Appendix I-1

ASPHALT CAP QUARTERLY INSPECTION FORM

Wabtec-MotivePower Facility
U.S. EPA ID No.: IDD980976831
Boise, Idaho

Name of Inspector (print):

Date:

Time:

Facility/Structure/Inspected:

Describe appearance of structure, note any damages or degradation observed.

Remedial Action Taken:

Are intact and visible Warning Signs present at the entrance and along the perimeter fence?

Materials Used:

- Spray paint:
- Sealing compound:
- New asphalt (contractor):
- Total hours for completion of inspection and remedial work:

Signature of Inspector:

Supervisor's Signature:

Table I-1

Inspection Schedule
Post-Closure Inspection and Maintenance
Wabtec-MotivePower Facility
U.S. EPA ID No.: IDD980976831
Boise, Idaho

Item	Inspection Frequency	Type of Inspection
Small Paint Shop Basin Cover	Yearly in March or April	Engineering evaluation of cap integrity
	Quarterly	Visually check for general cap integrity
Surface Water Control Stuctures	Yearly in March or April or after a storm event that could cause damage	Visually check for damage resulting in decreased capacity
Locomotive Shop Basin Cover	Yearly in March or April	Engineering evaluation of cap integrity
	Quarterly	Visually check for general cap integrity
Groundwater Monitoring Wells	At each sampling event	Visual check for integrity
Groundwater Monitoring Wells	October sampling event	Total well depth measured to check for excess silt or other issues
Warning Signs	Quarterly (with asphalt cap inspections, above)	Visually check for signs to be present and legible (see Figure B-5)

SECTION I

CLOSURE AND POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS

MotivePower
A Wabtec company

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I. CLOSURE AND POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS

This section describes the Closure and Post-Closure Plans and presents the financial assurance mechanism and estimated costs for performing Post-Closure activities at the facility. The regulated Waste Management units (WMUs) at the Wabtec Corporation-MotivePower (MP) facility were closed in accordance with the drain field closure plan (MK, 1986) that is maintained in the permanent operating record at the MP facility in Boise, Idaho.

I-1 Closure Plan

MK received approval in November 1987 of the closure plan, which required the construction of an impermeable asphalt cap over the Locomotive Shop Basin and the non-regulated Waste Disposal Trench (LSB/WDT) and surface water controls. Cap construction was completed on June 13, 1988. The Paint Shop and locomotive shop buried drain fields were closed as RCRA-regulated WMUs in accordance with the closure plan (MK, 1986) on July 18, 1988. Closure certification required under 40 CFR Parts 264.115-119 was completed on August 11, 1988.

I-2 Post-Closure Plan

This section provides a general description and an overview of the inspections, operations, and maintenance of Post-Closure activities conducted at the MP facility.

The implemented closure plan minimizes the need for Post-Closure maintenance. Post-Closure activities consist primarily of inspection and maintenance associated with the existing asphalt caps, runoff control systems, and the use of enhanced bioremediation injection to help further reduce impacts to groundwater attributable to historical site operations.

I-2a *Inspection Plan*

This section describes the inspection activities to be conducted that are associated with the Post-Closure activities for the MP facility. A schedule of the inspection and maintenance activities for the Post-Closure care period is presented in Table I-1 (Inspection Schedule).

I-2a(1) *Asphalt Cap Inspections*

Each asphalt surface covering the closed RCRA-regulated paint shop basin (PSB) and the closed RCRA-regulated LSB/WDT will be inspected quarterly to identify specific conditions that threaten the cap's integrity. Each asphalt surface will also be inspected and evaluated annually to determine the general condition of the cap for establishing the general maintenance program for the surface to be performed that year.

Quarterly visual inspections will be performed by qualified technicians to examine the caps for any damage or conditions that threaten their integrity. Such conditions include cracks that have penetrated the entire distance between the surface and the base course and/or any damage or deterioration that has reduced the thickness of material to less than half of the original thickness. The inspector will walk the asphalt surfaces and delineate any damage or conditions requiring repair. The inspector will also examine the ancillary drainage structures and note any blockages or damage that impair their function. A log of each quarterly inspection will be completed by the inspector. A copy of the Asphalt Cap Quarterly Inspection Form is presented as Appendix I-1.

An annual inspection will be performed by a registered professional engineer with experience in the design and/or construction of asphalt pavement. The annual evaluation will be conducted in the spring of each year following thaw. A portion of the inspection will be performed during a heavy precipitation event or heavy snow melt, so that the drainage system can be observed. The registered professional engineer will conduct the inspection in accordance with procedures outlined in Asphalt Institute Information Series No. 169, *A Pavement Rating System for Low Volume Asphalt Roads*. The Annual Asphalt Cap Evaluation Form, along with the Asphalt Institute Information Series No. 169 guidelines, are presented as Appendix I-2. The completed annual inspection forms will be maintained in MP's RCRA compliance files. In addition, the registered professional engineer will note any special conditions (i.e., low spots, potholes with maximum undrained water depths of at least one inch, alligator or shrinkage cracks with grid spacing of six-inches or less covering an area of 100 square feet or greater) that potentially threaten the integrity of the caps. If the overall rating is less than or equal to 80, but greater than 50, the surface will be repaired, so that upon reevaluation, the rating is at least 85. If the overall rating is less than 50 the entire surface will be reconstructed.

I-2a(2) *Surface Runoff Control Structures Inspection*

The surface water diversion plan was designed to require limited maintenance. Potential damage to existing structures following the 24-year, 24-hour design storm are not expected to be significant.

