. Closure at the former Drum Storage Area would then be requested through the submittal of a Closure Report.

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ATTACHMENT B.5
WASTE CHARACTERIZATION SAMPLE RESULTS - SOIL

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Sep 30, 2009 09:17

03/17/2004 03:10 7346540060

03/10/04 11:04 FAX 248 753 5829

03/14/2004 04:18 7346540060

REPUBLIC SERVICES

002/008

PAGE 02



Office Use Only

Approval Number: _____

Expiration Date: _____

SPECIAL WASTE PROFILE

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material. The information on this form must be COMPLETE, LEGIBLE, and the form must be SIGNED.

A. GENERATOR INFORMATION

1. Generator Name: GM (General Motors)
 2. Address: 1245 E. Coliseum Rd.
 City: Flint County: Genesee
 State: MI Zip: 48305
 3. Site Location (if different): Former Kenmore Coliseum Rd Facility
 4. Contact Name: Cheryl Hiatt
 5. Phone Number: 248-753-5799
 6. Fax Number: 248-753-5829

B. CUSTOMER/BILLING INFORMATION

1. Billing Name: Realm Pontiac Center Point Campus Central
 2. Address: 2000 Center Point MAIL CODE 488-520-192
 City: Pontiac County: _____
 State: MI Zip: 48341-3147
 3. Contact Name: Cheryl Hiatt
 4. Phone Number: 248-753-5799
 5. Fax Number: 248-753-5829
 6. Is there a service agreement on file? YES NO

C. TRANSPORTER INFORMATION

1. Name: TBA
 2. Street Address: _____
 City: _____ State: _____ Zip: _____
 3. Phone Number: _____
 4. Fax Number: _____
 5. Contact Name: _____

D. AGENT/CONSULTANT INFORMATION

1. Name: CRA
 2. Street Address: 902 Southwestern (651 Colby Dr)
 City: Ann Arbor MI State: MI Zip: 48106
 3. Phone Number: 319 884 0510
 4. Fax Number: 519-889-0525
 5. Contact Name: Sylvie Eastman
 6. Is there a Letter of Authorization on file? YES NO

E. WASTE STREAM INFORMATION

1. Common Name of Waste: Non haz sand soil and debris
 2. Detailed Description of Process: removal of sediments below concrete surface pad sediments may be oily / have oily residue and soils from additional excavations around pads
 3. Physical State at 70°F: Solid Semi-Solid Liquid Powder Other
 4. Odor: None Mild Significant: (describe) _____
 5. Color: Brown and black
 6. Flash Point: SMALL NOT TESTED (SOIL-GENERATOR KNOWLEDGE)
 7. Reactive: NO YES with NOT TESTED
 8. pH Range: na
 9. Heat Generating Waste: NO YES
 10. Free Liquid: NO YES
 11. Water Content: na % by water
 12. Does the waste contain radioactive or U.S.D.O.T. hazardous materials, PCB's, or asbestos? NO YES
 13. Does the waste contain any biological agents or untreated medical waste? NO YES
 14. Is the waste proposed for management a hazardous waste as defined by Federal or State regulations? NO YES

F. SUPPLEMENTAL INFORMATION

1. Attached Document(s): None MSDS Certified Analytical Report Memo/Letter Process Knowledge
 2. If analytical data is attached, is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? YES NO

G. SHIPPING INFORMATION

1. Packaging: Bulk Solids Bulk Liquids Drums Roll-Off Dump Truck Tank Truck Other:
 2. Estimated Volume: 5000 Tons Cubic Yards Drums Gallons Other:
 3. Shipping Frequency: 125 per One Time Month Year Other:
 4. Designated Landfill(s): Brenton
 5. Disposal Method: Landfill Solidification Bioremediation Other:

H. Generator's Certification Statement:

I hereby certify that the above and attached information is complete and accurate to the best of my ability, that no deliberate information was omitted, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. If any of the above information changes, I agree to notify Republic Services prior to offering the waste for shipment or management.

1. CHERYL HIATT
GENERAL MOTORS CORP.

(NAME, PLEASE PRINT) am employed by
(COMPANY NAME) and am authorized to sign this request for

COMPANY NAME: GENERAL MOTORS CORP
DATE: 3/11/04

PRINTED NAME: CHERYL HIATT
SIGNATURE: _____

Form SW01 (2003)

03/15/04 MON 11:30 [TX/RX NO 5360]

03/17/2004 03:10 7346540060
03/16/04 17:05 FAX 248 753 5820
- 03/14/2004 04:18 7346540060

REPUBLIC SERVICES



Office Use Only

Approval Number: _____

Expiration Date: _____

SPECIAL WASTE PROFILE

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material. The information on this form must be COMPLETE, LEGIBLE, and the form must be SIGNED.

A. GENERATOR INFORMATION

1. Generator Name: GM Power Products
2. Address: 1345 E. Coldwater Rd.
City: Flint County: Genesee
State: MI Zip: 48503
3. Site Location (if different): FORMER PEREGRINE COLDWATER P.D. SITE
4. Contact Name: Cheryl Hiatt
5. Phone Number: 248-753-5799
6. Fax Number: 248-753-5829

B. CUSTOMER/BILLING INFORMATION

1. Billing Name: Realm Pontiac Center Point Campus Central
2. Address: 2070 Center Point MAIL CODE 483-500-190
City: Pontiac County: _____
State: MI Zip: 48341-3147
3. Contact Name: Cheryl Hiatt
4. Phone Number: 248-753-5799
5. Fax Number: 248-753-5829
6. Is there a service agreement on file? YES NO

C. TRANSPORTER INFORMATION

1. Name: TBA
2. Street Address: _____
City: _____ State: _____ Zip: _____
3. Phone Number: _____
4. Fax Number: _____
5. Contact Name: _____

D. AGENT/CONSULTANT INFORMATION

1. Name: CRA
2. Street Address: 300 W. Hamilton 161 COLBY DR.
City: WATERLOO State: MI Zip: 49124
3. Phone Number: 519-884-0310
4. Fax Number: 519-884-0535
5. Contact Name: Sylvia Eastman
6. Is there a Letter of Authorization on file? YES NO

E. WASTE STREAM INFORMATION

1. Common Name of Waste: Non haz concrete and debris
2. Detailed Description of Process: removal of oil stained concrete pad at former GM Coldwater Rd. Facility
3. Physical State at 70°F Solid Semi-Solid Liquid Powder Other: _____
4. Odor: None Mild Significant (describe): _____
5. Color: White gray
6. Flash Point: 2200°F °C CONCRETE - NOT TESTED
7. Reactive: NO YES with NOT TESTED & pH Range: na
8. Heat Generating Waste: NO YES
9. Free Liquid: NO YES
10. Does the waste contain radioactive or U.S.D.O.T. hazardous materials, PCB's, or asbestos? NO YES
11. Does the waste contain any biological agents or untreated medical waste? NO YES
12. Is the waste proposed for management a hazardous waste as defined by Federal or State regulations? NO YES

F. SUPPLEMENTAL INFORMATION

1. Attached Document(s): None MSDS Certified Analytical Report Memo/Letter Process Knowledge
2. If analytical data is attached, is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? YES NO

G. SHIPPING INFORMATION

1. Packaging: Bulk Solids Bulk Liquids Drums Roll-Off Dump Truck Tank Truck Other: _____
2. Estimated Volume: 9000 Tons Cubic Yards Drums Gallons Other: _____
3. Shipping Frequency: 125 per One Time Month Year Other: _____
4. Designated Landfill(s): Brant run
5. Disposal Method: Landfill Solidification Bioremediation Other: _____

H. Generator's Certification Statement:

I hereby certify that the above and attached information is complete and accurate to the best of my ability, that no deliberate information was omitted, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. If any of the above information changes, I agree to notify Republic Services prior to offering the waste for shipment or management.

