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Ontario

Ministry of the Environment **Ministère de l'Environnement**

PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER 2227-55TM6D

Material Resource Recovery S.R.B.P. Inc.
P.O. Box 683
Cornwall, Ontario
K6H 5T5

Site Location: 2425 Industrial Park Drive
Cornwall City, United Counties Of Stormont, Dundas & Glengarry

You have applied in accordance with Section 27 of the Environmental Protection Act for approval of:

a Mobile Waste Disposal Site (Processing) serving the Province of Ontario and including only the mobile unit listed in the attached Schedule "B", consisting of the following major components:

- one (1) photocatalytic oxidation treatment system (Photo-Cat System);
- one (1) Control Cabinet (CC), which controls all process functions and includes the Motor Control Center (CC);
- one (1) Ballast Cabinets;
- one (1) System Control and Data Acquisition System (SCADA);
- one (1) Photo-Cat photocatalytic reactor, which uses titanium dioxide catalyst;
- Reactor Subsystem (RS);
- Catalyst Recovery Unit (CRU);
- TiO2 Catalyst;
- pH Control System;
- Pre-Filter & Coalescor;
- Oxidant Feed System;
- Flow Control & Measurement; and
- Feed Pumps;

all mounted on a trailer;

to be used for treatment of wastewater contaminated with PCB, considered as hazardous waste class no. 243, as described in the document entitled "New Ontario Waste Classes" January 1986,

all in accordance with the following plans and specifications listed in Schedules "A", "B", "C", "D", "E" and "F" which are attached to, and form a part of this Provisional Certificate of Approval.

Note: Use of the site for any other type of waste is not approved under this Certificate, and requires obtaining a separate approval amending this Certificate.

For the purpose of this Provisional Certificate of Approval and the terms and conditions specified below, the following definitions apply:

A. Definition

(i) "**Act**" or "**EPA**" means the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended;

(ii) "**Certificate**" means this Provisional Certificate of Approval number "2227-55TM6D", including Schedules "A", "B", "C", "D", "E" and "F";

(iii) "**Clean-up Criteria**" means the concentration of PCBs which is less than the concentration of PCBs in "PCB materials" as defined in *O. Reg. 362*;

(iv) "**Company**" means Material Resource Recovery S.R.B.P. Inc., including its officers, employees, agents or contractors;

(v) "**Dioxin(s)/Furan(s)**" means TCDD Toxicity Equivalents (TEQ), calculated according to Schedule "F", which is attached to and forms part of this Certificate and is based on high resolution and analysis of the tetrachlorinated through octachlorinated isomers of Dioxins and Furans;

(vi) "**Director**" means any Ministry employee appointed by the Minister pursuant to Section 5 of the EPA;

(vii) "**District Manager**" means the District Manager of the Ministry for the geographic area in which the mobile waste disposal site is to be operated;

(viii) "**Ministry**" means the Ontario Ministry of the Environment;

(ix) "**Mobile Unit**" means a mobile waste disposal site that is listed in Schedule "B", which is attached to and forms a part of this Certificate;

(x) "**Non-PCB Wastes**" means wastes containing PCBs at concentrations less than the Clean-up Criteria;

(xi) "**O. Reg. 347**" means Ontario Regulation 347 - R.R.O. 1990, General - Waste Management, as amended from time to time, made under the EPA;

(xii) "**O. Reg. 352**" means Ontario Regulation 352 entitled "Mobile PCB Destruction Facility", (formerly Ontario Regulation 148/86), under the Act;

(xiii) "**O. Reg. 362**" means Ontario Regulation 362 - R.R.O. 1990, Waste Management - PCBs, as amended from time to time, made under the EPA;

(xiv) "**PCBs**" means any monochlorinated or polychlorinated biphenyl or any other mixture of them or any mixture that contains one or more of them, as defined in Section 1 of Ontario Regulation 362;

(xv) "**PCB Waste**" means PCB equipment, PCB liquid or PCB material as defined in Section 1 of O. Reg. 362;

(xvi) "**Processing**" means treatment of wastewater contaminated with PCBs using the Mobile Unit, which is listed in Schedule "B" of this Certificate;

(xvii) "**Regional Director**" means the Regional Director of the Ministry for the geographic area in which the mobile waste disposal site is to be operated; and

(xviii) "**Site**" means the location at which the Mobile Unit is being operated, or is to be operated.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

B. <u>General Provisions</u>

1. Except as otherwise provided by these Conditions, the Company shall operate the Mobile Unit in accordance with the following:

a. plans and specifications outlined in Schedule "A" attached to this Certificate, except when specified otherwise by the conditions of this Certificate;

b. terms and conditions listed in this Certificate;

c. Provisional Certificate of Approval for a Waste Management System number 6283-59ZQHA;

d. all applicable municipal by-laws.

2. The requirements specified in this Certificate are the requirements under the *EPA*. The issuance of this Certificate in no way abrogates the Company's legal obligations to take all reasonable steps to avoid violating other applicable provisions of the *EPA* and other legislation and regulations.

3. The requirements of this Certificate are severable. If any requirement of this Certificate, or the application of any requirement of this Certificate to any circumstance, is held invalid, the application of such requirement to other circumstances and the remainder of this Certificate shall not be affected in any way.

4. The Company shall ensure compliance with all terms and Conditions of this Certificate. Any non-compliance constitutes a violation of the *EPA* and is grounds for enforcement.

5. (a) The Company shall, forthwith upon request of the Director, District Manager, or Provincial Officer (as defined in the *EPA*), furnish any information requested by such persons with respect to compliance with this Certificate, including but not limited to, any records required to be kept under this Certificate; and

(b) In the event the Company provides the Ministry with information, records, documentation or notification in accordance with this Certificate (for the purposes of this Condition referred to as "Information")

i. the receipt of Information by the Ministry;
ii. the acceptance by the Ministry of the Information's completeness or accuracy; or
iii. the failure of the Ministry to prosecute the Company, or to require the Company to take any action, under this Certificate or any statute or regulation in relation to the Information

> shall not be construed as an approval, excuse or justification by the Ministry of any act or omission of the Company relating to the Information, amounting to non-compliance with this Certificate or any statute or regulation.