Surface runoff control structures will be inspected following periods of increased runoff (i.e., heavy rainfall, etc.) at a minimum of annual inspections. These inspections will consist of visual examination of water control structures for damage resulting in decreased capacity to route runoff away from the former waste management units (WMUs). A copy of the Surface Water Control Structures Inspection Form is presented as Appendix I-3. Completed forms will be maintained by the plant manager and corporate environmental compliance personnel.

I-2a(3) *Monitoring Well Network Inspection*

The groundwater monitoring network will be periodically inspected during sampling of the wells. Static water level, pumping rate (i.e., volume of water purged from casing storage per time required for casing purge), water level after purging, and any increases in turbidity following purging are noted in the field sampling record book for each well at the time of sampling. The field record book is maintained on-site. Well sounding is also conducted during the sampling events to evaluate if excess silting has occurred. Excess silt will be removed when necessary as indicated in Section I-2c (3).

I-2a(4) *Groundwater Recovery and Treatment System Inspection*

Groundwater recovery and treatment was previously conducted as part of the corrective action program (CAP) at well locations (MW-9/RW-1, RW-3, RW-4, RW-6, and MW-1A1/RW-7). The groundwater recovery and treatment system was operated until September 23, 2002 when the emulsified vegetable oil (EVO, VegOil) treatment pilot program was implemented in September 2002. Section E of this document provides information regarding the historical use of groundwater recovery wells and monitoring wells at the MP facility.

I-2a(5) Warning Sign Inspection

Each warning sign posted on the facility's perimeter fence will be inspected on a quarterly basis to ensure that the sign is present and legible, as shown on Figure B-5. Quarterly visible inspections will be recorded on the Asphalt Cap Quarterly Inspection Form (Appendix I-1).

I-2b *Monitoring Plan*

The original sampling and analysis plan that was used at the MP facility was contained in the original Part B permit application (MK, 1986) and Post-Closure Plan (MK, 1988). A revised sampling and analysis plan was included in the first Part B Permit (IDHW, 1991) and in the September 1995 revision to the permit (IDHW, 1995, Attachment E). A revised sampling and analysis plan was included in the Part B renewal application (MP, 2001). An updated sampling and analysis plan is included as Appendix E-12.

Following completion of the groundwater sampling events and receipt of the analytical results, MP submits copies to the IDEQ in accordance with the reporting requirements of the Part B Permit. Field sampling logs and laboratory results are maintained as part of the MP facility operating record and are not included with this document.

I-2c *Maintenance Plan*

This section describes the anticipated maintenance activities associated with the Post-Closure activities for the MP facility.

I-2c(1) *Asphalt Cap Maintenance*

Repair needs identified during the inspections will be made, based on defect type, within 60 days after the defect has been identified for limited areas, or within 90 days for general repairs to the entire surface unless weather conditions make proper repairs difficult. Cracks will be sealed using a tar-based compound. Damaged or deteriorated areas will be appropriately repaired. The original asphaltic surface may be overlaid with a new surface course if the original is sealed or otherwise treated to provide a stable base. An appropriate geotextile may be installed between the original and new surface course to inhibit reflective cracking, if necessary. Materials and construction methods used to repair defective areas will be the same as those used for the original construction unless approval is received from the IDEQ. All live or dead vegetation found on the asphalt surfaces or drainage surfaces will be removed before repair of the damaged area. No herbicides or other chemical methods will be used to control vegetation.

I-2c(2) *Surface Runoff Control Structures Maintenance*

All necessary repairs to the surface runoff control structure such as regrading or debris removal will be performed in a timely manner to allow proper drainage of the closed WMUs.

I-2c(3) *Monitoring Well Network Maintenance*

If a significant decline in well performance is observed due to sediment plugging, a qualified contractor will redevelop the well. The contractor will be trained in the proper handling of the material and the hazards to which they may be exposed.

I-2c(4) Warning Sign Maintenance

If a warning sign is missing or damaged, replacement will be performed in a timely manner.

I-2d *Land Treatment*

The implemented Closure Plan does not include any land treatment units; therefore, operation, inspection and maintenance programs for land treatment are not applicable.

I-2e *Post-Closure Care for Miscellaneous Units*

The implemented Closure Plan does not include any miscellaneous units; therefore, Post-Closure care for miscellaneous units is not applicable.

I-2f *Post-Closure Security*

As a matter of routine site operations, the security fence surrounding the MP facility is inspected and maintained on a regular basis. Posted warning signs are also inspected to make sure they are visible and intact. In addition, a full-time security force is maintained by the facility to control and prohibit access to the facility by any unauthorized personnel. These site security operations are anticipated to be continued throughout the duration of the Post-Closure period. Any changes to the site security operations will be submitted to the IDEQ before implementation.

I-2g *Post-Closure Contact*

The following individual should be contacted regarding the care and maintenance of the units during the Post-Closure care period:

Name:	Brian Morgan
Title:	Controller
Address:	4600 Apple Street, Boise, Idaho 83716
Phone Number:	(208) 947-4800

I-3 Required Notices

I-3a *Certification of Closure*

All RCRA WMUs at the facility have been closed. The Certification of Closure was signed by MK on August 11, 1988 and submitted to the U.S. EPA Region 10 in accordance with IDAPA 16.01.05.0008 (40 CFR §264.115).

I-3b *Survey Plat*

A survey plat indicating the location and dimensions of the WMUs for the MP facility is presented in Appendix B-4 (On-the-Ground Survey). The plat was filed with Ada County on August 11, 1988.

I-3c *Post-Closure Certification*

Within 60 days of completion of the Post-Closure care period for each WMU, a certification will be submitted to the IDEQ. The certification will certify that the Post-Closure care period was performed in accordance with the specification of the Post-Closure Plan.