I, CHERYL HIATT
GENERAL MOTORS CORP.

(NAME, PLEASE PRINT) am employed by
(COMPANY NAME) and am authorized to sign this request for

COMPANY NAME: GENERAL MOTORS CORP.
DATE: 3/16/04

PRINTED NAME: CHERYL HIATT
SIGNATURE: Cheryl Hiatt



Laboratory Report

Project: Former Peregrine (Coldwater Rd) #12636

CT&E Work Order: 3041189
#12636 Former Peregrine

Client: Conestoga-Rovers & Associates
14496 Sheldon Road
Suite 200
Plymouth, MI 48170

Attention: Paul Wiseman

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

Respectfully submitted,

Denise Heckler for

4/2/2004

Date

Denise Heckler, Project Manager
CT&E Environmental Services Inc.

Michigan Division
1200 Conrad Industrial Drive
Ludington, MI 49431

Phone: 231.843.1877
Fax: 231.845.9942

E-mail: dheckler@sgsenvironmental.com

This report contains _____ pages

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Report Order

Report Legend
Laboratory Report
Chain-of-Custody Record
Log-In Check List
Preservation Check List
Report Addenda

Laboratory Report Legend

The laboratory holds the following certifications:

National Environmental Laboratory Accreditation Program (NELAP), Accreditation No. 100433 (State of Illinois)
State of Alaska UST, Approval No. UST-048
State of Indiana, Certification No. C-MI-01
State of Maryland, Certification No. 266
State of Michigan, Certification No. 0021
State of Wisconsin, Certification No. 999959180
United States Army Corps of Engineers

Container Identification (ID)

The unique container ID is comprised of the CT&E Sample ID plus a "-" and the number found in the Cont. ID column.

Qualifiers (located next to the Result column)

ND Not detected
B Blank contaminant
D Dilution
J Estimated result
M Matrix interference
N Presumptive evidence by GC/MS library search
E Concentration exceeds calibration range
U Not detected

Footnotes

- (1) Parameter analyzed according to method; this combination of method and / or parameter has not been evaluated by NELAP



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189002 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-029 Location:
 Collected: 03/30/2004 10:00 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).
 PCB: Sample clean-up performed for hydrocarbons (SW-846 Method 3630C Silica Gel)

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	8.94		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	85.9		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1221	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1232	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1242	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1248	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1254	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1260	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Barium	0.78	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:53	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189002	Matrix: Solid
Client Sample ID: S-12636-033004-SDM-029	Location:
Collected: 03/30/2004 10:00	Project: Former Peregrine' (Coldwater Rd) #12636
Received: 03/31/2004 09:15	Sampled By: JY

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				

TCLP METAL ANALYSIS SW-846 Method 1311

TCLP VOLATILES SW-846 Method 1311

1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH	1

TCLP SEMI-VOLATILES SW1311

2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189003 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-030 Location:
 Collected: 03/30/2004 10:15 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.20		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	81.2		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1221	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1232	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1242	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1248	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1254	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1260	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Barium	0.26	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:56	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189003 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-030 Location:
 Collected: 03/30/2004 10:15 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
TCLP VOLATILES SW-846 Method 1311									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
TCLP SEMI-VOLATILES SW1311									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189004 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-031 Location:
 Collected: 03/30/2004 10:30 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.50		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	78.4		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	

GC SEMIVOLATILE ORGANIC ANALYSIS

Aroclor-1016	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1221	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1232	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1242	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1248	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1254	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1260	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1

TCLP METAL ANALYSIS SW-846 Method 1311

Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Barium	0.28	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:59	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189004	Matrix: Solid
Client Sample ID: S-12636-033004-SDM-031	Location:
Collected: 03/30/2004 10:30	Project: Former Peregrine (Coldwater Rd) #12636
Received: 03/31/2004 09:15	Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
<u>TCLP VOLATILES SW-846 Method 1311</u>									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
<u>TCLP SEMI-VOLATILES SW1311</u>									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

T&E Sample ID: 3041189005 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-032 Location:
 Collected: 03/30/2004 10:43 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.13		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	88.6		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Brochlor-1016	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1221	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1232	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1242	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1248	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1254	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Brochlor-1260	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Barium	0.63	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 19:02	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189005	Matrix: Solid
Client Sample ID: S-12636-033004-SDM-032	Location:
Collected: 03/30/2004 10:43	Project: Former Peregrine (Coldwater Rd) #12636
Received: 03/31/2004 09:15	Sampled By: JY

Comments: Results reported on Dry Weight basis.
 PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Cont. Analyst	ID
				Detection Limit	Method Analysis / Preparation				
<u>TCLP VOLATILES SW-846 Method 1311</u>									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
<u>TCLP SEMI-VOLATILES SW1311</u>									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1

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SHIPPED TO (Laboratory Name):

565

REFERENCE NUMBER:

19636

PROJECT NAME:

former Farmington

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: *John York* PRINTED NAME: John York

CONTAINERS

PARAMETERS
TCLP VOCs
TCLP SVOCs
PCB/CBI

SEQ. No.	DATE	TIME	SAMPLE TYPE	NO OF CONTAINERS	REMARKS
1	3-30-04	0945	Liquid	12	Rush
2	1000		Soil	1	3 Day TAT
3	1015		"	1	
4	1030		"	1	
5	1043		"	1	

TOTAL NUMBER OF CONTAINERS 16

RELINQUISHED BY: <i>Shawn McLean</i>	RECEIVED BY: <i>[Signature]</i>	DATE: 3-30-04	DATE: 3-30-04
		TIME: 12:00	TIME: 12:00
RELINQUISHED BY:	RECEIVED BY:	DATE:	DATE:
		TIME:	TIME:
RELINQUISHED BY:	RECEIVED BY:	DATE:	DATE:
		TIME:	TIME:

METHOD OF SHIPMENT: UPS Ground AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

SAMPLE TEAM:

York, psom

RECEIVED FOR LABORATORY BY:

[Signature]

26004

DATE: 3-31-04 TIME: 9:15 AM

6°C



**Environmental Services
 Michigan Division**

Login Checklist

page: 1 of 1

Project Number: 3041189 Date Logged In: 3/31/04 Login Person Initials: as

This section to be completed when corrective action is required:

Client: CRA Project Name: _____
 Client Contact: _____ Phone Number: _____

- If no to any, notify the project manager and project manager documents client response below.*
- | | YES | NO |
|--|-----|----|
| 1. Were custody seals/original packing tape intact? | ✓ | — |
| 2. Are the samples in good condition, i.e. not broken or leaking? | ✓ | — |
| 3. Are samples within holding times? | ✓ | — |
| 4. Were the samples received on ice (ice in direct contact with the samples)?
<i>If yes, and Wisconsin samples, do not record the sample temperature.</i> | ✓ | — |
| 5. Is the temperature of the samples between 2-6°C?
<i>NOTE: Samples not between 2-6°C that are received at the laboratory on the day of sample collections do not require client notification.</i> | ✓ | — |
| 6. Do the samples match the COC? | ✓ | — |
| 7. Were the proper containers used? | ✓ | — |
| 8. Were the samples collected in CT&E Environmental Services containers?
<i>No corrective action required.</i> | ✓ | — |
| 9. Is there adequate sample volume for requested analyses and QC? | ✓ | — |
| 10. Do water VOC samples contain headspace less than the size of a pea? | ✓ | — |
| 11. Are samples preserved to the proper pH? (attach Preservative Check Sheet)
<i>If no, identify sample bottle and preservative, adjust to the proper pH, and note below.</i> | ✓ | — |
| 12. Is the chain of custody signed? | ✓ | — |
| 13. Is sub-sampling required? (note bottles created and preserved below) | — | ✓ |
| 14. Were proper sample weights met for Wisconsin soil samples? | — | — |