6. The Company shall allow Ministry personnel, or a Ministry authorized representative(s), upon presentation of credentials, to:

(a) carry out any and all inspections authorized by Section 156, 157 or 158 of the *EPA*, Section 15, 16, or 17 of the *Ontario Water Resources Act*, R.S.O. 1990, or Section 19 or 20 of the *Pesticides Act*, R.S.O. 1990, as amended from time to time, of any place to which this Certificate relates; and, without restricting the generality of the foregoing to:

(b) i. enter upon the premises where the records required by the Conditions of this Certificate are kept;

ii. have access to and copy, at any reasonable time, any records required by the Conditions of this Certificate;

iii. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations required by the Conditions of this Certificate; and

iv. sample and monitor at reasonable times for the purposes of assuring compliance with the Conditions of this Certificate.

7. (a) Where there is a conflict between a provision of any document referred to in Schedule "A", and the Conditions of this Certificate, the Conditions in this Certificate shall take precedence; and

(b) Where there is a conflict between documents listed in Schedule "A", the document bearing the most recent date shall prevail.

8. Should there be discrepancies between the provisions of this Certificate and any other Certificate of Approval issued under Section 27 of the *EPA* for the Site where the Mobile Unit is to operate, that Site Certificate of Approval shall take precedence.

9. The Company shall ensure that all communications/correspondence made pursuant to this Certificate reference the number "2227-55TM6D".

10. Any information relating to this Certificate and contained in Ministry files may be made available to the public in

accordance with the provisions of the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, C. F-31.

11. All records and monitoring data required by the Conditions of this Certificate shall be kept by the Company for a minimum period of three (3) years. These records shall be made available to staff of the Ministry upon request, as required under Conditions 5 and 6.

C. Notification - Change of Ownership

12. (1) The Company shall notify the Director of the Environmental Assessment and Approvals Branch, in writing, of any of the following changes within thirty (30) calendar days of the occurrence of the change:

a. change of owner or operator or both;

b. change of address or address of new owner;

c. change of partners where the Company is or at any time becomes a partnership, and a copy of the most recent registration registered under the *Business Names Act* shall be included in the notification to the Director;

d. change of name of the corporation where the Company is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 of Ontario Regulation 189, R.R.0. 1980, as amended from time to time), filed under the *Corporation Information Act* shall be included in the notification to the Director; and

e. change in director(s) or officer(s) of the corporation where the Company is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" as referred to in d.

(2) In the event of any change in ownership of the Mobile Unit, the Company shall notify the succeeding (new owner) company of the existence of this Certificate, and a copy of such notice shall be forwarded to the Director.

(3) The Company shall ensure that all communications made pursuant to this Condition shall refer to this Certificate number "2227-55TM6D".

D. Waste Disposal Site Approval

13. The Mobile Unit shall not be located at a Site unless the Company has applied for and the Director of Environmental Assessment and Approvals Branch has issued a Provisional Certificate of Approval for the Site as required by O. Reg. 352. The Mobile Unit may be only situated at a Class 2 Mobile PCB Destruction Facility waste disposal site, including Company's site in Cornwall.

E. Demonstration Study

14. The Company shall undertake a demonstration study for a maximum of one year, starting with the first project.

This demonstration study shall include, but not be limited to, the requirements outlined in this Certificate.

15. (1) The Company shall decontaminate at least three (3) cases of different levels of PCBs contaminated wastewater during the study. Two cases may have similar level of PCB in the contaminated wastewater, provided that the chemical/physical characteristics are different.

(2) The wastewater contaminated with PCBs shall be processed via Photo-Cat System and stored in a holding tank;

(3) Two samples, from the full depth of the wastewater, shall be taken from either end of the holding tank and mixed to form a composite sample;

(4) The two (2) samples of PCB contaminated wastewater, prior (influent) and after decontamination (the composite sample from holding tank), shall be sent to an accredited Ontario laboratory for testing of PCB content;

(5) Sampling events shall be scheduled on Monday to Friday.

(6) District Manager shall be notified of the up-coming sampling event, in writing, twenty-four (24) hours before the proposed sampling to allow the Ministry staff to witness the sampling, if deemed necessary by the District Manager.

16. The Company shall test the samples collected as per Condition 15 for PCB and Dioxin(s)/Furan(s). For PCBs samples shall be tested according to the methodology included on Schedule "C" attached to this Certificate.

17. (1) If the PCB content in the processed wastewater is equal to or above five (5) ppb, the wastewater shall be processed once again and re-sampled;

(2) If the PCB content in the wastewater is less than five (5) ppb, the Company, on behalf of the owner of the Site, shall apply to the local municipality having jurisdictional authority, to obtain approval to release the wastewater into a sanitary sewer; and

(3) The decontaminated wastewater to be released into the sanitary sewer shall comply with the "Model Sewer Use By-Law", August 1998.

18. (1) Upon completion of the demonstration study, the Company shall prepare a summary report.

The report shall be submitted to the Director no later than thirty (30) calendar days from the completion of the demonstration study.

(2) The report shall contain the following information:

(a) address and location of the Site(s) where operation has taken place;

(b) date of commencement and date of completion of operations;

(c) description of operation;

(d) concentration of PCBs and Dioxin(s)/Furan(s) in all of samples collected, identified in Condition 15;

(e) duration and type (batch or continuous) of each operation;

(f) testing method used to test PCBs contaminated wastewater; and

(g) name, address and the telephone number of a laboratory utilized for testing required in this Certificate.