I-3d *Post-Closure Notices*

The following Post-Closure notices have been appropriately filed and are included in Appendix B-1 (Legal Descriptions and Record of Survey):

- A record of the quantity, type, and location of hazardous wastes disposed of in each WMU has been submitted to the IDEQ.

- A notation has been made to the deed to the facility property notifying any potential purchasers of the property that the land has been used to manage hazardous waste and use of the land is restricted to activities that will not disturb the integrity of the final cover system or monitoring system during the Post-Closure care period.

- A certification that the deed notice has been made has been submitted to the IDEQ.

I-4 Closure Estimate

Closure of the regulated WMUs at the facility was completed in June 13, 1988; therefore, no estimated closure cost is provided.

I-5 Financial Mechanism for Closure

Closure of the regulated WMUs at the facility was completed on July 18, 1988; therefore, no financial mechanism for closure is required.

I-6 Post-Closure Cost Estimate

The estimated annual cost for the Post-Closure activities is presented in Table I-2. Table I-3 presents estimated costs and associated frequencies of Post-Closure activities broken down by monitoring and maintenance activity. Detailed descriptions of activities to be performed during the Post-Closure period are provided in Section I-2 of this document. All estimates were prepared using year 2012 dollars. The

Post-Closure cost estimate will be maintained and adjusted annually for inflation per regulations specified in IDAPA 58.01.05.008 (40 CFR §264.144) by the MP facility's business manager.

I-7 Financial Assurance Mechanism for Post-Closure

Financial assurance for Post-Closure care will be maintained through corporate guarantee and application of appropriate financial test criteria. Copies of the corporate guarantee and associated financial certifications are presented as Appendix I-4.

I-8 References

Idaho Department of Health and Welfare (IDHW). 1991. *(Original) Part B Permit.*

---. 1995. *Part B Permit (Revision)*, September.

Idaho Department of Environmental Quality (IDEQ). 2002. *Part B Permit (Revision),* August.Morrison-Knudsen (MK) Company, Inc. 1986. *Part B Permit Application, Drain Field Closure Plan, Boise Industrial Complex*, May, revised September.

---. 1988. *Part B Permit Application Post-Closure Plan*, submitted July.

MotivePower, A Wabtec Company. 2001. *Resource Conservation and Recovery Act Part B Hazardous Waste Post-Closure Permit Renewal Application.* December.

TABLES

SECTION I

APPENDICES

MotivePower
A Wabtec company

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Appendices

APPENDIX I-1

ASPHALT CAP QUARTERLY INSPECTION FORM

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APPENDIX I-2

ANNUAL ASPHALT CAP EVALUATION FORM AND GUIDELINES

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APPENDIX I-3

SURFACE WATER CONTROL STRUCTURES INSPECTION FORM

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APPENDIX I-4

CORPORATE GUARANTEE AND FINANCIAL CERTIFICATIONS

MotivePower
A Wabtec company

Appendix I-3

SURFACE WATER CONTROL STRUCTURES INSPECTION FORM

Wabtec-MotivePower Facility
U.S. EPA ID No.: IDD980976831
Boise, Idaho

Name of Inspector (print):

Date:

Time:

Facility/Structure/Inspected:

Describe appearance of structure, note any damages or degradation observed.

Remedial Action Taken:

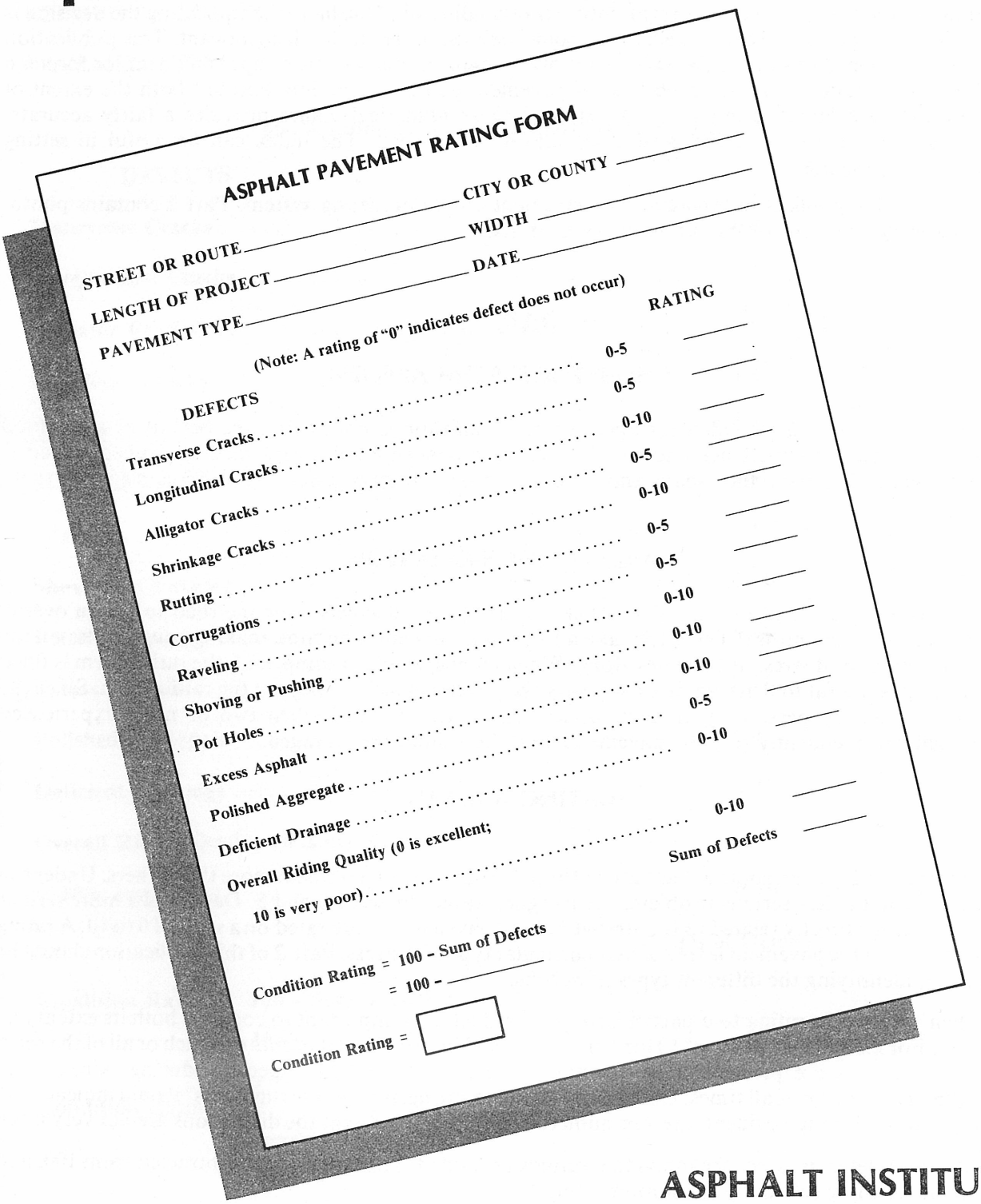
Materials Used:

Sand and Gravel Fill:
Equipment for Repair/Regrading:
Total hours for completion of inspection and remedial work:

Signature of Inspector:

Supervisor's Signature:

A Pavement Rating System for Low-Volume Asphalt Roads



ASPHALT PAVEMENT RATING FORM

STREET OR ROUTE _____ CITY OR COUNTY _____

LENGTH OF PROJECT _____ WIDTH _____

PAVEMENT TYPE _____ DATE _____

(Note: A rating of "0" indicates defect does not occur)

DEFECTS		RATING
Transverse Cracks	0-5	
Longitudinal Cracks	0-5	
Alligator Cracks	0-10	
Shrinkage Cracks	0-5	
Rutting	0-10	
Corrugations	0-5	
Raveling	0-5	
Shoving or Pushing	0-10	
Pot Holes	0-10	
Excess Asphalt	0-10	
Polished Aggregate	0-5	
Deficient Drainage	0-10	
Overall Riding Quality (0 is excellent; 10 is very poor)	0-10	
	Sum of Defects	

Condition Rating = 100 – Sum of Defects

= 100 – _____

Condition Rating = [ ]

ASPHALT INSTITUTE

Information Series No. 169 (IS-169)

A PAVEMENT RATING SYSTEM FOR LOW-VOLUME ASPHALT ROADS

INTRODUCTION

For those individuals or agencies with the responsibility of maintaining low-volume roads and streets, deciding which roads should get first attention is often difficult. One factor complicating the decision is the variety of types of pavement distress — some serious, others rather insignificant. This publication presents a system that utilizes the experience of an engineer, maintenance superintendent, or foreman to assign a numerical value to each type of pavement defect, taking into account both the extent of distress and its relative seriousness. The sum of these numerical values provides a fairly accurate, though subjective, index of the general condition of the road. The index can be useful in setting maintenance priorities.

Part 1 of this publication explains the pavement condition rating system. Part 2 contains photographs and descriptions of the different types of distress.

PART 1

WHERE THE SYSTEM APPLIES

The rating system is intended for agencies or organizations not having the benefit of specialized highway engineering experience and without access to conventional testing facilities. It is designed to apply to relatively low-volume roads and streets — those that carry fewer than 1,000 cars and 50 trucks per day.

MAKING THE INSPECTION

An effective way of inspecting a pavement is first to drive slowly over the road to get an overall impression of its condition. Then, to make a thorough inspection on foot, making rough notes on the type and extent of distress as one goes along. When the inspection is completed, the rating form is filled out. It may be useful to drive again slowly over the pavement after filling out the rating form. Since the system is based on personal judgment, better results are obtained when two or more experienced individuals independently rate the pavements and the results are averaged.

RATING A ROAD

As mentioned earlier, some defects affect the performance of a pavement more than others. Under this rating system, the less serious problems are assigned values between 0 and 5. Defects of a more serious nature — those directly related to the strength of the pavement — are rated on a scale of 0 to 10. A rating of 0 means that the pavement is free of that particular type of distress. Part 2 of this publication should be helpful in identifying the different types of defects.

When assigning a rating to a particular type of defect, it is important to consider both its extent and severity. For example, a rating of 10 for "rutting" would indicate that it occurs on much or all of the road, and that the ruts are probably deep enough to be a safety hazard, especially during rain, and an impediment to traffic at all times. On the other hand, a rating of 1 for "corrugations" would indicate that corrugations, although evident, are not numerous and that at present the distortions are not very large.

After each defect is rated, the individual ratings are added. This sum is then subtracted from 100, and the result is simply called the "condition rating."

