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A LEGAL PERSPECTIVE OF INTEGRATED SURFACE MINING,  
SOLID WASTE LANDFILL RECLAMATION  
AND LAND CONSERVATION

ROBERT LEE ASTON

Doctor of Philosophy

THE UNIVERSITY OF ASTON IN BIRMINGHAM

April 1996

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The University of Aston In Birmingham

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THESIS SUMMARY

In the area of international environmental law this thesis proposes the formulation of one-step planning and permitting regulation for the integrated utilisation of new surface mines as depositories for municipal solid waste. Additionally, the utilisation of abandoned and currently operated surface mines is proposed as solid waste landfills as an integral step in their reclamation. Existing laws, litigation and issues in the United Kingdom, the U.S. and Canada are discussed because of their common legal system, language and heritage.

The critical shortage of approved space for disposal of solid waste has caused an urgent and growing problem for both the waste disposal industry and society. Surface mining can serve three important environmental and societal functions inuring to the health and welfare of the public: (1) providing basic minerals for goods and construction ; (2) sequentially, to provide critically needed, safe burial sites for society's wastes, and (3) to conserve land by dual purpose use and to restore derelict land to beneficial surface use.

Currently, the first two functions are treated environmentally, and in regulation, as two different siting problems, yet they both are earth-disturbing and excavating industries requiring surface restoration. The processes are largely duplicative and should be combined for better efficiency, less earth disturbance, conservation of land, and for fuller and better reclamation of completed surface mines returning the surfaces to greater utility than present mined land reclamation procedures. While both industries are viewed by a developed society and its communities as "bad neighbours", they remain essential and critical for mankind's existence and welfare. The study offers successful examples of the integrated process in each country.

The study argues that most non-fuel surface mine openings, if not already safe, can economically, through present containment technology, be made environmentally safe for use as solid waste landfills. Simultaneously, the procedure safeguards and monitors protection of ground and surface waters from landfill contamination.

KEY WORDS: SURFACE MINING; OPENCAST MINE RECLAMATION;  
LANDFILLING; LAND CONSERVATION;

## ACKNOWLEDGEMENTS

The writer wishes to express appreciation and gratitude to his Internal Advisor at Aston University, Dr. Peter D. Hedges, for his time, assistance, direction, dedication and ever-ready, sound advice in the research, for his many trans-oceanic faxes, his critiquing of the work, and for his trips to the Colonies to meet with the researcher and the External Advisor, Dr. C. Dale Elifrits.

Appreciation and thanks are also very much due Dr. C. Dale Elifrits, Professor of Geological Engineering at the University of Missouri-Rolla, for acting as the External Advisor, and for his omni-present cheerfulness, enthusiasm and encouragement as to the need and purpose of this study and work; for his generous giving of time, advice, assistance and critiquing of the research.

Appreciation and thanks for assistance in supplying valuable research information is expressed to others, particularly the following:

Ms. Susan Blackman, lawyer and researcher, Canadian Institute of Resource Law, University of Calgary, Alberta, Canada;

Mr. Hugh G. Kent, Planning Manager, Clay Colliery Company, Ltd., Telford, U.K.;

Mr. Paul A. Tomes, Regional Director, Northern Regional Office, Greenways Landfill, Judkins Quarry, Tuttle Hill, Nuneaton, Warwickshire, U.K. ;

Mr. David Harding, Manager, Public Relations, ARC Central, Regional Office, Leicester, U.K.;

Mr. Marc Ramsey , Manager, Fred Weber Inc, Maryland Heights, Missouri, USA;

Mr. Ronald Plewman, Manager, Walker Inds., Thuroid, Ontario, Canada;

Dr. Robert W. Slater, Deputy Minister, Environment Canada, Hull, Quebec, Canada, and his staff, particularly, Mr. Bob Christensen of the Solid Waste Management Division;

to my son, Roger A. Aston, a computer expert and consultant, for his help in the computer work ;

and last, but most assuredly not least, much gratitude and thanks to my faithful, supportive, loving wife and secretary, Mary Pierce-Aston, whose help over several years at the libraries and office made the task lighter, by her ever-constant, cheerful support and encouragement in completing the work.