COMMENTS/CORRECTIVE ACTION

Containers Created

40 mL vial	1 liter amber	250 mL plastic	500 mL plastic	1 Liter plastic	2-oz. glass	4-oz. glass	8-oz. glass	other	Samp No.
									1
									2
									3
									4
									5
									6
									7
									8
									9
									0

Preservative code: A = MeOH, B = HNO₃, C = H₂SO₄, D = NaOH, E = HCl

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

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ATTACHMENT B.6
VERIFICATION SAMPLE RESULTS

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Report ID: S16643.01(01)
Generated on 04/09/2004

Report to
Attention: Mr. Tony Finch
O'Brien & Gere, Inc. of North America
33469 West 14 Mile Road Suite 150
Farmington Hills, MI 48331

Report produced by
Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Phone: 248-661-3745 X 14 FAX: 248-661-4057

Report Summary

Lab Sample ID(s): S16643.01-S16643.12
Project: DSL Coldwater
Submitted Date/Time: 04/08/2004 14:00
Sampled by: Chad Krieter
P.O. #:

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Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Preliminary Report

Lab Sample ID: S16643.01
 Sample Tag: DSA - Sump - F1
 Collected Date/Time: 04/08/2004 10:40
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/08/04 23:25	JGH	79-01-6	

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Preliminary Report

Lab Sample ID: S16643.02
Sample Tag: DSA - Sump - F1 - MS
Collected Date/Time: 04/08/2004 10:40
Matrix: Soil
COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	1.28	mg/kg	0.05	8260B	04/08/04 20:07	JGH	79-01-6	1

1-Spiked at 1.25 mg/Kg

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Lab Sample ID: S16643.03
 Sample Tag: DSA - Sump - F1 - MSD
 Collected Date/Time: 04/08/2004 10:40
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	1.22	mg/kg	0.05	8260B	04/08/04 20:40	JGH	79-01-6	1

1-Spiked at 1.25 mg/Kg

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Preliminary Report

Lab Sample ID: S16643.04
 Sample Tag: DSA - Sump - F2
 Collected Date/Time: 04/08/2004 10:30
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst CAS #	Flags
Inorganics							
Total Solids	Incomplete	%		160.3	11		
Organics							
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 00:31	JGH 79-01-6	

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Preliminary Report

Lab Sample ID: S16643.05
 Sample Tag: Dup
 Collected Date/Time: 04/08/2004 :
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 01:04	JGH	79-01-6	

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Lab Sample ID: S16643.06

Sample Tag: DSA - Pipe - 1

Collected Date/Time: 04/08/2004 11:00

Matrix: Soil

COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 01:36	JGH	79-01-6	

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Lab Sample ID: S16643.07
 Sample Tag: DSA - North - SW2
 Collected Date/Time: 04/08/2004 11:10
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst CAS #	Flags
Inorganics							
Total Solids	Incomplete	%		160.3	//		
Organics							
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 02:10	JGH 79-01-6	

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Preliminary Report



Lab Sample ID: S16643.08

Sample Tag: DSA - North - F1

Collected Date/Time: 04/08/2004 11:15

Matrix: Soil

COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 02:43	JGH	79-01-6	

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Lab Sample ID: S16643.09
 Sample Tag: DSA - North - SW1
 Collected Date/Time: 04/08/2004 11:20
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	0.40	mg/kg	0.05	8260B	04/09/04 03:16	JGH	79-01-6	T

T-No correction for total solids

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Lab Sample ID: S16643.10
Sample Tag: EB
Collected Date/Time: 04/08/2004 11:50
Matrix: Groundwater
COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst CAS #	Flags
Organics							
Trichloroethene	Incomplete	mg/l		8260B	//	79-01-6	

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Preliminary Report

Lab Sample ID: S16643.11
 Sample Tag: TB
 Collected Date/Time: 04/08/2004 :
 Matrix: Groundwater
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40 ml Glass	HCL	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst CAS #	Flags
Organics							
Trichloroethene	Incomplete	mg/l		8260B	//	79-01-6	

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Lab Sample ID: S16643.12
 Sample Tag: DSA - Pipe - 2
 Collected Date/Time: 04/08/2004 11:25
 Matrix: Soil
 COC Reference: 020406

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz. Glass	None	Yes	3	3
1	20g EnCore	None	Yes	3	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	Incomplete	%		160.3	//			
Organics								
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/09/04 14:01	JGH	79-01-6	1
1-Scan run								

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Generated on 04/14/2004

Report to

Attention: Mr. Tony Finch
O'Brien & Gere, Inc. of North America
33469 West 14 Mile Road Suite 150
Farmington Hills, MI 48331

Phone: 248-661-3745 X 14 FAX: 248-661-4057

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S16671.01-S16671.04
Project: DSA Coldwater
Submitted Date/Time: 04/13/2004 14:30
Sampled by: Chad Krieter
P.O. #: DSA

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Report Notes

Results relate only to items tested.
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Results reported on a dry weight basis where applicable.
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Lab Sample ID: S16671.01
 Sample Tag: DSA - North - SW - 3
 Collected Date/Time: 04/13/2004 12:45
 Matrix: Soil
 COC Reference: 020408

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	20g EnCore	None	Yes	8	3
1	4oz. Glass	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	87.6	%	1	160.3	04/13/04 17:00	JGH		
Organics								
Trichloroethene	0.47	mg/kg	0.05	8260B	04/13/04 18:36	JGH	79-01-6	

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Lab Sample ID: S16671.02
 Sample Tag: DSA - North - SW - 4
 Collected Date/Time: 04/13/2004 13:00
 Matrix: Soil
 COC Reference: 020408

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	20g EnCore	None	Yes	8	3
1	4oz. Glass	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst CAS #	Flags
Inorganics							
Total Solids	86.1	%	1	160.3	04/13/04 17:00	JGH	
Organics							
Trichloroethene	Not detected	mg/kg	0.05	8260B	04/13/04 19:42	JGH 79-01-6	

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Lab Sample ID: S16671.03
 Sample Tag: EB
 Collected Date/Time: 04/13/2004 13:15
 Matrix: Groundwater
 COC Reference: 020408

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
Trichloroethene	Not detected	mg/l	0.001	8260B	04/14/04 06:08	JGH	79-01-6	

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Lab Sample ID: S16671.04
Sample Tag: TB
Collected Date/Time: 04/13/2004 :
Matrix: Water
COC Reference: 020408

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40 ml Glass	HCL	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
Trichloroethene	Not detected	mg/l	0.001	8260B	04/14/04 06:41	JGH	79-01-6	

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ATTACHMENT C
WASTE EVALUATION RESULTS

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Evaluation Result Records

Part 111, Rule 307(2) states that "a generator who is requested by the director to submit evaluation results shall provide the required information within 30 days after receipt of the request. The records shall include all of the following information:"

A. The type of waste and the source or process from which it was produced.

The remediation waste consists of soil excavated from the former DSA.

B. The chemical composition of the waste and the anticipated fluctuations in its chemical composition.

Soil in the former DSA was previously investigated, and was found to exceed MDEQ Generic Industrial Drinking Water Protection Criteria (IDWPC) for trichloroethene (TCE) of 100 µg/kg. Soil did not exceed MDEQ Generic Industrial Direct Contact Criteria/Groundwater Contact Criteria or 20x TCLP limits.