ASPHALT PAVEMENT RATING FORM

STREET OR ROUTE _____ CITY OR COUNTY _____

LENGTH OF PROJECT _____ WIDTH _____

PAVEMENT TYPE _____ DATE _____

(Note: A rating of "0" indicates defect does not occur)

DEFECTS		RATING
Transverse Cracks	0-5	_____
Longitudinal Cracks	0-5	_____
Alligator Cracks	0-10	_____
Shrinkage Cracks	0-5	_____
Rutting	0-10	_____
Corrugations	0-5	_____
Raveling	0-5	_____
Shoving or Pushing	0-10	_____
Pot Holes	0-10	_____
Excess Asphalt	0-10	_____
Polished Aggregate	0-5	_____
Deficient Drainage	0-10	_____
Overall Riding Quality (0 is excellent; 10 is very poor)	0-10	_____
	Sum of Defects	_____

Condition Rating = 100 – Sum of Defects

= 100 – _____

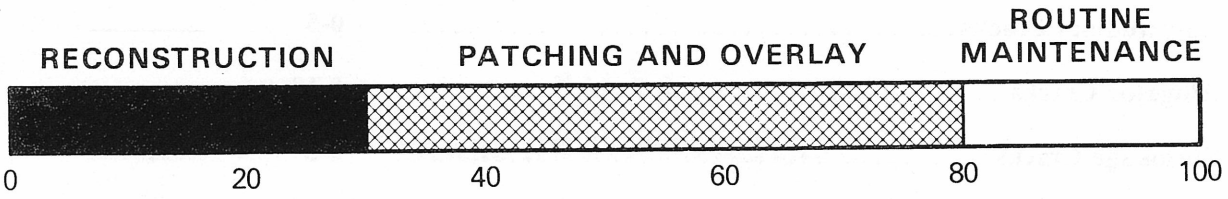
Condition Rating = [ ]

Figure 1. Asphalt pavement rating form.

INTERPRETING THE CONDITION RATING

There are two ways that the condition rating can be used. First, as a relative measurement, it provides a rational method for ranking roads and streets according to their condition.

Secondly, as an absolute measure, the condition rating provides a general indicator of the type and degree of repair work necessary. As a very general rule, if the condition rating is between 80 and 100, normal maintenance operations such as crack-filling, pot hole repair, or perhaps a seal coat are usually all that is required. If the condition rating falls below 80, it is likely that an overlay will be necessary. In this event, it may be advisable to contact the nearest Asphalt Institute or other similarly qualified engineer for assistance. If the condition rating is below 30, chances are that major reconstruction is necessary; this is illustrated in Figure 2.



CONDITION RATING AS A GENERAL INDICATOR OF TYPE OF MAINTENANCE

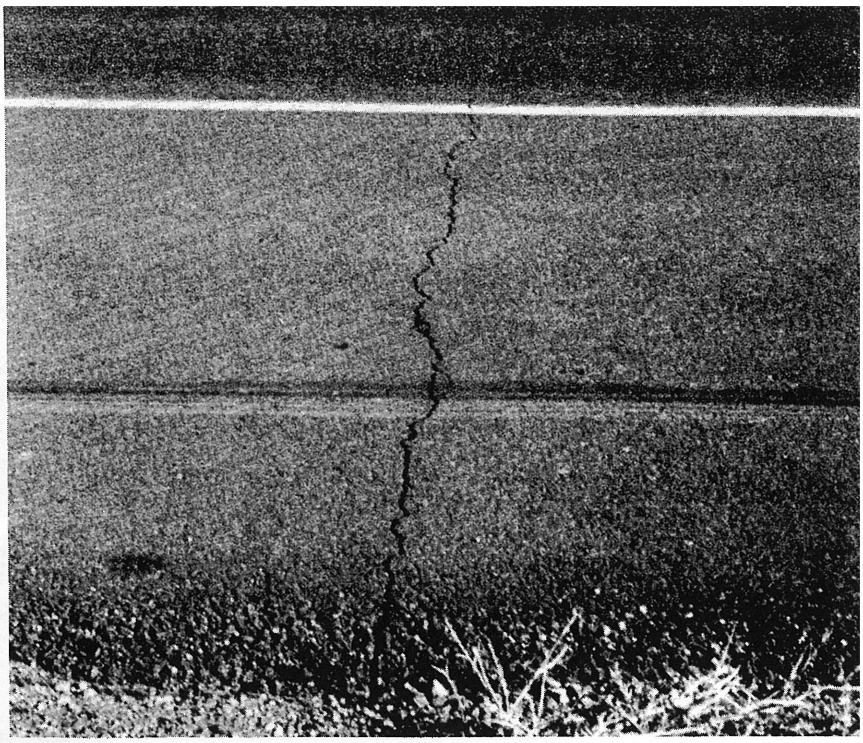
Figure 2.

PART 2

PAVEMENT DEFECTS

CAUSES OF PAVEMENT DEFECTS

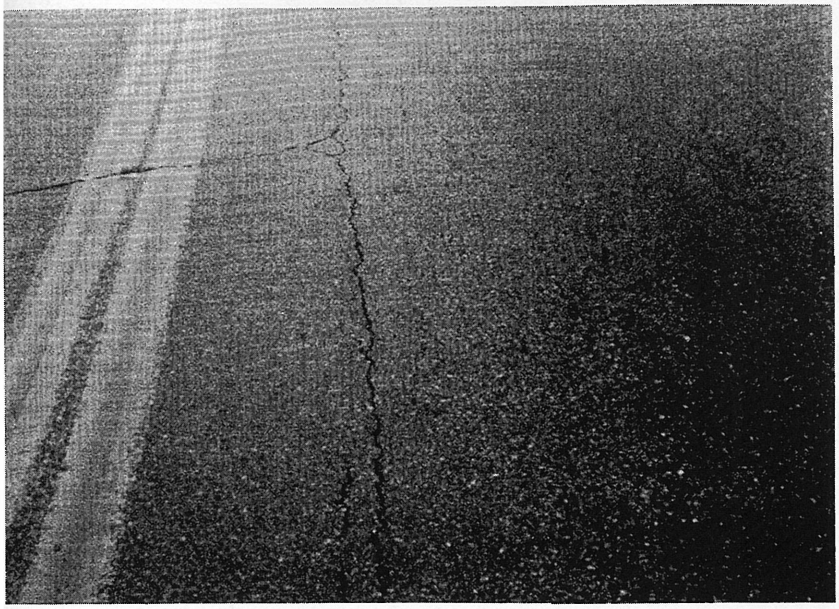
Although a detailed discussion of the subject is beyond the scope of this publication, an understanding of the cause of a pavement defect is essential before an attempt is made to remedy it. Similarly, efficient use of a maintenance budget requires that proven methods be used to prevent recurrence of a problem. Accompanying the illustrations of defects that follow, there is a brief statement of their usual cause and the suggested means of repair. If more detailed assistance is needed in determining either the cause of a defect or the proper method of its repair, it may be advisable to contact the nearest Asphalt Institute office listed on the back cover. Other Asphalt Institute publications that might be particularly useful are: *Full-Depth Asphalt Patching*, CL-19; *Asphalt in Pavement Maintenance*, MS-16; *Asphalt Overlays for Highway and Street Rehabilitation,* MS-17; and *Drainage of Asphalt Pavement Structures,* MS-15.