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## ABBREVIATIONS / ACRONYMS COMMONLY ENCOUNTERED

AMD	Acid Mine Drainage
ARD	Acid Rock Drainage
AONB	Areas of Outstanding Natural Beauty (UK)
APA	Administrative Procedure Act (US)
ASCML	Abandoned Surface Coal Mined Land
BAT	Best Available Technology
BLM	Bureau of Land Management (US)
CEQ	Council of Environmental Quality (US)
CFR	Code of Federal Rules (US)
COPA	Control of Pollution Act (UK)
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act (US)
CMZA	Coastal Zone Management Act (US)
EA	Environmental Assessment (UK, US, Canada)
EC	European Community
EIR	Environmental Impact Report
EIS	Environmental Impact Statement (UK, US, Canada)
EPA	Environmental Protection Agency / Administration / Act
FONSI	Finding of No Significant Impact (US)
HDPE	High Density Polyethylene
LG/LFG	Landfill Gas
MEND	Mine Environment Neutral Drainage
MPG	Mineral Planning Guide (UK)
MSW	Municipal Solid Waste
NEPA	National Environmental Protection Act (US)
NFFO	Non-Fossil Fuel Obligation (UK)
NIMBY	Not In My Back Yard (Syndrome)
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System (US)
NRA	National Rivers Authority (UK)
PIP	Public Inquiry Process / Public Hearing Process
RDF	Refuse Derived Fuel
SMCRA	Surface Mining Control and Reclamation Act (US)
SSSI	Sites of Special Scientific Interest (UK)
TCPA	Town and Country Planning Act (UK)
USEPA	United States Environmental Protection Agency / Administration / Act
v.	versus
VER	Valid Existing Rights
WC	Wildlife and Countryside Act (UK)
WCA	Waste Collection Authority (UK)
WDA	Waste Disposal Authority (UK)
WRA	Waste Regulation Authority (UK)
WML	Waste Management Licence (UK)



A DOCTORAL DISSERTATION on  
A LEGAL PERSPECTIVE OF INTEGRATED SURFACE MINING, SOLID WASTE  
LANDFILL RECLAMATION AND LAND CONSERVATION  
by R. Lee Aston, Attorney-at-Law, Mining Engineer and Geologist

**PREFACE I**

A critical shortage of approved space for the disposal of municipal solid wastes has caused the developed nations to have an urgent and growing need for landfill space. It is a problem for both the disposal industry and society. Simultaneously, the ever-continuing, ever-growing need exists for minerals which supplies society with the basic raw materials for its health, well-being, existence and growth.

In its recent publication, "*Living with Minerals*", by the Confederation of British Industry (CBI), it is emphasised that what is assumed to be common, or layman's, knowledge, is actually not; i.e., that man in his ordinary, daily activities constantly uses mineral products, is surrounded by them, and is totally dependent on them, and yet, man remains unknowing, unsuspecting, or unmindful that he "cannot survive without them." To illustrate, CBI, cites the use of minerals in the home alone- "Apart from the timber joists and floor-boards, most of the fixtures and fittings in the modern house, ranging from the ceramic basin (clay) in the bathroom to the fiberglass insulation (silica minerals) in the roof (and the gypsum walls) have mineral origins. \*\*\* that a telephone can contain as many as 40 mineral products, or the family car about 15." (The Mining Journal, 1995 a).

Thus, treating the problem and seeking an acceptable solution is found to be in a very sensitive area between environmental protection and the life-supporting industries. Therefore, in prefacing this thesis, it should be understood that the environmentally reprehensible acts of the past committed by the mining and waste disposal industries can only be excused by the historical fact that they were done as the accepted way of life at the time, not with prime intent to cause harm or injury to the earth, the environment, or to fellow men. Favour to the mining industry herein is not intended. However, it is notably emphasised that mining and waste disposal have a proper and fundamentally essential place in society's cultural order and deserves as much support and favour as does clean air and clean water. Mankind's survival is as equally dependent on the mining industry and proper waste disposal as the individual is dependent on the air he breathes or the water he drinks. However, the air and water man consumes must be clean. So it is in the developed nations, and, hopefully, soon will be in the developing nations, that the mining and waste disposal industries are clean-operating and environmentally-safe under current regulation. Thus, the thesis will be rightfully found to support surface mining in creating earth voids for subsequent waste filling and justifying their place in the social order.

Surface mining, unlike other of man's activities, can serve three important environmental functions: (1) providing minerals for the beneficial well-being, health and welfare of the public; (2) sequentially, to provide critically needed disposal sites for



society's wastes which also inures to the health and welfare of the public, and (3) land conservation and sustainability is greatly increased. Currently, the two needs for minerals and waste deposit are treated environmentally, and in regulation, as two different problems, yet they are closely related by virtue of both being earth-disturbing and earth-moving industries. Mining digs a hole to obtain minerals, then only slightly backfills for deficient land reclamation. Waste disposal, whether mounded on the earth's level or sloped surface, or placed in a ravine or topographic depression, must trench below the surface to emplace a leachate collection system and to make the initial pocket for starting the landfill. Additionally, other pits must be excavated to obtain daily cover material for the waste deposited, for clays for use as lining and capping material, or for sand for overlay of the clay capping material. Thus, earth-moving processes are duplicative and should be combined into one location for better efficiency, less earth disturbance, conservation of land, for fuller and better reclamation of completed surface mines, and restoration of mined land to surface use.

While both industries are viewed by modern, developed society and its communities as "bad neighbours", they remain, nevertheless, essential and critical for mankind's existence. By way of analogy in a household, the water closet, the coal bin and wood pile, the furnace, the heat pump and air conditioning, are all essentials for modern-day comfortable living; few modern homes in a developed society would be without them. These necessities of the home are not as aesthetically appealing as the living room, den, or boudoir, still they are a necessity included in the home plan but are ordinarily placed in less conspicuous parts of the home or curtilage, and often given some dressing to be more aesthetically acceptable.