Soil samples have been collected from various depths at 23 locations in the DSA and analyzed for total TCE and/or other VOCs. Soil sample results for TCE ranged from non-detect to 6,720 µg/kg, with 5 of 26 soil samples exceeding IDWPC.

Attachment C.1 presents the sample locations and sample results.

C. Testing Information

C.1 The sampling procedure and the reasons for determining that the sample is representative of the waste.

As identified in the February 2004 Work Plan, characterization sampling was performed to determine appropriate disposal. To minimize the amount of soil material to be staged pending characterization, it was decided to sample the material in situ.

As identified above, numerous samples have been collected from the area and analyzed for total TCE, and all results have been below MDEQ Generic Industrial Direct Contact Criteria and 20x TCLP limits. If the total waste concentration is less than 20 times the TCLP regulatory level, the waste cannot be characterized hazardous waste (53 FR 51444, December 21, 1988). The only area not previously sampled was directly beneath the sump, because it was not possible to complete a soil boring through the concrete sump bottom. In addition, if a release had occurred from the sump, which was not considered likely because no evidence of a breach was observed during cleaning activities, this sample would provide "worst case" concentrations. Therefore, it was decided to collect samples for waste characterization from directly beneath the sump.

The sump was broken out and removed on March 30, 2004. The majority of the soil surrounding the sump was gray-brown clay. A representative sample of this material was collected. In addition, green-stained clay was observed in the northeast corner of the sump,

black sand was observed in the northeast corner of the sump, and black/green stained clay was observed in the northwest corner of the sump. A sample was also collected of each of these three materials. The samples were analyzed for TCLP VOC/SVOC/metals; Total PCBs; and Reactivity, Corrosivity, and Ignitability (RCI). All samples identified that the material was non-regulated waste.

C.2 The results of all tests conducted.

All soil characterization samples were non-detect for TCE at 10 µg/L, and the only chemical detected was barium in all samples at concentrations ranging from 260 to 780 µg/L, well below the TCLP limit of 100,000 µg/L. Characterization sample results for soil are presented in Attachment C.2.

C.3 The accuracy and precision of any tests conducted.

The detection limits for all samples collected were below TCLP limits, allowing an accurate identification of the toxicity of the material. Detection limits are identified on the laboratory reports presented in Attachments C.2 and C.3.

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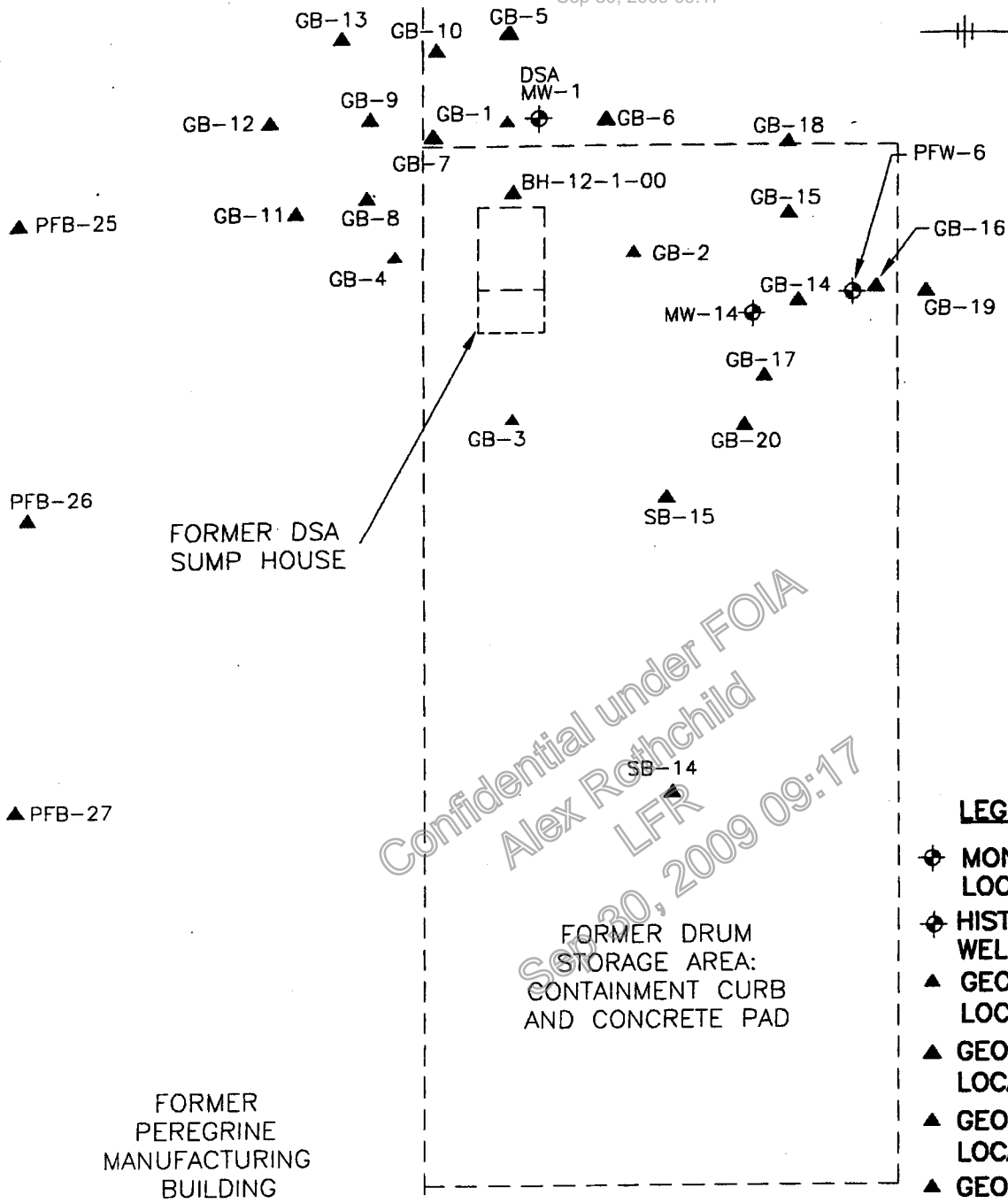
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ATTACHMENT C.1
DSA INVESTIGATION SAMPLE LOCATIONS AND SAMPLE RESULTS

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FIGURE 1



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LEGEND

- ⊗ MONITORING WELL LOCATION
- ⊗ HISTORICAL MONITORING WELL LOCATION
- ▲ GEOPROBE BORING LOCATION-8/1/2000
- ▲ GEOPROBE BORING LOCATION-5/10/2002
- ▲ GEOPROBE BORING LOCATION-6/4/2002
- ▲ GEOPROBE BORING LOCATION-11/26/2002
- ▲ HISTORICAL SOIL BORING LOCATION
- ▲ CRA BORING LOCATION

**SAMPLE LOCATION MAP
FORMER DRUM STORAGE AREA
COLDWATER ROAD FACILITY
FLINT, MICHIGAN**



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Table 1

**Former Drum Storage Area
Soil Analytical Results - August 2000**
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/Kg)