TRANSVERSE CRACK — A crack that follows a course approximately at right angles to the pavement centerline.

This frequently is caused by movement in the pavement beneath the asphalt layer (reflection cracking). Can also result from stresses induced by low-temperature contraction of the pavement.

Requires filling with asphalt emulsion slurry. This is usually (but not necessarily) followed by a seal coat or overlay over the entire surface.



LONGITUDINAL CRACK — A crack that follows a course approximately parallel to the centerline.

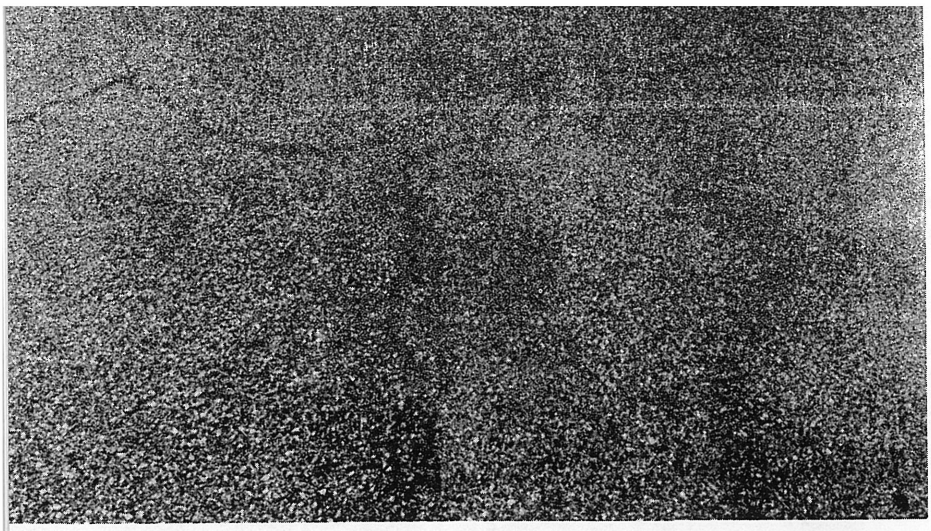
This usually results from a weak joint between paving lanes. These cracks can also result from earth movements, particularly on embankments. Two closely-spaced longitudinal cracks in a wheel path usually indicate bending stress induced by rutting. Longitudinal cracks can also occur as a result of movement in the pavement beneath the asphalt layer (reflection cracking).

For repair, see "Transverse Crack."

ALLIGATOR CRACKS — Interconnected cracks forming a series of small polygons, the pattern resembling an alligator's skin.

Caused by excessive deflection of the surface over unstable subgrade or lower courses of the pavement. The unstable support usually is the result of saturated granular bases or subgrade.

Requires deep patching.



SHRINKAGE CRACKS — Interconnected cracks forming a series of large polygons, usually having sharp angles at the corners.

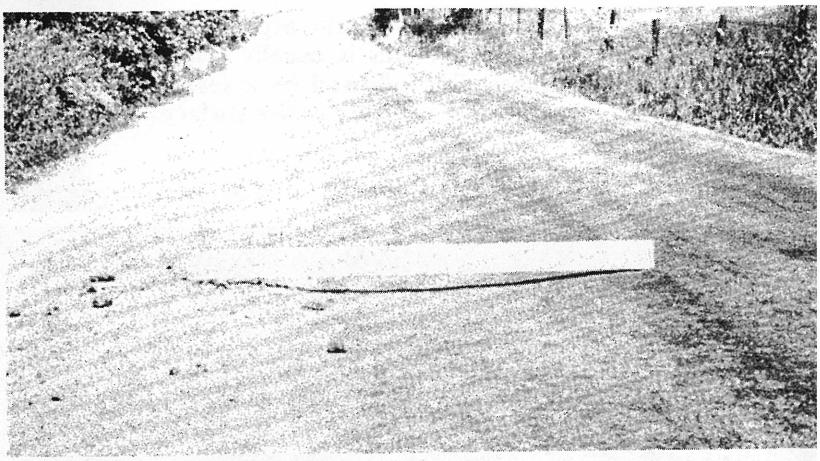
Caused by volume change in the asphalt mix or in the base or subgrade.

Requires crack filling with asphalt emulsion slurry followed by a surface treatment or a slurry seal over the entire surface.

RUTTING — Longitudinal depressions that form under traffic in the wheel paths and have a minimum length of approximately 6 m (20 ft).