So it is with surface mines and trash or garbage dumps (now, more politely called municipal waste disposal sites). They are absolute necessities of life for communities. Without them, society invites a return to the dark ages, living in filth and disease without the conveniences and amenities as medicines, building materials, machines and electronics, all manufactured from minerals taken from the earth.

Since both industries are earth-disturbing, they incur the greatest attention of both the general public and environmentalists seeking protection to the environment by strict controls through law and regulations. This study reviews and analyses, separately, regulatory controls for both industries, and then proposes the joining of them into one. The proposal herein is, therefore logically, to utilise the man-made void openings in the earth, or excavations from mining of minerals for backfilling with man's wastes. The logic of this solution seems indicated in a quotation from the Bible, "... for dust thou art, and unto dust shalt thou return." (Genesis 3: 19, King James version).

R. Lee Aston



## PREFACE II

### Instructions for the non-legally trained reader in the use of case citations.

A case citation is the reference to the parties, the date, the court and the legal publication where the full text of the case may be found.

A Table of Cases for those, either reported on, or mentioned by reference, is given in Appendix B. Cases listed are separated for Great Britain (England/Scotland) and the European Community (EC) in B-1, the United States in B-2, and Canada, B-3.

Parties: The style of the case refers to the names of the parties, i.e., the plaintiff party, bringing the suit, is listed first; then, following *v.*, for versus, the Defendant's name follows, or the party defending the charge. In this work, the case style, or parties names, are *italicized*.

Date of Decision of Case: In English and Canadian cases, the date of the hearing court's decision immediately follows the litigating parties' names. The date of the decision in United States cases is given at the end of the citation.

The Court rendering the decision: In older English cases, a court is not usually cited. The date is followed by the Case Recorder's name which indicates his series of Reports. In modern English case reporting, no court is given in the citation, but may be found in the publication cited, e.g., *P. & C.R.*, which stands for Property and Compensation Reports, or *A.E.R.*, All England Reports, or *W.W.R.*, Western Weekly Reports.

In U.S. citations, the name of the court is generally given after the publication citation, e.g., 297 SW 184 (Mo.App. 1927); the court was the Missouri Court of Appeals. found in volume 297, 1st series of SouthWestern Reporter, on page 184.

In Canadian citations, the name of the court is not always given. It may appear after the parties' names, or after the date.

Publication volumes and pages: The volume number of the publication precedes the initials of the publication. The number after, indicates the page number on which the case begins. If a second number follows the first number, it is given as a reference where a particular quotation just given from the case is found. In the U.S. citation example given above, the number 297 indicates the volume; SW indicates it is a case in the Southwestern Series (by West Publishing Co., St. Paul, Minnesota); volume 297 is in the first series, since there is no other number immediately following SW, as in SW2d for the second series; the case will be found starting on page 184.

U.S. Case Reporters: West Publishing Company covers all the United States Courts, state and federal, in its series of publications. For the federal system of published cases, West publishes weekly case decisions for the U.S. Supreme Court in the Supreme Court Reports; for the U.S. Courts of Appeal in the Federal Reporter (F); and for the U.S. District Court decisions in the Federal Supplement (F.Supp.).



In West's regional system of state case reporting system, cases from the lower trial courts, the Circuit and Superior Courts, are not published. West publishes appealed decisions of the lower, trial courts made to state courts of appeal and to the state supreme courts in a series of Reporters grouped according to geographical location of the states. West publishes seven state case reporters, viz., Atlantic, Northeastern, Southeastern, Southern, Southwestern, Northwestern and Pacific Reporters. For example, Nevada and Oklahoma state decisions are found in the Pacific Reporter; the Pacific Reporter covers most of the Rocky Mountain states; Missouri, Arkansas, Texas decisions are in the Southwest Reporter; the New England states and southward through Pennsylvania are in the Atlantic Reporter; below the Mason and Dixon Line, the Southern states, Maryland, West Virginia, Virginia, southward to South Carolina are in the Southeastern Reporter; the Southern Reporter covers the Deep South, Georgia, Florida, and westward to Louisiana. Michigan is included in the Northwest Reporter; Illinois in the Northeastern Reporter along with Indiana. West publishes state cases for California and New York in separate reporters. All states also have their own decisions reported and published in bound volumes, usually by another publisher, not West.

Canadian Case Reports: Provincial cases from the provincial court systems are found in the various Provincial case reporters. For example, *Casamiro Resources Ltd. v. British Columbia*, [1991] 55 B.C.L.R. (2d) 346, is a 1991 decision found in volume 55 of the second series of the British Columbia Law Reports starting on page 346. And, *Tener v. The Queen* [1985] 1 S.C.R.533, 3 W.W.R. 673, is found by either of two citations, viz., volume 1 of the Supreme Court (of Canada) Reports starting on page 533, or may be found in volume 3, page 673 of Western Weekly Reports. Few other Canadian case sources are used, e.g., *Regina v. United Keno Hill Mines Ltd.* [1980], 10 CELR 43, indicates that it is found in volume 10 of the Canadian Environmental Law Reports, starting on page 43. Various publishers are used for Canadian case reporting.