19. The Company shall continuously monitor the following parameters during the operation of the Mobile Unit:

(a) temperature;

(b) pressure;

(c) flow;

and log values of the parameters at beginning and end of each batch operation, at least hourly.

20. No further decontamination of PCB contaminated wastewater shall be done, until the Director of Environmental Assessment and Approvals Branch has given written approval of acceptance of the demonstration study results.

F. Pre-Operation Notification Requirements

21. (1) The Company shall notify the District Manager, in writing, of its intent to operate the Mobile Unit at a Site in the District Manager's area of jurisdiction.

The notification shall be submitted a minimum of fifteen (15) business days prior to the operation of the Mobile Unit, or twenty-four (24) hours after finalization of the contract to commence work, whichever is less, but shall not be less than

three (3) business days.

(2) The notification shall include, but is not be limited to the following information:

a. name, address, telephone number, and location of the Site at which the Company intends to operate;

b. description of the Mobile Unit or room(s) to be utilized for the operation including the information listed in Schedule "A" attached to this Certificate and Schedule "A" attached to the Provisional Certificate of Approval for a Waste Management System number 6283-59ZQHA;

c. Site plan for the location where the Company intends to operate, showing the following:
- property boundaries;
- buildings;
- Site fencing;
- access control;
- placement of the Mobile Unit on the Site;
- storage location of water to be processed and processed wastewater and waste; and
- locations of manholes, catchbasins, open sewers, water bodies;

d. usage of properties adjacent to the Site where the Company intends to operate the Mobile Unit;

e. proposed date and time of commencement of operation of the Mobile Unit;

f. proposed hours of operation for the Mobile Unit;

g. anticipated completion date and time of the operation of the Mobile Unit;

h. copy of this Certificate and of Provisional Certificate of Approval for a Waste Management System number 6283-59ZQHA;

i. copy of the letter from the Director confirming acceptance of the financial assurance;

j. details of valid liability insurance of the Mobile Unit;

k. license plate and the location of issue for the vehicle used for transportation of the Mobile Unit;

l. copy of the notification to the municipal clerk, or designate;

m. details of the Site-specific contingency plan as required under Condition 46;

n. details of PCB contaminated wastewater storage prior to processing in the Mobile Unit;

o. general description of PCB contaminated wastewater and its approximate amount to be processed;

p. estimated amount of processed PCB contaminated wastewater resulting from the operation of the Mobile Unit;

q. final destination of processed PCB contaminated wastewater;

r. proposed handling and storage procedures utilized for processed PCB contaminated wastewater;

s. proposed handling, storage and/or disposal procedures utilized for all non-PCB wastes and decontaminated wastewater, generated by the operation of the Mobile Unit; and

t. proposed destination of non-PCB wastes and decontaminated wastewater.

(3) The Company shall provide to the District Manager any additional information that the District Manager may require.

(4) This information shall be submitted in the form and within a time period acceptable to the District Manager.

(5) The Company shall not allow the Mobile Unit to be located or operated at the Site until the District Manager has provided, in writing, his concurrence of all required additional information.

22. A copy of the notification referred to in Condition 21 shall also be submitted to the clerk of the municipality in which the Company intends to operate or to such other municipal officer that the clerk designates in writing.

G. General Operating Conditions

23. The Company shall operate the Mobile Unit in compliance with the requirements set out in the following documents:

a. *EPA*;
b. *O. Reg. 347*;
c. *O. Reg. 352;*
c. *O. Reg. 362*;
d. Storage of PCB Material Regulation, SOR/92-507; and
e. Transportation of Dangerous Goods Act and Regulations, SOR/85-77.

24. (1) Only the Mobile Unit described in Schedule "B" attached to this Certificate and in Schedule "B" attached to the Provisional Certificate of Approval for a Waste Management System number 6283-59ZQHA, shall be operated pursuant to this Certificate.

(2) In the event that the Company proposes to operate additional equipment, which is not a part of the Mobile Unit approved by this Certificate, a separate application shall be submitted to the Director, who may amend this Certificate or issue a separate Certificate of Approval for a Waste Disposal Site.

25. The operation of this Mobile Unit is limited to the following:

decontamination of PCB contaminated wastewater, all for specifically the following waste class: 243, as described in the "Ministry of the Environment waste Classes" January 1986, as amended.

26. PCB contaminated wastewater shall not be diluted in any way to lower PCB concentration before or during the treatment.

27. (a)-The Mobile Unit shall only be operated at a site where the waste is generated, or consolidated according to Director's Instructions issued under *Ontario Regulation 362.*

(b) No waste shall be transported from other generators/sites to the Mobile Unit for processing.

28. (1) No waste shall be transported in the Mobile Unit.

(2) No waste shall be contained in the Mobile Unit while it is transported from one operating Site to another operating Site or to the storage location as listed in the supporting documentation contained in Schedule "A".

29. The Company shall not locate the Mobile Unit at a Site for a period of more than ninety (90) calendar days after arrival of the Mobile Unit at the Site, except with the written concurrence of the Regional Director.

30. The Mobile Unit shall only be operated when the appropriately trained personnel are in attendance.

31. The Company shall cover any open or uncovered containers or other holding areas that contain waste to be processed by the Mobile Unit or waste which is to be left on site prior to removal from the Site.

32. Disposal of PCB waste and non-PCB waste shall be the responsibility of the owner/generator.

33. Should the operation of the Mobile Unit at a Site result in any environmental adverse effects and cause complaints from the public, the Regional Director, upon the District Manager's recommendation, may order the Mobile Unit to immediately cease operation.

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H. Standards for Analyzing PCB Concentrations and Testing Frequency

34. To analyse total PCB concentration in soil and solid waste, the Ministry of the Environment, method E3153A entitled Ministry of the Environment; 1998 - The Determination of Polychlorinated Biphenyls (PCB) in Soil and Solid Industrial Waste by Gas Chromatography - Electron Capture Detection (GC-ECD) (PSAPCB - E3153A), Laboratory Services Branch, Etobicoke, Ontario, shall be used.