Caused by consolidation or lateral movement under traffic in one or more of the underlying courses, or by displacement in the asphalt surface layer itself.

Ruts should be filled with hot plant-mixed material to restore proper cross section. This should be followed by a thin overlay.



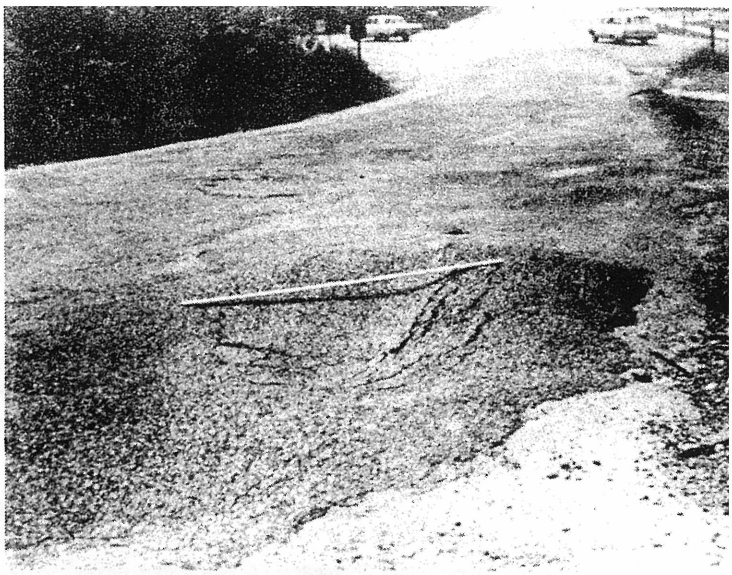
CORRUGATIONS — Transverse undulations at regular intervals in the surface of the pavement consisting of alternate closely-spaced valleys and crests.

Caused by lack of stability in asphalt layers. Requires repair before resurfacing. If the corrugated pavement has an aggregate base with a thin surface treatment, a satisfactory corrective measure is to scarify the surface, mix it with the base, and recompact the mixture before resurfacing. If the pavement has more than 5 cm (2 in.) of asphalt surfacing and base, shallow corrugations can be removed with a pavement planing machine. This is followed with a seal coat or overlay.

RAVELING — The progressive disintegration from the surface downward, or edges inward by the dislodgement of aggregate particles.

Caused by lack of compaction during construction, construction during wet or cold weather, dirty or disintegrating aggregate, too little asphalt in the mix, or overheating of the asphalt mix.

Usually requires a seal coat.



SHOVING — Lateral displacement of paving material due to the action of traffic, generally resulting in the bulging of the surface.

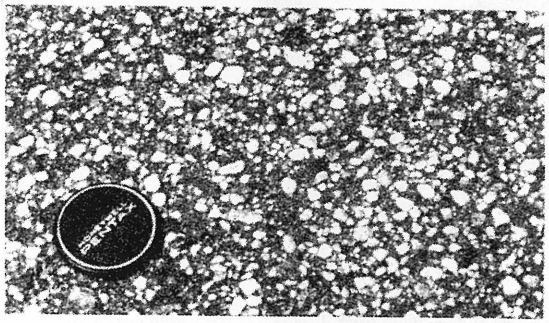
Caused by lack of stability in asphalt layers.

Requires removal of affected area, followed by deep patching.

POT HOLES — Bowl-shaped holes of varying sizes in the pavement, often the result of progressive deterioration of other defects such as alligator cracking.

Usually caused by a combination of weaknesses in the pavement resulting from such as too little asphalt, too thin an asphalt surface, too many fines, too few fines, or poor drainage, and traffic.

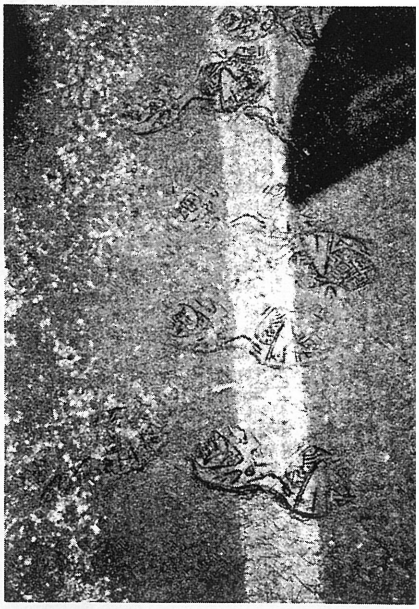
Requires deep patching.



POLISHED AGGREGATE — Aggregates in the surface of a pavement that have been polished smooth.

Caused by naturally smooth uncrushed gravels and crushed rock that wears down quickly under action of traffic.

Requires covering the surface with a skid resistant treatment.



EXCESS ASPHALT (BLEEDING) — Free asphalt on the surface of the pavement.

Caused by too much asphalt in one or more of the pavement courses.

In many cases, bleeding can be corrected by repeated applications of hot sand, hot slag screenings or hot rock screenings to blot up the excess asphalt. Sometimes, when bleeding is light, a plant-mixed surface treatment or an aggregate seal coat, using absorptive aggregate, is the only treatment needed. In rare instances of heavily over-asphalted surfaces, the surfaces should be completely removed.

DEFICIENT DRAINAGE — Drainage problems may be considered in two categories: surface and subsurface. Proper surface drainage efficiently removes runoff from the pavement and the nearby ground. Standing water on the pavement or in the side ditches indicates surface drainage deficiency.

Proper subsurface drainage keeps groundwater away from the pavement structure. Two indicators of deficient subsurface drainage are, in the absence of precipitation, water in a side ditch, or alligator cracking with moisture in the cracks.