United Kingdom Case Reports: The system of reporting for British case law is more complicated than in either the U.S. or Canada. This is due to there being more levels of courts and more jurisdictions, with each having its own reporting publication. More than that, it is not the purpose of this work to give an extensive discourse on British case reporting.

Explanations of the abbreviations of legal publications is not offered here as the sources are so numerous for the three countries included in this work. If the non-lawyer needs to have a legal citation reference deciphered, a law librarian will be of help.

Statute / Act Citations : Where an act is cited, it is usually followed by letters, e.g., "R.S.C." (Revised Statutes of Canada), the date of the statute and the civil code number; or, "Stat. Ann.", meaning Statutes Annotated.



# **SECTION I**

## **CHAPTER 1 - INTRODUCTION**

### **1.1 Opening Statement of The Case**

Because this dissertation is quasi-legal in nature, combining subject matters of law, geology, mining, environmental and geological engineering, Counsel will outline the general case to be presented. The Opening Statement is simply to advise of the issues involved, of the forthcoming facts to be relied on and entered into evidence. The anticipated proof of facts will be brought into evidence and presented at the proper time as the claims are made later when the points are presented and the issues argued.

Statements of judicial notice are also made, particularly in the Opening Statement, which are those facts given as true without formal pleading and proof. The essential elements for judicial notice are that the fact stated must be one of common knowledge which persons of average intelligence and knowledge of things about him can be presumed to know, and which fact is certain. Judicially known facts are those covering matters so notorious that a production of evidence is unnecessary.

The overall aim of this research and study is to argue the case for developing a best uniform practice model for the Anglo-nations for conjunctive regulation to enable non-fossil fuel open pit mining reclamation through landfilling of municipal solid wastes.

The aim of the study will be achieved through ten main objectives, visually :

- (i) an historical review of mineral lands and regulation in the U.K., the U.S, and Canada up to the environmental consciousness of the 1960's;
- (ii) an historical review of the disposal of wastes by earth burial;
- (iii) an historical review of litigated mining and refuse disposal pollution claims in the three Anglo-nations;
- (iv) a review of the environmental era regulatory actions taken for surface mining and landfilling with litigated interpretations;
- (v) a review of later legislative environmental responses to update the initial regulations;
- (vi) a report on today's weaknesses of environmental regulations concerning surface mining and waste disposal;
- (vii) a report of present and future mineral and waste disposal trends in the U.K. and North America;
- (viii) an updated report on landfill technology making open pit landfilling environmentally feasible;
- (ix) a report on expected future legislative problems;



(x) the solution through a proposed regulatory model for land conservation, sustainable land use, reclamation of surface mining by subsequent landfilling, and restoration of derelict lands to beneficial surface uses.

As observed in the preceding objectives and the List of Contents, the work is a progression, from past to present to future; from whence surface mining and waste disposal came, existing for centuries without concern for the environment or regulatory controls, then, passing rapidly into late-twentieth century's rigid regulation within a relatively short period, and where it must go for the future good of Mankind, as well as his environment.

Before presenting the hard issues of the case, the historical review of mining, litigated damage claims from early mining and early disposal methods of man's wastes by burial in the three concerned Anglo nations is presented in Section II in the following three chapters, i.e., 2, 3 and 4. Histories are traced from the earliest written recordings in Great Britain, the United States and Canada to the advent of the 1960's when rumblings of environmental concern were loudly heard.

In tracing the separate histories of mining and waste disposal, litigated claims have been researched over ensuing and parallel periods of time. Such study enables us to compare the development of Anglo-law for meeting the complaints over the many decades leading up to recent environmental concerns and the subsequent formation and enactment of stringent environmental regulations.

The purpose of studying the separate development courses for legal treatment of mining and waste disposal, from earlier time to the recent past, is to reveal the former earth-disturbing practices and the environmentally damaging claims made against each. Historical nuisance claims from mining and garbage dumping have become today's regulated environmental concerns. It is found in reviewing the past that there were environmental concerns for both the so-called "bad-neighbour" industries, i.e., mining and waste disposal, long before the advent of the 1960's green movement. Both industries are earth-disturbing operations. They share yesteryears' common environmental concerns for noise, dust, traffic, odours, air and water pollution, along with the more recent addition of today's society's concerns for disturbance to wildlife habitats and aesthetic objections of intrusion into and destruction of natural beauty areas.

The historical background chapters are followed by three chapters, 5, 6, and 7, which bring the study up to the present. They look into the early environmental regulatory period beginning in the 1970's with its unprecedented, pervasive environmental controls for all industry and the public. As might be expected, with any newly and intensely regulated social reformation, the era was fraught with political and legal contention in deciding to what extent the parameters of regulatory control for the improvement of the environment could and might go.