35. To analyse PCB concentration in oil or liquid, Ministry of the Environment, Method E3145A entitled Ministry of the Environment; 1998 - The Determination of Polychlorinated Biphenyls (PCB) in Liquid Industrial Wastes by Gas Chromatography - Electron Capture Detection (GC-ECD) (POACPCB - E3145A), Laboratory Services Branch, Etobicoke, Ontario, shall be used.

36. Leachate analyses shall follow the Toxicity Characteristic Leaching Procedure, Method 1311 that appears in the United States Environmental Protection Agency Publication SW-846 entitled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", as amended from time to time, or an equivalent test method approved by the Director of the Environmental Assessment and Approvals Branch, MOE, as described under the definition of "leachate toxic waste" in Section 1 - Definitions, *Ontario Regulation 347*.

37. For thirty (30) or more PCB contaminated solid waste samples that have been analysed for total PCB, and analysis show PCB concentration less than 50 mg/Kg, the Company shall carry out leachate testing on only ten percent (10%) of the samples.

38. The samples to be leachate tested, should have a total PCB concentration below 50 mg/Kg and should be selected from those with a PCB concentration nearest 50 mg/Kg.

39. PCB contaminated waste that has been tested in accordance with Condition 43, using the leachate analysis method described under Condition 41, and which has a test result of less than 0.3 mg/l PCB concentration, is not considered PCB waste or hazardous waste.

40. If any of the leachate tests shows PCB concentration exceeding 0.3 mg/l, a more comprehensive leachate testing program should be developed in consultation with MOE and shall be approved by the Director of the Environmental Assessment and Approvals Branch.

I. Sampling and Disposal Protocol for PCB Contaminated Materials

41. The Company shall test PCB contaminated materials listed in Schedule "D" of this Certificate, following the sampling and disposal protocols described in Schedule "D" of this Certificate.

J. Processing and Disposal Protocol for Oily wastewater

42. The Company shall process oily wastewater, which may form as an emulsion of oil in water, at phase separation between oil and water layers, following this operating and developing procedure:

a. The oily water shall be placed into open top drums;

b. The lid shall be placed on the open top of the drum and the drum heater shall be applied to raise the oily wastewater temperature to 30 degrees C;

c. The separated oil which floats on top of the wastewater in the drum shall be separated into a drum;

d. The separated oil shall be processed by a contractor that has approval for destruction of PCBs in oil. The decontaminated oil shall be sent to an approved liquid industrial waste processing facility. The Company may choose to send the separated oil directly to an approved final disposal site;

e. The separated wastewater shall be treated via Photo-Cat System with the rest of the wastewater; and

f. The Company is responsible for processing and disposal of the oily water;

unless small amount of oil prevents meaningful separation of the oil phase.

43. The Company is responsible for cleaning up the wastewater holding tank. The cleaned tank shall be swab tested and if the test yields less than 10Fg/100cm^2 of PCBs it shall be relocated off site.

K. Reporting Requirements

44. (1) If the duration of the operation of the Mobile Unit at a specific Site is shorter than thirty (30) calendar days, then the Company shall prepare a report at the completion of the operation of the Mobile Unit.

If the duration of the operation of the Mobile Unit at a specific Site exceeds thirty (30) calendar days, then the Company shall prepare a report at the end of each thirty (30) day-operating period and at the completion of the operation at a specific Site.

(2) The report shall be submitted to the District Manager within thirty (30) calendar days from the end of each reporting period.

(3) The report shall include, but not be limited to the following information:

a. a summary of the notification requirements listed under Condition 14;

b. amount of waste which was processed by the Mobile Unit while located at the Site;
c. description of PCB contaminated wastewater which was processed;
d. total amount of PCB wastes, including PCB contaminated wastewater, wood, paper sorbent pads, metal components and any other materials generated by the operation of the Mobile Unit while located at the generator's Site;
e. total amount of non-PCB wastes, generated by the operation of the Mobile Unit while located at the generator's Site;
f. dates and hours of operation of the Mobile Unit, including the actual commencement and completion date;
g. handling, storage and disposal procedures utilized for all non-PCB wastes generated by the operation of the Mobile Unit;
h. handling and storage procedures utilized for all PCB wastes, including PCB contaminated wastewater, metal components, wood, paper and any other materials, generated by the operation of the Mobile Unit;
i. destination of PCB wastes;
j. destination of non-PCB wastes; and
k. results of the testing required by this Certificate.
l. actual amount of PCB contaminated wastewater which was processed by the Mobile Unit;
m. handling and storage procedures utilized for processed PCB contaminated wastewater;
n. records of upsets or emergency situation that occurred during the operation of the Mobile Unit;
o. details of storage for any processed PCB contaminated wastewater that is not intended for shipment.

L. Spill Reporting

45. The Company shall promptly take all necessary steps to contain and clean up any spills which result from the operation of the Mobile Unit at the Site. All spills, upsets and fires shall be immediately reported to the Ministry's Spills Action Centre at **1-800-268-6060**, and shall be recorded in a written log or an electronic file format, as to the nature of the spill or upset, and the action taken for clean-up, correction and prevention of future occurrences.

M. Contingency Plan

46. For each Site, the Company shall have in place a Spill Contingency and Emergency Response Plan prior to commencing operations at the Site. The Plan shall include, but is not necessarily limited to:

(a) emergency response procedures to be undertaken in the event of a spill or process upset, including specific clean up methods for each individual waste;

(b) a list of contingency equipment and spill clean up materials, including names and telephone numbers of waste management companies available for emergency response;

(c) maintenance and inspection procedures required to keep the equipment and materials for spills and emergency situations in operating condition;

(d) a notification protocol with names and telephone numbers of persons to be contacted, including Company personnel, the Ministry of Environment District Office and Spills Action Centre, the local Fire Department, the local Municipality, the local Medical Officer of Health, and the Ministry of Labour.