For information on alleviation of drainage problems, the reader is referred to *Drainage of Asphalt Pavement Structures*, MS-15, The Asphalt Institute.

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Asphalt Materials, Inc., Indianapolis, Indiana
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Bituminous Products Company, Maumee, Ohio
***Bouchard Coastwise Management Corp.,** Hicksville, New York
BP, Whiting, Indiana
Caltex Corporation, Sydney, Australia
Canadian Asphalt Industries Inc., Markham, Ontario, Canada
Centennial Gas Liquids L.L.C., Denver, Colorado
Chevron Products Company, San Ramon, California
CITGO Asphalt Refining Company, Plymouth Meeting, Pennsylvania
***Coastal Towing, Inc.,** Houston, TX
Colas, S.A., Paris, France
Consolidated Oil & Transportation Co., Inc., Englewood, Colorado
***Dexco Polymers (A Dow/ExxonMobil Partnership),** Houston, Texas
***DuPont,** Wilmington, Delaware
***Dynasol L.L.C.,** Houston, Texas
EMCO Limited, Building Products, LaSalle, Quebec, Canada
***EniChem Americas, Inc.,** Houston, Texas
Equiva Trading Company, Burbank, California
Ergon Asphalt & Emulsions, Inc., Jackson, Mississippi
ExxonMobil Lubricants & Petroleum Specialties Company, Fairfax, Virginia
ExxonMobil Lubricants & Petroleum Specialties Company (International), Fairfax, Virginia
Frontier Terminal & Trading Company, Tulsa, Oklahoma
GAF Materials Corporation, Wayne, New Jersey
Golden Bear Oil Specialties, Los Angeles, California
Gorman Asphalt, LTD, Rensselaer, New York
Gulf States Asphalt Co., L.P., South Houston, Texas
***Heatec, Inc.,** Chattanooga, Tennessee
Hunt Refining Company, Tuscaloosa, Alabama
Husky Oil Marketing Company, Calgary, Alberta, Canada
IKO, Chicago, Illinois
Imperial Oil, Toronto, Ontario, Canada
Isfalt A.S., Uskudar, Istanbul, Turkey
Jebro Inc., Sioux City, Iowa
Koch Materials Company, Wichita, Kansas
***KRATON Polymers,** Houston, Texas
Marathon Ashland Petroleum LLC, Findlay, Ohio
E. A. Mariani Asphalt Co., Inc., Tampa, Florida
Mathy Construction Company, Onalaska, Wisconsin
McAsphalt Industries Ltd., Scarborough, Ontario, Canada
Moose Jaw Asphalt Inc., Moose Jaw, Saskatchewan, Canada
Murphy Oil USA, Inc., Superior, Wisconsin
Nynäs Bitumen, Brussels, Belgium
Oldcastle Materials Group, Washington, D.C.
Paramount Petroleum Corporation, Paramount, California
***Penn Maritime, Inc.,** Stamford, Connecticut
Petro-Canada Inc., Oakville, Ontario, Canada
***Petro-Nav Inc.,** Montreal, Quebec, Canada
Petroleo Brasileiro, S.A. - Petrobras, Rio de Janeiro, Brazil
Pioneer Oil LLC, Parker, Colorado
RECOPE, Cartago, Costa Rica
Repsol Productos Asfalticos, S.A., Madrid, Spain
***Rohm and Haas Company,** North Andover, Massachusetts
***Safety-Kleen, Oil Recovery Division,** Elgin, Illinois
San Joaquin Refining Co., Inc., Bakersfield, California
Sargeant Marine, Inc., Boca Raton, Florida
Seneca Petroleum Co., Inc., Crestwood, Illinois
Shell Canada Products, Montreal, Quebec, Canada
Shell International Petroleum Company Limited, London, England
SK Corporation, Seoul, Korea
Southland Oil Company, Jackson, Mississippi
Suit-Kote Corporation, Cortland, New York
Terry Industries, Inc., Hamilton, Ohio
Tesoro Petroleum Corporation, Anacortes, WA
***Texaco Refining and Marketing, Inc.,** Marrero, Louisiana
Tosco Refining Company, Phoenix, AZ
Trumbull Products (Division of Owens Corning), Toledo, Ohio
Ultramar Diamond Shamrock, San Antonio, Texas
***Ultrapave Corporation,** Resaca, Georgia
United Refining Company, Warren, Pennsylvania
U.S. Oil & Refining Company, Tacoma, Washington
Valero Energy Corporation, San Antonio, Texas
Warden Modified Asphalt, Harrisburg, Pennsylvania
YPF S.A., Buenos Aires, Argentina

* Affiliate Member

Appendix I-2

ANNUAL ASPHALT CAP EVALUATION FORM

Wabtec-MotivePower Facility
U.S. EPA ID No.: IDD980976831
Boise, Idaho

Evaluator: _____ Date: _____

Waste Management Unit: _____

Type of Inspection (Annual, Post Repair, etc.): _____

(Note: A rating of "0" indicates the defect does not occur)

DEFECTS		RATING
Transverse Cracks	(0-5)	_____
Longitudinal Cracks	(0-5)	_____
Alligator Cracks	(0-10)	_____
Shrinkage Cracks	(0-10)	_____
Rutting	(0-10)	_____
Corrugations	(0-10)	_____
Raveling	(0-10)	_____
Shoving or Pushing	(0-10)	_____
Potholes	(0-15)	_____
Deficient Drainage	(0-15)	_____
	Sum of Defects	

Condition Rating = 100 – Sum of Defects
= 100 - _____

Condition Rating = _____ Note any special conditions requiring immediate repair on the back of this form.

Signature: _____