Toward this end, selected, recent and current litigated cases are examined to illustrate the conflicts over regulations which arose and were challenged as they affected



surface mining, waste disposal and water pollution. Resolution of these challenges by the judiciary in some cases have clarified the regulations, whilst in a few, a regulation has been found *ultra vires*, or beyond the delegated powers authorised by the governing and enacting bodies, or lastly, as found in a majority of cases that the regulation was upheld. The purpose of examination of litigation in this era is to accomplish an understanding of the extent of regulation that had been undertaken by Anglo governments, the effects on industry and society, its degree of acceptance by industry and society, and its to-date, realised successes and weaknesses in cleaning up the environment.

Section III, the Transition from Present to Future, Chapter 8 follows with an inspection and critiquing of the weaknesses of certain existing environmental regulations and actions. Conclusions are drawn and made to improve and expedite the regulatory processes for permitting and licencing new operating sites, particularly to combat the NIMBY (Not in My Back Yard) syndrome largely caused by the hangover distrust from a former age's disrepute for surface mining and refuse disposal sites.

The focus of the case then turns to the future in Section IV, Chapters 9 and 10. First examined are the indicated trends for society's future mineral requirements. As more products are produced from increased mineral production, the resulting increase in waste will, in turn, cause an even more critical, increased demand and urgency for more landfill space in the future.

As a part of Chapter 9 on current and future trends, §7 refers the reader to Appendix A-1 for matters concerning the urgency for landfill space, waste disposal, with pictorially illustrated examples of reclamation projects of derelict mines and uncontrolled waste sites, and the NIMBY landfill siting problem.

Chapter 9 § 8 refers the reader to Appendix A-2 which introduces evidentiary proof on open pit-landfill feasibility. Appendix A-2 contains a short review of current landfill technology, recent treatment and containment innovations, supporting the argument that waters around most any former or current surface mine can be made environmentally safe when a mining pit is used for depositing municipal solid waste (MSW). Successful reclamation examples with pictorial illustrations of making mined-out and working surface mines usable as landfills are given for each of the three Anglo-nations.

Section IV on the trends culminates in Chapter 10 treating possible future legislative problems. Concerns are expressed for mounting limitations on the available land base for future surface mining in the name of land conservation which could seriously hamper mining's ability to adequately and economically furnish the mineral requirements for society's future needs to maintain standards of quality living.

In the final Section V, closing arguments are made in Chapter 11, in support of the use of surface mines to relieve the present and predicted future critical need of space for landfills. The combined present and future requirements are supported by the argument of the steady population growth and concentration in urban masses, accompanied by the



repetitive process or cyclical nature of increased societal demands for goods and construction, requiring more construction materials for ever-growing population centres, which in turn increases the size and number of aggregate surface mines near the population masses. In turn, construction materials from mining provide more potential municipal solid waste disposal sites near the population centres where the greatest volumes of waste are generated. The cycle is continuously repetitive.

With the case presented, accompanied by supportive arguments and evidence, the final chapter refers the reader to Appendix A-3 containing the format for a proposed model law to alleviate and resolve the critical need for waste disposal space through utilisation of surface mine sites.

Having stated the case to be presented, the evidence will show that the name “Bad Neighbours” no longer properly describes the surface mining and solid waste disposal industries, that in fact, they are a new generation and “breed” of operators with environmental awareness, and should no longer be equated to their predecessors, the miners as “rapers of the land”, and refuse collectors as “spreaders of pestilence”. They deserve a new, greatly improved image in the public’s eye, truly pictured as citizens equally conscientious and environmentally responsible.

In finality, the last chapter formally proposes the solution to the problem of urgency for landfill space through the utilisation of surface mines by backfilling them with MSW, making for fuller and better reclamation of the mined land, and simultaneously conserving land use. Additionally, a proposal is made for alteration and improvement of the present, general planning, public inquiry and permission process, or systems, in place.

The first proposal concerns reduction of the vexatious, prolonged, litigious, time consuming and expensive delays caused by the public inquiry process (PIP) which confronts projects, and at times defeats essential projects vital for the general public’s good and benefits. At times projects are defeated by the public hearing process for no other reason that they are undesirable and unwanted by a group in the local area, i.e., “not in my back yard”.

The second, and main proposal is made in the form of a best practice model law for the planning, licencing and mandatory use of such dual purpose surface sites in a one-step approval process as opposed to the present individual, separate, two-step process for individual operations at different locations.

In pleading this case for surface mining and the utilisation of open cast, non-fuel mining pits as depositories for municipal solid waste (MSW), it is felt necessary that, at least, an attempt should be made to combat and assuage, if not refute, their age-old “bad-neighbour” reputations. In this attempt for modern surface miners and MSW collectors of the 1990’s to cast off the disrepute to which former surface mining and trash dumping had fallen, and in defense of their present, essential existence, inuring to society’s benefit, the greatly needed facility of licencing such operations without impediments by an uninformed,



or perhaps more appropriately, a misinformed public is pleaded. The pleading for this case might be analogised to a fictional civil action, as the case of *Modern Surface Mining Vs. The General Public*.