Compound	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Criteria
Acetone	50 U	50 U	50 U	50 U	50 U	100
Benzene	50 U	50 U	50 U	50 U	50 U	1,500
Bromobenzene	50 U	50 U	50 U	50 U	50 U	NA
Bromoform	50 U	50 U	50 U	50 U	50 U	2,000 (W)
Carbon tetrachloride	50 U	50 U	50 U	50 U	50 U	2,000 (W)
Chlorobenzene	50 U	50 U	50 U	50 U	50 U	580
Chloroethane	50 U	50 U	50 U	50 U	50 U	4,600
Chloroform	50 U	50 U	50 U	50 U	50 U	4,600
Chloroform, 1,1,1-trichloro-	50 U	50 U	50 U	50 U	50 U	4,600
1,1-Dichloroethane	50 U	50 U	50 U	50 U	50 U	100
1,1-Dichloroethene	50 U	50 U	50 U	50 U	50 U	2,000
1,1,1-Trichloroethane	50 U	50 U	50 U	50 U	50 U	34,000
1,1,1-Trichloroethene	50 U	50 U	50 U	50 U	50 U	2,000 (W)
1,1,2-Trichloroethane	50 U	50 U	50 U	50 U	50 U	22,000
1,1,2-Trichloroethene	50 U	50 U	50 U	50 U	50 U	2,000 (W)
1,2-Dichloroethane	50 U	50 U	50 U	50 U	50 U	4.0 (M)
1,2-Dichloroethene	50 U	50 U	50 U	50 U	50 U	NA
1,2-Dichloroethene, cis-1,2-	50 U	50 U	50 U	50 U	50 U	4,600
1,2-Dichloroethene, trans-1,2-	50 U	50 U	50 U	50 U	50 U	14,000
1,2-Dibromoethane	50 U	50 U	50 U	50 U	50 U	480
1,2-Dibromoethene	50 U	50 U	50 U	50 U	50 U	1,700
1,2-Dibromoethene, cis-1,2-	50 U	50 U	50 U	50 U	50 U	270.0E+3
1,2-Dibromoethene, trans-1,2-	50 U	50 U	50 U	50 U	50 U	50,000
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	100
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	140
1,2-Dibromoethene, trans-1,2- (Z)	820	50 U	50 U	50 U	50 U	1,400
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	2,000
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	100
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	1,300
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	NA
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	NA
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	NA
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	1,500
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	72,000
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	2.60E+05
1,2-Dibromoethene, trans-1,2- (Z)	300 U	300 U	300 U	300 U	300 U	NA
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	100
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	1.0E+05
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	4,600
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	2,700
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	6,400
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	700
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	100
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	16,000
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	NA
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	4,200
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	4,000
1,2-Dibromoethene, trans-1,2- (Z)	6720	50 U	50 U	50 U	50 U	100
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	1.50E+05
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	2,400
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	2,100
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	1,800
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	40
1,2-Dibromoethene, trans-1,2- (Z)	50 U	50 U	50 U	50 U	50 U	5,600
1,2-Dibromoethene, trans-1,2- (E)	50 U	50 U	50 U	50 U	50 U	5,600
1,2-Dibromoethene, trans-1,2- (Z)	500 U	500 U	500 U	500 U	500 U	42,000
1,2-Dibromoethene, trans-1,2- (E)	500 U	500 U	500 U	500 U	500 U	7.60E+05
1,2-Dibromoethene, trans-1,2- (Z)	500 U	500 U	500 U	500 U	500 U	46,000
1,2-Dibromoethene, trans-1,2- (E)	500 U	500 U	500 U	500 U	500 U	58,000
1,2-Dibromoethene, trans-1,2- (Z)	500 U	500 U	500 U	500 U	500 U	1.00E+05

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Fire & Environmental Consulting Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "C" Value presented is a screening level based on the chemical-specific generic soil saturation concentration.
- 6) "M" Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- 7) "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- 8) "NA" indicates criteria not available.
- 9) Bold type indicates MDEQ Generic Industrial Drinking Water Protection Criterion exceedence.
- 10) "DUP" denotes duplicate sample.

Table 1
Former Drum Storage Area
Soil Analytical Results - August 2000
Metals by USEPA methods 6020, 7197, 7471M and Cyanide by USEPA Method 9010 (ug/Kg)

Sample ID	As	Cd	Cu	Pb	Mn	Cyanide
1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	30,000
11100 J	11900 J	12000 J	12500 J	11600 J	11600 J	1.0E+9 (D)
11100 J	11900 J	12000 J	12500 J	11600 J	11600 J	1.0E+9 (D)
7,600	7,800	7,700	7,000	7,400	7,400	7.0E+05
100 U	100 U	100 U	100 U	100 U	100 U	1,200
500 U	500 U	500 U	500 U	500 U	500 U	4,000 (P)

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Fire & Environmental Consulting Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected.
- 5) "J" denotes that the concentration should be considered approximate.
- 6) "P" Amenable or Method OIA-1677 analysis are used to quantify cyanide concentrations for compliance with all groundwater criteria.
- 7) "D" Calculated criterion exceeds 100%, hence it is reduced to 100% (i.e., 1.0E+9 ppb).
- 8) "DUP" denotes duplicate sample.

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Table 3
Former Drum Storage Area
SPLP Analytical Results - May 2002
Trichloroethene SPLP by USEPA Method 8260B (ug/l)

		MDEQ Part 201 Generic Industrial Cleanup Criterion
SAMPLE ID	RESULTS	CRITERION
19	19	5 (A)

Notes:

- 1) Result and criterion are shown in parts per billion (ug/l).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criterion as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Sample analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "A" denotes the criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act No. 399 of the Public Acts of 1976.
- 5) Bold type indicates MDEQ Generic Industrial Drinking Water Criterion exceedance.

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Table 5
Former Drum Storage Area
Soil Analytical Results - June 2002
Volatile Organic Compounds by USEPA Method 5035/8260 (ug/Kg)