47. A copy of the Spill Contingency and Emergency Response Plan shall be kept on the Site at all times, in a central location available to all staff, and a copy shall be submitted to the District Manager, the local Municipality and the Fire Department.

(a) The Company shall ensure that the contingency equipment and materials outlined in the Spill Contingency and Emergency Response Plan are immediately available on the Site at all times, in a good state of repair, and fully operational; and,

(b) The Company shall ensure that all operating personnel are fully trained in their use, and in the procedures to be employed in the event of an emergency.

48. The Company shall cover any open drains to prevent spilled material from entering any sewer system.

N. Staff Training

49. (a) All operators of the Mobile Unit shall be trained with respect to the following areas:

i. terms, conditions and operating requirements of this Certificate;
ii. operation and management of the Mobile Unit, including contents of the Operation and Maintenance Manual required under Condition 52;
iii. any environmental concerns pertaining to the wastes to be processed;
iv. occupational health and safety concerns pertaining to the wastes to be processed;
v. relevant waste management legislation, regulations and *the EPA*;
vi. operation of equipment and procedures to be followed in the event of an emergency situation;
vii. contents of the Contingency Plan and procedures, as required under Conditions 46 to 48;
viii. Equipment and Facility Inspection Procedures, as required under Condition 50;
ix. Complaint Response Procedures, as required under Condition 51;
x. recognition of the PCB contaminated wastewater which need re-processing due to yet contamination with PCBs above the Clean-up Criteria.

(b) The Company shall maintain a written record at the Site, which may be in the form of a log-book, which includes:

i. date of training;
ii. name and signature of person who has been trained; and
iii. description of the training provided.

O. Equipment and Facility Inspection

50. The Company shall conduct regular inspections of the equipment and facilities, including materials and equipment used for spills and emergencies, as required under Conditions 46 to 48, to ensure that all equipment and facilities at the Site are maintained in good working order at all times. Any deficiencies detected during these regular inspections shall be promptly corrected. A written record shall be maintained at the Site, which includes the following:

a. name and signature of trained personnel conducting the inspection;
b. date and time of the inspection;

c. list of equipment inspected and all deficiencies observed;
d. a detailed description of the maintenance activity;
e. date and time of maintenance activity; and
f. recommendations for remedial action and actions undertaken.

P. Complaint Response Procedure

51. If at any time, the Company receives complaints regarding the operation of the Site, the Company shall respond to these complaints according to the following procedure:

a. The Company shall record each complaint on a formal complaint form entered in a sequentially numbered log book. The information recorded shall include the nature of the complaint, the name, address and the telephone number of the complainant and the time and date of the complaint;

b. The Company, upon notification of the complaint shall initiate appropriate steps to determine all possible causes of the complaint, proceed to take the necessary actions to eliminate the cause of the complaint and forward a formal reply to the complainant; and

c. The Company shall retain on-site a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the re-occurrence of similar incidents.

Q. Operation and Maintenance Manual

52. The Company shall:

(1) continue to maintain and update an Operations and Maintenance Manual outlining the routine operating procedures, maintenance programs and inspection procedures required to keep the Mobile Unit in good operating condition, in accordance with good engineering practices;

(2) incorporate into the Operations and Maintenance Manual, the plans and specifications outlined in Schedule "A" attached to this Certificate, except when specified otherwise by the Conditions of this Certificate;

(3) up-date the Operations and Maintenance Manual as required to maintain it in keeping with good engineering practices; and

(4) implement the recommendations of the Operations and Maintenance Manual.

R. Financial Assurance

53. (1) The Company shall ensure that financial assurance in the amount of $50,000.00 (the amount required for one (1) unit), is posted with the Director of the Environmental Assessment and Approvals Branch at all times that the Mobile Unit is in operation or is located at a Site where the operation is to take place.

(2) Financial assurance may be in one of the following forms:

a. cash; or
b. letter of credit; or
c. bond; or
d. other form;

all satisfactory to the Director of the Environmental Assessment and Approvals Branch.

(3) This Certificate number "2227-55TM6D" shall be included on any correspondence related to the financial assurance that is to be submitted to the Director of the Environmental Assessment and Approvals Branch.

(4) In the event that the financial assurance is scheduled to expire or notice is received that it will not be renewed and a

replacement in a form satisfactory to the Director of the Environmental Assessment and Approvals Branch is not received at least sixty (60) calendar days before the expiry or the renewal date, the Company shall replace it with a cash deposit.

(5) The financial assurance may be used for any expenses incurred by Her Majesty the Queen in Right of Ontario, including cash deposits made under this Condition or payment under Part XII of the *EPA*, related to any waste management activity of the Company or its successors and assignees.

(6) Financial assurance shall be considered acceptable for the purpose of operation of the Mobile Unit, once the Director of the Environmental Assessment and Approvals Branch issues written approval of the proposed financial assurance.

(7) The Company shall only operate the number of units for which adequate financial assurance has been provided.

SCHEDULE "A"

***This Schedule "A" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

1. Application for a Provisional Certificate of Approval for a Waste Disposal Site, submitted by Material Resources Recovery S.R.B.P. Inc., dated February 20, 2001.

2. Application for Approval of a Waste Management System, submitted by Material Resources Recovery S.R.B.P. Inc., dated February 20, 2001.

3. A binder entitled "MRR Material Resources Recovery, Applications for Approval for a Waste Disposal Site & Waste Management System, Prepared for: Ministry of the Environment, Submitted by: Nancy Dyck, P. Eng. Material Resource Recovery SRBP Inc., P. O. Box 683, Cornwall, Ontario, K6H 5T5" and contains the following sections and appendices:

Design/Operation Report;
Waste Mgmt Training Manual;
Vehicle Registration; and
Insurance Certificate.

Appendix A Verification of Legal Name
Appendix B Drawing & Schematics
Appendix C Notification Form.