The parties in such a fictional case would be: Plaintiff, the modern surface mining industry, joined by the solid waste disposal industry as co-Plaintiff. Defendants would be the General Public.

Plaintiffs might bring the action against the General Public for slander, libel and defamation of character, complaining that they have been maliciously and wrongfully maligned, falsely accused of perpetrating certain injurious acts against the environment, the well-being, health and welfare of the General Public.

Defendant General Public might answer the Plaintiffs' complaint stating that it is a well-established fact, perhaps one of judicial note and common knowledge, that both Plaintiffs are generally known as "bad neighbours", having earned and established their reputations over past centuries. Plaintiffs are in disrepute because of their past harmful acts to the Public, to Nature and the environment. Public opinion has been justified. Truth is always a defence to slander, libel and defamation, and the past accusations made against the Plaintiffs are true. Therefore, the reputations of the "bad neighbours" are truthful and not slanderous.

Plaintiffs, Modern Surface Mining and Solid Waste Disposal Industry respond to Defendants' Answer by way of Amendment to its Complaint saying that they are a new generation, being neither culpable, nor responsible for the acts of their antecedents and forebearers. Both, new generation industries are responsible, conscientious, law abiding citizens conforming to environmental regulatory controls. They are very aware and concerned with preservation and conservation of the earth's environment, and that their acts in performing its essential earth-disturbing job are carried out with care and concern for the protection of the public good and environment. Plaintiff Modern Surface Mining rejects the appellation of "Bad Neighbour" as a wrongful and misapplied character description.

Modern Surface Mining pleads, as good citizens of many international and local communities, in a demonstration of good faith, and in view of its improved and law-abiding environmental conduct in recent years that it be accepted as a "good neighbour" and as a responsible member of society in the local communities where it is so critically needed.

To demonstrate Modern Surface Mining's public spirit, it proposes to come to the aid of society, the General Public, at a time of critical need in solving the municipal solid waste space-deficiency problem by offering its mining void spaces for waste disposal, to enhance reclamation of its disturbed land by total restoration of the original surface whilst conserving land use by combining worked-out mines as solid waste landfill depositories as



opposed to requiring a separate location for depositing municipal solid wastes. Future land use planning and permitting is proposed to be accomplished under a pre-planned, one-step licencing regulatory process rather than the present haphazard, by chance, double licencing method.

This concludes the Opening Statement by Counsel for Plaintiffs.

## **1.2 A Brief Outline Of The Problem**

The basic problem is to find an environmentally acceptable solution for the critical shortage of approved space for disposal of solid waste materials, particularly in the areas of population concentrations.

A co-relative problem is to find better utilisation and fuller restoration for mined-out, non-fuel, open pits than under the present land reclamation regulations.

A third problem is to find a less contentious, less controversial and less combative way for projects to be approved, permitted and licenced than through the extended PIP / public hearing process. It is pleaded and urged that more public trust and confidence be placed in the scientific management of the in-place regulatory agencies already charged with the protection of the public and the earth from environmental harm.

The proposed solution for the first two problems is to utilise existing mining voids wherever possible for landfills, and in the future to join the making of new surface mines and landfills into a sequentially, one-step procedure from the initial planning and permitting stage. Thus, in a world currently conscious of re-cycling, the worked-out surface mines should be "re-cycled" to further serve humanity, and finally to fully restore the mined land to beneficial surface uses.

The essence of this work is to stress and prove the importance of the very desirable joining in regulation for the planning, permitting and much needed co-management of two major earth-disturbing, earth-working, essential-to-man, industries contributing environmental problems in the present world, viz., mining and solid waste disposal. Though waste disposal may not be thought of as an earth-working industry making large excavations as does mining, it does, in fact, require excavations to prepare, grading to slope, and daily fill-cover to operate the waste disposal site. Landfill sites are commonly deposited on top of the earth's surface, or in a topographic depression as a ravine or canyon, as opposed to burial in some previous man-made excavational void. However, waste landfilling, whether mounded on the earth's level or sloped surface, or placed in a topographic depression, must trench below the surface to emplace a leachate collection system and to create and grade the initial pocket with a drainage gradient for starting the landfill. It must, additionally, excavate other pits to obtain daily cover material for the waste deposited, and for clays for use as lining and capping material, and for sand or other vegetative-supporting material for overlay of the clay capping material. Consequently,



waste disposal/burial by landfilling is indeed very much earth disturbing, earth-moving and excavating in nature as is mining. For support that landfilling is earth-disturbing, evidence is cited in "A case of excavating three clay pits to cover one landfill ", *Ontario (Joint Bd.) v. Metropolitan Toronto*, *infra*, Chapter 6. Also, it is noted that sand and gravel was used as periodic cover material in the 1968 Ontario case of *Plater v. Town of Collingwood et al*, Ontario High Court of Justice [1968], 1 O.R. 81, *infra*, Chapter 6. The sand and gravel obviously had to be mined from some location. In a California landfill, the volume of cover material is reported to be 20% of the whole. The cover material is dirt /clay that had to be excavated from some other site.