Sample Location	1	2	3	4	MDEQ Part 201 Generic Industrial Cleanup Criteria
Sample Name	1	2	3	4	1
Reference	1	2	3	4	1
Acetone	60 U	60 U	60 U	60 U	100
Bromobenzene	60 U	60 U	60 U	60 U	1,500
Bromochlorobenzene	60 U	60 U	60 U	60 U	NA
Bromodichlorobenzene	60 U	60 U	60 U	60 U	2,000 (W)
Bromotrifluorobenzene	60 UJ	60 UJ	60 UJ	60 UJ	2,000 (W)
Carbon tetrachloride	300 U	300 U	300 U	300 U	580
Chlorobenzene	60 U	60 U	60 U	60 U	4,600
Chloroethane	60 U	60 U	60 U	60 U	4,600
Chloroethene	60 U	60 U	60 U	60 U	4,600
Chloroform	60 U	60 U	60 U	60 U	NA
Chloroform, 1,1,1-trichloro-	60 U	60 U	60 U	60 U	NA
Chloroform, 1,1,2-trichloro-	60 U	60 U	60 U	60 U	100
Chloroform, 1,1,1,1-tetra-	60 U	60 U	60 U	60 U	2,000
Chloroform, 1,1,1,2-tetra-	60 UJ	60 UJ	60 UJ	60 UJ	34,000
Chloroform, 1,1,1,2,2-penta-	60 U	60 U	60 U	60 U	2,000 (W)
Chloroform, 1,1,1,2,2,2-hexa-	60 U	60 U	60 U	60 U	22,000
Dibromodichloromethane	60 U	60 U	60 U	60 U	2,000 (W)
Dibromodifluoromethane	60 UJ	60 UJ	60 UJ	60 UJ	4.0 (M)
Dibromofluoromethane	60 U	60 U	60 U	60 U	NA
Dibromomethane	60 U	60 U	60 U	60 U	4,600
Dibromomethane, 1,1-dibromo-	60 U	60 U	60 U	60 U	14,000
Dibromomethane, 1,2-dibromo-	60 U	60 U	60 U	60 U	480
Dibromomethane, 1,1,1,1-tetra-	60 U	60 U	60 U	60 U	1,700
Dibromomethane, 1,1,1,2-tetra-	60 U	60 U	60 U	60 U	270.0E+3
Dibromomethane, 1,1,2,2-tetra-	60 U	60 U	60 U	60 U	50,000
Dibromomethane, 1,1,2,2,2-penta-	60 U	60 U	60 U	60 U	100
Dibromomethane, 1,1,2,2,2,2-hexa-	60 U	60 U	60 U	60 U	140
Dibromomethane, 1,1,2,2,2,2,2-hepta-	60 U	60 U	60 U	60 U	1,400
Dibromomethane, 1,1,2,2,2,2,2,2-octa-	60 U	60 U	60 U	60 U	2,000
Dibromomethane, 1,1,2,2,2,2,2,2,2-nona-	60 U	60 U	60 U	60 U	100
Dibromomethane, 1,1,2,2,2,2,2,2,2,2-deca-	60 U	60 U	60 U	60 U	1,300
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2-undeca-	60 U	60 U	60 U	60 U	NA
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2-dodeca-	60 U	60 U	60 U	60 U	NA
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2-trideca-	60 U	60 U	60 U	60 U	NA
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2-tetradeca-	60 U	60 U	60 U	60 U	1,500
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2-pentadeca-	60 U	60 U	60 U	60 U	2.60E+05
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2-hexadeca-	60 U	60 U	60 U	60 U	NA
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2-hepta-	300 U	300 U	300 U	300 U	100
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2-octa-	60 U	60 U	60 U	60 U	1.0E+05
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2-nona-	60 U	60 U	60 U	60 U	4,600
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2-deca-	60 U	60 U	60 U	60 U	2,700
Dibromomethane, 1,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2-undeca-	60 U	60 U	60 U	60 U	6,400
Dibromomethane, 1,1,2-dodeca-	60 U	60 U	60 U	60 U	700
Dibromomethane, 1,1,2-trideca-	60 U	60 U	60 U	60 U	100
Dibromomethane, 1,1,2-tetradeca-	60 U	60 U	60 U	60 U	16,000
Dibromomethane, 1,1,2-pentadeca-	60 U	60 U	60 U	60 U	NA
Dibromomethane, 1,1,2-hexadeca-	60 U	60 U	60 U	60 U	4,200
Dibromomethane, 1,1,2-hepta-	60 U	60 U	60 U	60 U	4,000
Dibromomethane, 1,1,2-octa-	60 U	60 U	60 U	60 U	100
Dibromomethane, 1,1,2-nona-	60 U	60 U	60 U	60 U	100
Dibromomethane, 1,1,2-deca-	60 U	60 U	60 U	60 U	1.50E+05
Dibromomethane, 1,1,2-undeca-	60 U	60 U	60 U	60 U	2,400
Dibromomethane, 1,1,2-dodeca-	60 U	60 U	60 U	60 U	2,100
Dibromomethane, 1,1,2-trideca-	60 U	60 U	60 U	60 U	1,800
Dibromomethane, 1,1,2-tetradeca-	60 U	60 U	60 U	60 U	40
Dibromomethane, 1,1,2-pentadeca-	60 U	60 U	60 U	60 U	5,600
Dibromomethane, 1,1,2-hexadeca-	60 U	60 U	60 U	60 U	5,600
Dibromomethane, 1,1,2-hepta-	300 U	300 U	300 U	300 U	7.60E+05

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "M" Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- 6) "W" Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- 7) "NA" indicates criteria not available.
- 8) "UJ" denotes the analyte reporting limit should be considered approximate.
- 9) "DUP" denotes duplicate sample.

**Former Drum Storage Area
Soil Analytical Results - November 2002
TCE by USEPA Method 5035/8260 (ug/Kg)**

Sample ID	USEPA	MDEQ (10)	GIS	GIS	GIS	Groundwater MDEQ (10)
100-100-01	60 U	60 U	60 U	60 U	60 U	100

Notes:

- 1) Results and criteria are shown in parts per billion (ug/Kg).
- 2) MDEQ Part 201 Generic Industrial Cleanup Criteria as listed in Part 201 PA 451 dated December 19, 2002.
- 3) Samples analyzed by Merit Laboratories, Inc. of East Lansing, Michigan.
- 4) "U" denotes the analyte was analyzed for, but was not detected above the reported detection limit.
- 5) "DUP" denotes duplicate sample.

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ATTACHMENT C.2
WASTE CHARACTERIZATION SAMPLE RESULTS - SOIL

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03/17/2004 03:10 7346540060
03/10/04 11:04 FAX 248 753 5829
03/14/2004 04:18 7346540060

REPUBLIC SERVICES



Office Use Only

Approval Number: _____

Expiration Date: _____

SPECIAL WASTE PROFILE

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material. The information on this form must be COMPLETE, LEGIBLE, and the form must be SIGNED.

A. GENERATOR INFORMATION

1. Generator Name: GM Remanufacturing
2. Address: 1245 E. Coldwater Rd.
City: Flint County: Genesee
State: MI Zip: 48505
3. Site Location (if different):
Former Permarine Coldwater Rd Facility
4. Contact Name: Cheryl Hiatt
5. Phone Number: 248-753-5799
6. Fax Number: 248-753-5829

B. CUSTOMER/BILLING INFORMATION

1. Billing Name: Realm Pontiac Center Point Campus Central
2. Address: 2000 Center Point MAIL CODE 483-520-192
City: Pontiac County: _____
State: MI Zip: 48341-3147
3. Contact Name: Cheryl Hiatt
4. Phone Number: 248-753-5799
5. Fax Number: 248-753-5829
6. Is there a service agreement on file? YES NO

C. TRANSPORTER INFORMATION

1. Name: TBA
2. Street Address: _____
City: _____ State: _____ Zip: _____
3. Phone Number: _____
4. Fax Number: _____
5. Contact Name: _____

D. AGENT/CONSULTANT INFORMATION

1. Name: CRA
2. Street Address: 802 Hamilton G61 Colby Dr
City: Stittville MI 48160 State: MI Zip: 48160
3. Phone Number: 319 884 0510
4. Fax Number: 319-884-0523
5. Contact Name: Sylvie Eastman
6. Is there a Letter of Authorization on file? YES NO

E. WASTE STREAM INFORMATION

1. Common Name of Waste: Non haz sand soil and debris
2. Detailed Description of Process: removal of sediments below concrete surface pad sediments may be oily /have oily residue and soils from additional excavations around pads
3. Physical State at 70°F: Solid Semi-Solid Liquid Powder Other _____
4. Odor: None Mild Significant: (describe) _____
5. Color: Brown and black
6. Flash Point: NOT TESTED (SOIL - GENERATOR KNOWLEDGE)
7. Reactive: NO YES with NOT TESTED
8. pH Range: na
9. Heat Generating Waste: NO YES
10. Free Liquid: NO YES
11. Water Content: na % by water
12. Does the waste contain radioactive or U.S.D.O.T. hazardous materials, PCB's, or asbestos? NO YES
13. Does the waste contain any entological agents or untreated medical waste? NO YES
14. Is the waste proposed for management a hazardous waste as defined by Federal or State regulations? NO YES

F. SUPPLEMENTAL INFORMATION

1. Attached Document(s): None MSDS Certified Analytical Report Memo/Letter Process Knowledge
2. If analytical data is attached, is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? YES NO

G. SHIPPING INFORMATION

1. Packaging: Bulk Solids Bulk Liquids Drums Roll-Off Dump Truck Tank Truck Other: _____
2. Estimated Volume: 5000 Tons Cubic Yards Drums Gallons Other: _____
3. Shipping Frequency: 125 per One Time Month Year Other: _____
4. Designated Landfill(s): Brenton
5. Disposal Method: Landfill Solidification Bioremediation Other: _____

H. Generator's Certification Statement:

I hereby certify that the above and attached information is complete and accurate to the best of my ability, that no deliberate information was omitted, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. If any of the above information changes, I agree to notify Republic Services prior to offering the waste for shipment or management.