4. Document entitled "Material Resource Recovery Inc., Demonstration of Efficiency of the Photo Catalytic Water Treatment System in Treatment of PCB Contaminated Water, June 28, 2001, Prepared for Jan Strmen, Vice President of Technical Operations, Written by Jeffrey Lee, Field Engineer".

5. Letter and its attachment from Nancy Dyck, MRR, Material Resource Recovery to Mohsen Keyvani, MOE, dated June 28, 2001, Re: Application for Approval of Waste Disposal Sites Mobile PCB Wastewater Treatment System MOE Reference No. 4675-4U8TM3.

6. Letter and its attachment from Jan Strmen, MRR, Material Resource Recovery to Mohsen Keyvani, MOE, dated August 22, 2001, Re: Application for Approval of Waste Disposal Sites Mobile PCB Waste Water Treatment System, MOE Reference No. 4675-4U8TM3.

7. Letter and its attachment from Jan Strmen, MRR Material Resource Recovery to Mohsen Keyvani, MOE, dated September 21, 2001, Re: Application for Approval of Waste Disposal Sites Mobile PCB Waste Water Treatment System, MOE Reference No. 4675-4U8TM3.

8. Facsimile and its attachment from Jan Strmen, MRR to Mohsen Keyvani, MOE, dated May 17, 2002.

9. Facsimile and its attachment from Jan Strmen, MRR to Mohsen Keyvani, MOE, dated May 28, 2002.

10. Facsimile and its attachment from Jeffrey Lee, MRR to Mohsen Keyvani, MOE, dated July 30, 2003, Re: Application for Approval of Waste Disposal Sites Mobile PCB Waste Water Treatment System.

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SCHEDULE "B"

***This Schedule "B" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

Mobile Unit(s) approved for operation pursuant to this Certificate:

UNIT #	DESCRIPTION	SERIAL #	LICENCE #	PROVINCE	STORAGE LOCATION
1	Trailer	4X4TSEX21YN025591	X39412	Ontario	1

Storage Location(s): 1. 2425 Industrial Park Drive
Cornwall City, United Counties Of Stormont, Dundas & Glengarry

SCHEDULE "C"

***This Schedule "C" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

The following methods shall be utilized for the analysis of PCB contaminated wastewater and after being decontaminated:

1. The MOE method:

Method E3400: The Determination of Organochlorine Pesticides (OCs) and Other Chlorinated Organic Compounds in Water, Effluents, and Wastewater by Hexane Microextraction and Gas Chromatography - Mass Spectrometry (GC-MS). It is available by calling Laboratory Services Branch of the MOE at (416) 235-6311.

2. United States Environmental Protection Agency (U.S. EPA) method:

Method 608: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, Orgaochlorine Pesticides and PCBs.

SCHEDULE "D"

***This Schedule "D" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

1. The Company shall test PCB contaminated soil, sand, gravel, asphalt, concrete and wood, stored in drums and dispose of these wastes following this sampling and disposal protocol:

1.1 The contents of a drum shall be transferred onto a spill tray.

1.2 For drums containing soil, sand and gravel, aliquots from the tray shall be collected at locations representing top, middle and bottom of the drum. These three (3) aliquots shall be well mixed together to form one composite sample for analyses.

1.3 For drums containing asphalt and concrete, three (3) to five (5) aliquots from the tray shall be collected by taking surface chips from stained concrete and asphalt. These aliquots shall be well mixed together to form one (1) composite sample for analyses.

1.4 For drums with wood, three (3) to five (5) aliquots shall be collected by taking surface chips from stained wood. These aliquots shall be well mixed together to form one (1) composite sample.

1.5 The contents of the drum on the spill tray shall then placed back into a receiving drum, which shall be numbered and catalogued to correspond to the number of the composite sample.

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1.6 Each composite sample shall be divided into two portions. One portion shall be analysed for PCB concentration and another portion shall be analysed for PCB leachate concentration.

1.7 The samples shall be sent to an independent accredited Ontario laboratory for analyses for PCB concentration and PCB leachate concentration.

1.8 The content of drums, where the composite samples analyses exceed PCB concentration of 50 mg/Kg are PCB waste, as per *Ontario Regulation 362*, and shall be managed as PCB waste.

1.9 If the composite samples analyses exceed PCB concentration of 50 mg/Kg, a PCB leachate test is not required.

1.10 The content of drums, where analyses of the composite samples exceed PCB leachate test of 0.3 mg/L, as per *Ontario Regulation 347*, Schedule 4, is hazardous waste and shall be managed as hazardous waste.

1.11 The content of drums where analyses of composite samples show PCB concentration of less than 50 mg/Kg and PCB leachate test less than 0.3 mg/L is not PCB waste or hazardous waste, and shall be disposed of as non-hazardous waste.

2. The Company shall test PCB contaminated suits, gloves, rags and filters, stored in drums and dispose of these wastes following this sampling and disposal protocol:

2.1 The Company shall take two (2) sets of representative samples from each drum of:

a. tyvek suits: one (1) every twenty (20) suits - two (2) 10 cm2 samples
b. gloves: one (1) every twenty (20) pairs - two (2) samples cut out of finger tips
c. rags: one (1) 10 cm2 sample from every two (2) rags
d. breathing filters: one (1) every twenty (20) filters

2.2 The above samples shall be taken from the most visibly contaminated items.

2.3 Of those two composite samples, one shall be analysed for PCB concentration and the other for PCB leachate concentration.

2.4 The composite samples shall be sent to an independent accredited Ontario laboratory for analyses for PCB concentration and PCB leachate concentration.

2.5 The content of the drums where analyses of composite samples exceed PCB concentration of 50 mg/Kg is PCB waste, as per *Ontario Regulation 362*, and shall be managed as PCB waste.