Presently, the regulated attitude of environmental and land use planners and controllers treat them as two distinct and separate problems and industries. In reality, the two "problems" still co-exist in the general public's mind as "bad neighbour", earth-disturbing industries. Both should be regulated to coordinate and reduce excavations and to compliment each other for a far simpler and more satisfactory solution. New regulatory coordination, as proposed herein, should pre-plan for utilisation of mined-out pits as waste disposal sites. This would yield not only more efficient and beneficial results in greatly relieving the critical space problem for waste disposal, but reduce by nearly a whole the required land for MSW sites and greatly increase land conservation. The periodic and frustrating search by municipal and county governments for new waste disposal sites can be greatly reduced by simply using area mining pits.

### 1.3 Environmental Overview

The Anglo nations of the world, particularly the United Kingdom, the United States and Canada, are well advanced in establishing environmental controls for industry through legislation, laws and regulations to conserve and preserve natural resources, to minimize or eliminate pollution of water, soil and air, and to protect mankind, the health, safety, and welfare of his environment. Illustrative of this statement, is the fact that the U.S. was the earliest (1969) of nations to install a fully comprehensive, all-inclusive environmental protective act, *per se*. It was followed closely in time by Canada, the U.K. (see Ch.7§2.6, *infra*), and other northern European nations also enacting similar environmentally protective laws. That is not to say that other northern European nations had not made prior, initial in-roads with limited acts protecting certain areas of their environment. Nevertheless, the Environmental Protection Act of the U.S. (NEPA) is the most internationally copied law in the history of the U.S. According to Nicholas C. Yost, a United Nations Conference on Environment and Development (UNCED) delegate from the U.S. to the 1992 Earth Summit conference in Rio de Janeiro, eighty-four nations have borrowed, copied, or adopted the Environmental Impact Statement (EIS) feature of the NEPA. In the last two and a half decades the mining and waste disposal industries in these industrially-developed



nations have severely felt the impact of a multitude of environmental constraints and controls over their development, operation and land reclamation. By their very nature, mining and solid waste operations necessarily disturb the surface of the earth. During exploitation of the mineral deposit and during the solid waste covering, or burial, good earth tilling and care practices are temporarily in direct conflict with industrial operational practices. Still, neither miners, as "gardeners" of the earth, cannot reap the fruit that has been placed in the earth's crust for mankind's benefit and well-being without disturbing the matrix that holds them, nor can society's solid wastes be disposed in earth sites without disturbing the earth's surface.

By virtue of the distribution and varying depths of the occurrence of the "fruits", or minerals, that lie within the earth's crust, mining falls into two categories, viz., surface mining (quarrying, open pit or open cast), and subsurface, or underground mining. Both extractive operations disturb and affect the earth's environment. It is debatable which has a greater effect on the environment, particularly the aqueous resources, but certainly, surface mining has the more noticeable effect because of its greater public exposure. Surface mining alone produces overburden, that overlying waste dirt and rock that must be stripped from the surface to reach the mineral(s) to be mined. The overburden is stored on the surface for possible, later use, but is generally not replaced in mine reclamation due to prohibitive costs. Both types of mining produce "waste" rock in their excavations and mill tailings in their mineral beneficiation processes. Disposal and dispersal of waste rock and mill tailings become a problem for surface reclamation and for surface water pollution prevention.

Because of a significant physical difference between underground and surface mining methods, as well as the former's lack of effect on the surface environment, and its different potential effects on ground and surface waters, underground mining will not be treated in this study. Open pit coal mining is also eliminated from the study as separate regulations are usually made for the surface coal mining industry which presents different problems requiring different treatment. Thus, this study has been confined to surface, open cast mining of non-fuel minerals, with particular emphasis on the more numerous, the more conveniently located, construction materials mines, e.g., stone, gravel, sand, clay, gypsum, phosphate, etc, and to a lesser extent, of metallic minerals that are mined by open pit or surface mining methods, as gold, copper and iron. This not to say that surface coal mine pits should not be seriously considered as disposal sites for placement of solid wastes. In fact, there are successful examples of utilising coal pits for MSW (Bowmans Harbour, Wolverhampton, in the U.K., *infra*, Appendix, A-1 § 7.2, and a number of currently permitted landfills in former surface coal mines in Kentucky, Kansas, Illinois, Indiana, et al, in the U.S. See *infra*, Appendix, A-1, § 7.6).

In prior decades before reclamation regulations for mining were enacted, disposal of the waste rock from both types of mining operations was simply by piling it on the



earth's surface where it was left to eventually become, once again, part of the earth's crust (for an example, see the 1990 case of *Crowell Constructors v. N.C. State*, infra, Ch. 5 § 4.9.2 ). Natural processes take over and Mother Nature, in many cases, heals the earth's surface's wounds without help from man. Generally, no re-seeding, anti-erosional, anti-leaching, or anti-contamination controls were taken by the mine operators for the abandoned surface. With subsequent reclamation regulations in developed countries, the rock waste piles must be stabilised for erosion control by wind and water, and to abate or lessen the pollution of surface and ground waters from any naturally existing contaminants in the waste piles, e.g., lead, arsenic.