1. C. CHERYL HIATT
GENERAL MOTORS CORP.

(NAME, PLEASE PRINT) am employed by
(COMPANY NAME) and am authorized to sign this request for

COMPANY NAME: GENERAL MOTORS CORP
DATE: 3/16/04

PRINTED NAME: C. CHERYL HIATT
SIGNATURE: [Signature]

03/17/2004 03:10 7346540060
03/16/04 17:05 FAX 248 753 5829
03/14/2004 04:18 7346540060



Office Use Only

Approval Number: _____

Expiration Date: _____

SPECIAL WASTE PROFILE

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material. The information on this form must be COMPLETE, LEGIBLE, and the form must be SIGNED.

A. GENERATOR INFORMATION

1. Generator Name: GM Power Products
2. Address: 1245 E. Coldwater Rd.
City: Flint County: Genesee
State: MI Zip: 48505
3. Site Location (if different): FORMER PEREGRINE COLDWATER RD. SITE
4. Contact Name: Cheryl Hiatt
5. Phone Number: 248-753-5799
6. Fax Number: 248-753-5829

B. CUSTOMER/BILLING INFORMATION

1. Billing Name: Realm Pontiac Center Point Campus Central
2. Address: 2010 Center Point MAIL CODE 483-520-190
City: Pontiac County: _____
State: MI Zip: 48341-3147
3. Contact Name: Cheryl Hiatt
4. Phone Number: 248-753-5799
5. Fax Number: 248-753-5829
6. Is there a service agreement on file? YES NO

C. TRANSPORTER INFORMATION

1. Name: TBA
2. Street Address: _____
City: _____ State: _____ Zip: _____
3. Phone Number: _____
4. Fax Number: _____
5. Contact Name: _____

D. AGENT/CONSULTANT INFORMATION

1. Name: CRA
2. Street Address: 508 West Hamilton 1651 COLBY DR
City: WATERLOO State: MDN Zip: ADV 1C2
3. Phone Number: 519 884 0310
4. Fax Number: 519-884-0535
5. Contact Name: Sylvia Eastman
6. Is there a Letter of Authorization on file? YES NO

E. WASTE STREAM INFORMATION

1. Common Name of Waste: Non haz concrete and debris
2. Detailed Description of Process: removal of oil stained concrete pad at former GM Coldwater Rd. Facility
3. Physical State at 70°F: Solid Semi-Solid Liquid Powder Other: _____
4. Odor: None Mild Significant (describe) _____
5. Color: White gray
6. Flash Point: 200°F °C CONCRETE - NOT TESTED
7. Reactive: NO YES with NOT TESTED & pH Range: na 9. Heat Generating Waste: NO YES
10. Free Liquid: NO YES 11. Water Content: na % by water
12. Does the waste contain radioactive or U.S.D.O.T. hazardous materials, PCB's, or asbestos? NO YES
13. Does the waste contain any endological agents or untreated medical waste? NO YES
14. Is the waste proposed for management a hazardous waste as defined by Federal or State regulations? NO YES

F. SUPPLEMENTAL INFORMATION

1. Attached Document(s): None MSDS Certified Analytical Report Memo/Letter Process Knowledge
2. If analytical data is attached, is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? YES NO

G. SHIPPING INFORMATION

1. Packaging: Bulk Solids Bulk Liquids Drums Roll-Off Dump Truck Tank Truck Other: _____
2. Estimated Volume: 5000 Tons Cubic Yards Drums Gallons Other: _____
3. Shipping Frequency: 125 per One Time Month Year Other: _____
4. Designated Landfill(s): Brent run
5. Disposal Method: Landfill Solidification Bioremediation Other: _____

H. Generator's Certification Statement:

I hereby certify that the above and attached information is complete and accurate to the best of my ability, that no deliberate information was omitted, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. If any of the above information changes, I agree to notify Republic Services prior to offering the waste for shipment or management.

I, CHERYL HIATT
GENERAL MOTORS CORP.

(NAME, PLEASE PRINT) am employed by
(COMPANY NAME) and am authorized to sign this request for

COMPANY NAME: GENERAL MOTORS CORP
DATE: 3/16/04

PRINTED NAME: CHERYL HIATT
SIGNATURE: Cheryl Hiatt



Laboratory Report

Project: Former Peregrine (Coldwater Rd) #12636

CT&E Work Order: 3041189
#12636 Former Peregrine

Client: Conestoga-Rovers & Associates
14496 Sheldon Road
Suite 200
Plymouth, MI 48170

Attention: Paul Wiseman

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

Respectfully submitted,

Denise Heckler
for

Denise Heckler, Project Manager
CT&E Environmental Services Inc.

Michigan Division
1200 Conrad Industrial Drive
Ludington, MI 49431

Phone: 231.843.1877
Fax: 231.845.9942

E-mail: dheckler@sgsenvironmental.com

4/2/2004
Date

This report contains _____ pages

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Member of the SGS Group (Societe Generale de Surveillance)



Report Order

Report Legend
Laboratory Report
Chain-of-Custody Record
Log-In Check List
Preservation Check List
Report Addenda

Laboratory Report Legend

The laboratory holds the following certifications:

National Environmental Laboratory Accreditation Program (NELAP), Accreditation No. 100433 (State of Illinois)
State of Alaska UST, Approval No. UST-048
State of Indiana, Certification No. C-MI-01
State of Maryland, Certification No. 266
State of Michigan, Certification No. 0021
State of Wisconsin, Certification No. 999959180
United States Army Corps of Engineers

Container Identification (ID)

The unique container ID is comprised of the CT&E Sample ID plus a "-" and the number found in the Cont. ID column.

Qualifiers (located next to the Result column)

ND Not detected
B Blank contaminant
D Dilution
J Estimated result
M Matrix interference
N Presumptive evidence by GC/MS library search
E Concentration exceeds calibration range
U Not detected

Footnotes

- (1) Parameter analyzed according to method; this combination of method and / or parameter has not been evaluated by NELAP



CT&E Environmental Services Inc. Sep 30, 2009 09:17
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189002 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-029 Location:
 Collected: 03/30/2004 10:00 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

PCB: Sample clean-up performed for hydrocarbons (SW-846 Method 3630C Silica Gel)

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2*	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2*	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	8.94		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	85.9		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1221	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1232	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1242	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1248	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1254	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
Aroclor-1260	ND		ug/Kg	39	SW-846 8082 / SW-846 3550B	03/31/04 13:19	04/01/04 17:29	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Barium	0.78	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:53	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 18:57	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Sep 30, 2009 09:17

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189002 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-029 Location:
 Collected: 03/30/2004 10:00 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Cor* ID
				Detection Limit	Method Analysis / Preparation			

TCLP METAL ANALYSIS SW-846 Method 1311

TCLP VOLATILES SW-846 Method 1311

1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:15	JEH

TCLP SEMI-VOLATILES SW1311

2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/01/04 23:16	ESA



CT&E Environmental Services Inc. Sep 30, 2009 09:17
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189003 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-030 Location:
 Collected: 03/30/2004 10:15 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.
 PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.20		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	81.2		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1221	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1232	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1242	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1248	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1254	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
Aroclor-1260	ND		ug/Kg	41	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:07	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Barium	0.26	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:56	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:02	SRO	1



CT&E Environmental Services Inc.
 Michigan Division

Sep 30, 2009 09:17

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189003 **Matrix:** Solid
Client Sample ID: S-12636-033004-SDM-030 **Location:**
Collected: 03/30/2004 10:15 **Project:** Former Peregrine (Coldwater Rd) #12636
Received: 03/31/2004 09:15 **Sampled By:** JY