2.6 If composite samples analyses exceed PCB concentration of 50 mg/Kg of PCB, PCB leachate test is not required.

2.7 The content of drums, where analyses of composite samples exceed PCB leachate test of 0.3 mg/L, is hazardous waste, as per *Ontario Regulation 347*, and shall be managed as a hazardous waste.

2.8 The content of drums, where analyses of composite show PCB concentration less than 50 mg/Kg and PCB leachate test less than 0.3 mg/L, is not PCB waste and not hazardous waste, and shall be managed as non-hazardous waste.

3. The Company shall test PCB contaminated electrical cables stored in drums and dispose of these, following this sampling and disposal protocol:

3.1 If there is any free liquid or sludge at the bottom of the drum, it shall be sampled and tested for total PCB concentration. If the test results yield PCB concentration above 50 mg/Kg, the content of the drum is classified as PCB waste, and shall be managed as PCB waste.

3.2 If the test results yield PCB concentration less than 50 mg/Kg or if there is no free liquid in the drum, five (5) aliquots shall be collected from randomly selected sections of cable from each drum. The aliquots consist of short sections (1 to 5 cm) of the randomly selected cables.

3.3 The five (5) aliquots are well mixed to form one composite sample for analyses. The composite sample is separated into two portions. One shall be analysed for PCB concentration and the other for PCB leachate concentration.

3.4 The composite samples shall be analysed by an independent accredited Ontario laboratory, using analytical methods approved or acceptable by the Ministry.

3.5 If the composite samples analyses exceed PCB concentration of 50 mg/Kg, the cables are PCB waste, as per *Ontario Regulation 362* and shall be managed as PCB waste, or metal parts shall be separated from non-metal parts, decontaminated and recycled, while separated non-metal parts shall be disposed as PCB waste.

3.6 If the other portion of the composite sample analysed for PCB leachate concentration results in PCB concentration of more than 0.3 mg/L, the waste is classified as hazardous waste and shall be managed as hazardous waste, or metal parts shall be separated from non-metal parts, decontaminated and recycled, while separated non-metal parts shall be disposed as hazardous waste.

4. The Company shall sample, test and dispose of PCB contaminated carbon filters following only this sampling and disposal protocol:

4.1 Samples from the top, middle and bottom of the carbon filter drum shall be collected. These three (3) aliquots shall be mixed together to form one composite sample for analyses.

4.2 The composite sample is divided into two portions. One portion shall be analysed for PCB concentration and another portion shall be analysed for PCB leachate concentration.

4.3 The samples shall be sent to an independent accredited Ontario laboratory for analyses for PCB concentration and PCB leachate concentration.

4.4 The contents of the drums, where the composite samples analyses exceed PCB concentrations of 50 mg/Kg of PCB waste, as per *Ontario Regulation 362*, shall be managed as PCB waste.

4.5 If the composite samples analyses exceed PCB concentrations of 50 mg/Kg, a PCB leachate test is not required.

4.6 The content of the drums, where analyses of the composite samples exceed the PCB leachate test of 0.3 mg/L, as per *Ontario Regulation 347*, Schedule 4, are hazardous waste and shall be managed as hazardous waste.

4.7 The content of the drums where analyses of composite samples show PCB concentrations of less than 50 mg/Kg and the PCB leachate test is less than 0.3 mg/L is not PCB waste or hazardous waste, and shall be disposed of as non-hazardous waste.

SCHEDULE "E"

***This Schedule "E" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

Wipe Test Protocol

1. Purpose:

This wet wipe sampling protocol is recommended for the verification of PCB contamination concentrations on metal which are to be sent to metal recyclers for subsequent smelting. In particular, this protocol deals with the sampling of electrical transformers including the location of samples and the number of samples per location.

2. Pre-Sampling Preparation:

(1) In a pre-cleaned 250 mL glass jar, one 2 inch by 2 inch gauze pad. The jar is sealed with a lid lined with hexane cleaned aluminum foil or teflon.

(2) Disposable templates are prepared such that the inner edges represent a minimum 100 cm2 surface area. The template

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can be any shape appropriate for the surface being tested (e.g. square, rectangular, etc.) but should be at least 100 cm2. Smaller surface areas can be sampled if circumstances dictate; however, such an approach presents a risk of not detecting PCBs due to the small samples and the limitation of the analytical equipment.

Templates are normally made of heavy paper and cardboard.

3. Required Sampling Equipment:

(1) Prepared sampling jars containing gauze pad soaking in hexane.
(2) Disposable templates.
(3) Latex gloves.
(4) Markers and labels.
(5) Container for disposing of used templates and gloves.
(6) Chain of custody sheets.
(7) Metal forceps.
(8) Solvent bottle of pesticide grade hexane.

4. Sampling Methodology:

(1) Using a disposable template and wearing latex gloves, mark with a piece of chalk a 100 cm2 area on the metal surface to be tested. Dispose of the template and gloves.

Alternatively, the template may be taped to the surface.

(2) Open one sample jar. Wearing a clean pair of latex gloves, remove the gauze pad from the jar. Add 4 or 5 mL of hexane to the gauze pad quantitatively from a pump burette on the solvent bottle.

(3) Starting in one corner, wipe the pre-marked area with the gauze pad in rows ensuring the entire area is covered. Use a uniform and steady pressure.

(4) Open the gauze pad and refold to expose fresh surfaces.

(5) Wipe the marked area in rows which are perpendicular to the previous ones. Ensure the entire area is swabbed equally. Use a uniform and steady pressure.

(6) Place the gauze pad back into the jar. Close lid and label sample appropriately.

(7) Dispose of gloves.

5. A chain of custody is completed prior to removing the samples for analysis.

6. Variations on Sampling Methodology:

In the case of composite samples, the gauze pads which comprise the composite may be placed after wiping the appropriate area, in the same sampling jar which is then labelled as a composite sample. For example, if four areas are to be composited, gauze pads from four prepared sampling jars would be used, one for each area. Rather than returning each gauze pad to the jar it originated from, the gauze pads would all be placed into one jar after the wipe is performed.

To sample wires, a length representing a 100 cm2 area is marked and wiped by drawing the wire back and forth 8 times between a gauze pad which completely surrounds the wire. The gauze pad is opened to expose a fresh surface and the wiping is repeated.

7. Sampling Locations:

(1) The sampling locations for each transformer tank shall be as follows:

Composite 1 consists of:
flat surface adjacent to or below a fin port

side wall
weld joint/seam
bottom tank surface

Composite 2 consists of:
interior of fin
side wall or bottom surface
weld joint/seam
side wall corner

(2) For the wires, two composite samples shall be submitted for each transformer decontaminated. Each composite shall consist of two randomly selected lengths of wire which represent a 100 cm2.

(3) For the laminations, two composite samples shall be submitted for each transformer decontaminated. Each composite shall consist of two randomly selected 100 cm2 areas.

8. For the bushings, one composite sample shall be submitted for each transformer decontaminated. The composite shall consist of two randomly selected 100 cm2 areas.

For each of fewer samples, one gauze and container blank should be submitted.

9. Analysis:

Analysis shall normally be by capillary GC-ECD using Aroclor standards for quantification. Alternative analytical methods include GC-ELCD or GC-MS.

SCHEDULE "F"

***This Schedule "F" forms part of this Provisional Certificate of Approval number* 2227-55TM6D.**

Calculation of TCDD Toxicity Equivalents

In order to calculate the 2, 3, 7, 8 - tetrachlorodibenzo-p-dioxin Toxicity Equivalents (TCDD TEQ) values the following assumptions are made:

1. The concentration of 2, 3, 7, 8 - substituted isomers in each isomer group is obtained by GC HR/MS or in the absence of isomer - specific analytical data it is assumed that all isomers in the total isomer group data as reported are all 2, 3, 7, 8-substituted;

2. The resulting data is multiplied by the appropriate international toxicity equivalency (I-TEF) (column below) to give the appropriate TEQ, and,

3. The detection Limit must be < 5 ppt.

4. When an analytical result is reported as below the detection limit, one half of the detection limit is used as the basis of the TEQ calculation.

5. Method E3151B or USEPA1613, or an equivalent approved by the Director, must be used.

Example of Calculation: Soil Sample

Isomer Group	Level (pg/g)	I-TEF	TEQ (pg/g)
2,3,7,8-TCDD	ND (0.3)	1.0	0.2
1,2,3,7,8-5CDD	ND (1.3)	0.5	0.4
6CDD [1] [1]	ND (1.3)	0.1	0.07
1,2,3,4,6,7,8-7CDD	ND (1.3)	0.01	0.00
8CDD	78	0.001	0.08
2,3,7,8-TCDF	120	0.1	12
1,2,3,7,8-5CDF	ND (1.3)	0.05	0.04
2,3,4,7,8-5CDF	ND (1.3)	0.5	0.35
6CDF[2]	11	0.1	1.1
7CDF[3]	ND (1.3)	0.01	0.00
8CDF	ND (0.8)	0.001	0.00
TOTAL	209		14.24

1. Sum of 3 isomers
2. Sum of 4 isomers
3. Sum of 2 isomers

The reasons for the imposition of these terms and conditions are as follows:

1. The reason for Conditions 11, 13, 21, 29 and 44 to ensure that the Site is operated in accordance with the application and supporting documentation submitted by the Company, and not in a manner which the Director has not been asked to consider.

2. The reason for Conditions 1, 2, 3, 4, 7, 8, 9, 10, 12, 26 and 28 is to clarify the legal rights and responsibilities of the Company.

3. The reason for Conditions 5 and 6 is to ensure that the appropriate Ministry staff have ready access to information and the operations of the Site which are approved under this Certificate. Condition 5 is supplementary to the powers of entry afforded a Provincial Officer pursuant to the EPA, the OWRA, and the Pesticides Act, as amended from time to time.

4. Condition No. 14 is included to require the Company to carry out a demonstration study.

5. Condition No. 15 is included to ensure which procedure for sampling is to be followed.

6. Condition No. 16 is included to require the Company to apply methodology in Schedule "C" for testing of decontaminated Metal Components.

7. Condition No. 18 is included to require the Company to prepare a report on the demonstration study.

8. Condition No. 20 is included to ensure that no further decontamination takes place, until the Director has given written acceptance of the demonstration study results.

9. The reason for Conditions 18, 22, 23, 24, 28, 30, 31, 32, 33, 46, 47 and 48 is to ensure that the site is operated in a manner which does not result in a nuisance or a hazard to the health and safety of the environment or people.

10. The reason for Conditions 25 and 27 is to ensure that the types and quantities of waste received at the Site are in accordance with that approved under this Certificate.

11. The reason for Conditions 17, 34 to 43 is to ensure that sampling, testing and disposal procedures which are acceptable to the Ministry are followed.

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12. The reason for Condition 45 is to ensure that staff notify the Ministry forthwith of any spills as required in Part X of the EPA so that appropriate spills response can be determined.

13. The reason for Conditions 49, 50 and 52 is to ensure that staff are properly trained in the operation of the equipment used at the Site and emergency response procedures. This will minimize the possibility of spills occurring and will enable staff to deal promptly and effectively with any spills that do occur.

14. The reason for Condition 51 is to ensure that complaints are properly and quickly resolved, and that the complaints and follow-up actions have been documented.

15. The reason for Condition 53 is to ensure that sufficient funds are available to the Ministry to clean up the Site (as defined in the preamble of this Certificate of Approval) in the event that the Company is unable or unwilling to do so.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 9, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted waste disposal site is approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 1st day of August, 2003

Ian Parrott, P.Eng.
Director
Section 39, *Environmental Protection Act*

MK/
c: District Manager, MOE Kingston - District
Area Supervisor, MOE Cornwall - Area Office