Comments: Results reported on Dry Weight basis.
 PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
<u>TCLP VOLATILES SW-846 Method 1311</u>									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 16:48	JEH	
<u>TCLP SEMI-VOLATILES SW1311</u>									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:48	ESA	1

Sep 30, 2009 09:17



CT&E Environmental Services Inc.
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189004 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-031 Location:
 Collected: 03/30/2004 10:30 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2 ¹	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2 ¹	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C ¹		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.50		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	78.4		%	0.10	SM19 2540G ¹		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1221	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1232	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1242	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1248	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1254	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
Aroclor-1260	ND		ug/Kg	42	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 16:38	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Barium	0.28	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 18:59	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:44	SRO	1



CT&E Environmental Services Inc. Michigan Division
 Sep 30, 2009 09:17

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189004 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-031 Location:
 Collected: 03/30/2004 10:30 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
<u>TCLP VOLATILES SW-846 Method 1311</u>									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:20	JEH	1
<u>TCLP SEMI-VOLATILES SW1311</u>									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 00:03	ESA	1



CT&E Environmental Services Inc. Michigan Division
 Sep 30, 2009 09:17

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189005 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-032 Location:
 Collected: 03/30/2004 10:43 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.
 PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting Detection Limit	Method Analysis / Preparation	Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
GENERAL CHEMISTRY ANALYSIS									
Reactive Cyanide	ND		mg/Kg	60	SW-846 7.3.3.2'	03/31/04 10:40	03/31/04 13:35	JB	1
Reactive Sulfide	ND		mg/Kg	60	SW-846 7.3.4.2'	03/31/04 10:37	04/01/04 10:41	JB	1
PHYSICAL PROPERTY ANALYSIS									
Corrosivity pH Analysis	Non				SW-846 9045C'		04/01/04 09:00	SKP	1
Flashpoint Fahrenheit	>200		deg F		SW-846 1010		04/02/04 10:45	WD	1
pH	9.13		S.U.		SW-846 9045C		04/01/04 09:00	SKP	1
Total Solids	88.6		%	0.10	SM19 2540G'		04/01/04 08:14	SKP	
GC SEMIVOLATILE ORGANIC ANALYSIS									
Aroclor-1016	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1221	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1232	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1242	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1248	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1254	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
Aroclor-1260	ND		ug/Kg	38	SW-846 8082 / SW-846 3550B	03/31/04 13:19	03/31/04 17:08	JL	1
TCLP METAL ANALYSIS SW-846 Method 1311									
Arsenic	ND	5	mg/L	0.010	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Barium	0.63	100	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Cadmium	ND	1	mg/L	0.0020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Chromium	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Mercury	ND	0.2	mg/L	0.0020	SW-846 7470A	04/01/04 13:00	04/01/04 19:02	PSK	1
Lead	ND	5	mg/L	0.020	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Selenium	ND	1	mg/L	0.040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1
Silver	ND	5	mg/L	0.0040	SW-846 6020 / SW-846 3010A	04/01/04 09:40	04/01/04 19:49	SRO	1



CT&E Environmental Services Inc. Sep 30, 2009 09:17
 Michigan Division

Workorder: 3041189

Conestoga-Rovers & Associates

Reported: 4/2/2004

CT&E Sample ID: 3041189005 Matrix: Solid
 Client Sample ID: S-12636-033004-SDM-032 Location:
 Collected: 03/30/2004 10:43 Project: Former Peregrine (Coldwater Rd) #12636
 Received: 03/31/2004 09:15 Sampled By: JY

Comments: Results reported on Dry Weight basis.

PCB: Multiple cleanups performed for hydrocarbons (SW-846 Method 3620 Florisil Column and SW-846 Method 3665 Sulfuric Acid).

Test Description	Result	Allowable Limit	Unit	Reporting		Prepared Date / Time	Analyzed Date / Time	Analyst	Cont. ID
				Detection Limit	Method Analysis / Preparation				
TCLP VOLATILES SW-846 Method 1311									
1,1-Dichloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
1,2-Dichloroethane	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
1,4-Dichlorobenzene	ND	7.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
2-Butanone (M E K)	ND	200	mg/L	0.050	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Benzene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Carbon tetrachloride	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Chlorobenzene	ND	100	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Chloroform	ND	6	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Tetrachloroethene	ND	0.7	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Trichloroethene	ND	0.5	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
Vinyl chloride	ND	0.2	mg/L	0.010	SW-846 8260B	04/01/04 11:00	04/01/04 17:53	JEH	1
TCLP SEMI-VOLATILES SW1311									
2,4,5-Trichlorophenol	ND	400	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2,4,6-Trichlorophenol	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2,4-Dinitrotoluene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
2-Methylphenol (o-Cresol)	ND	200	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
3&4-Methylphenol (p&m-Cresol)	ND	200	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachlorobenzene	ND	0.13	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachlorobutadiene	ND	0.5	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Hexachloroethane	ND	3	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Nitrobenzene	ND	2	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Pentachlorophenol	ND	100	mg/L	0.010	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1
Pyridine	ND	5	mg/L	0.020	SW-846 8270C / SW-846 3510C	04/01/04 13:10	04/02/04 10:01	ESA	1



**Environmental Services
 Michigan Division**

Login Checklist

page: 1 of 1

Project Number: 3041189 Date Logged In: 3/31/04 Login Person Initials: as

This section to be completed when corrective action is required:

Client: CRA Project Name: _____
 Client Contact: _____ Phone Number: _____

- If no to any, notify the project manager and project manager documents client response below.*
- | | YES | NO |
|--|-----|-------|
| 1. Were custody seals/original packing tape intact? | ✓ | _____ |
| 2. Are the samples in good condition, i.e. not broken or leaking? | ✓ | _____ |
| 3. Are samples within holding times? | ✓ | _____ |
| 4. Were the samples received on ice (ice in direct contact with the samples)?
<i>If yes, and Wisconsin samples, do not record the sample temperature.</i> | ✓ | _____ |
| 5. Is the temperature of the samples between 2-6°C?
<i>NOTE: Samples not between 2-6°C that are received at the laboratory on the day of sample collections do not require client notification.</i> | ✓ | _____ |
| 6. Do the samples match the COC? | ✓ | _____ |
| 7. Were the proper containers used? | ✓ | _____ |
| 8. Were the samples collected in CT&E Environmental Services containers?
<i>No corrective action required.</i> | ✓ | _____ |
| 9. Is there adequate sample volume for requested analyses and QC? | ✓ | _____ |
| 10. Do water VOC samples contain headspace less than the size of a pea? | ✓ | _____ |
| 11. Are samples preserved to the proper pH? (attach Preservative Check Sheet)
<i>If no, identify sample bottle and preservative, adjust to the proper pH, and note below.</i> | ✓ | _____ |
| 12. Is the chain of custody signed? | ✓ | _____ |
| 13. Is sub-sampling required? (note bottles created and preserved below) | ✓ | ✓ |
| 14. Were proper sample weights met for Wisconsin soil samples? | ✓ | _____ |

COMMENTS/CORRECTIVE ACTION

Containers Created

40mL vial	1 liter amber	250 mL plastic	500 mL plastic	1 Liter plastic	2 oz glass	4 oz glass	8 oz glass	other	Samp No.
									1
									2
									3
									4
									5
									6
									7
									8
									9
									0

Preservative code: A = MeOH, E = HNO₃, C = H₂SO₄, D = NaOH, E = HCl

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

Confidential under FOIA
Alex Rothchild
LFR
Sep 30, 2009 09:17

Confidential under FOIA
Alex Rothchild
LFR
Sep 30, 2009 09:17