Various claims are made that mining's waste rock disposal on the earth's surface causes contamination and pollution of surface and subsurface waters. Some claims are founded on truth; others on part-truths, whilst still others are unsubstantiated, dubious to unfounded, being merely caution or misinformation. Waste rock from much of surface mining is chemically inert and has no different effect on water resources than were it in its original location. It should be borne in mind that under the USEPA's standards, even inert rock sediments placed into navigable streams are considered water pollutants, whether chemically neutral, or not. Such rigid standards were upheld in 1990 in *Rybachek v. U.S. EPA*, where the EPA interpreted dredged soil and inert rock as pollutants and required settling pond treatment before discharge. (See *Rybachek* case, infra, Ch. 7 § 3.1.1).

An historical investigation made herein, infra (see Ch. 3), for environmental damages against non-fuel surface mining pits indicates that claims for contamination and pollution of underground water were from nil to rare. It is the author's theory and conviction that, in general, non-fuel and non-metal surface mining has a negligible to no-effect in contaminating subsurface waters, whether mining occurs below the water table, or not.

It is conceded, and the historical investigation made herein of litigated pollution claims bears out, that at some sites containing mine-mill tailings waste and ponds, chemical additives and minute amounts of naturally occurring hazardous metals and compounds from the milling process remain and can produce a contaminative effect by its surface runoff waters into nearby surface and ground waters. This concession applies mainly to ore milling operations that were seeking to remove valuable metallic compounds from a rock matrix that was wasted. In virtually all cases where the mining operation is for physical values or attributes of the rock, such as stone aggregates and dimension stone, occurring in massive, relatively homogeneous lithologic bodies as limestone, marble, shales, granites, et al, there will be virtually no chemical additives involved in the plant-upgrading or milling process. Investigation of historical litigation also bears out that claims against surface stone quarries and sand pits for pollution of underground waters has been virtually non-existent.

The mining industry and its operating techniques are international in nature. Thus, the problems of waste rock dispersal and disposal from open pit mining, and ensuing



problems of mined-land reclamation, prevention of erosion, leaching and contamination from the resultant open pit and waste piles, and water discharges are also internationally common.

Since mineral development and exploitation is for profit, the cost of opening and closing a mine in the present era of environmental controls has increased the costs of mining dramatically. Many discovered metallic mineral deposits in the developed nations are marginal, or less, as to development costs. With the added cost of environmental safeguards, the demarcation between marginal and sub-marginal deposits has been raised thereby making previously marginal deposits sub-marginal and unmineable. In the course of determining what environmental measures are sufficient for protection of the environment during mining operations, a struggle has developed between the mining industry and those that would over-regulate. At present, ever-tightening environmental controls, whether too stringent or not, appear to be the promise of the future for mining operations.

On a world-wide basis for environmental concern, prospective countries for development by the international mining industry shows aspects of having a divided camp, falling into two groups, the developed or industrialized countries, and the Third World or developing countries. An incisive, speculative treatment of this environmental mining issue is made by an Editor of the International Bar Association's *Journal of Energy and Natural Resources Law*, in an article, "Environmental Policies Towards Mining in Developing Countries" (Walde, 1992). Professor Walde points out that in the developed countries, "...mining is no longer automatically assigned precedence over other land-uses, and environmentally (socially or culturally) important land is no longer available for mining." In contrast, in developing nations mineral development has become a priority for them.

Industrial exploration and operation mineral planners are well-aware of the extreme environmental sensitivity of land use in developed countries. Environmental risk assessments and risk modeling are becoming standard procedure for prospective mineral operation evaluations. In prior decades, the question of whether a mineral deposit would be developed by surface or underground mining methods was largely determined by the economics of the depth of overburden to be stripped. With the addition of high environmental and land reclamation costs in the developed nations, the choice of mining methods is no longer principally determined by overburden thickness and stripping economics. An additional environmental risk consideration for surface mining involves its exposure to the public. The obvious temporary disposal of large volumes of overburden on the surface from surface openings in the earth creates an anti-mining feeling in the host-community. As a consequence, frequently costly, and at times basically unnecessary, speculative and precautionary protective environmental measures must be incorporated into the permitting process to assuage the local citizenry.



Professor Walde's article quotes an estimate of environmental costs from the *Financial Times*, June 5, 1991, in industrialized countries as "likely to raise mining costs by 20%." Overall, in the opinion of this researcher, the figure appears to be an underestimate. For example, in the case of the Kennecott Corporation's new copper sulphide Flambeau open-pit mine in Wisconsin, U.S., "75% of the capital investment was tied up in environmental protection." (Engineering & Mining Journal, Feb.1992).

Consequently, the increasingly high costs of environmental controls of mining in developed nations have caused the mining industry to look elsewhere for lower mining costs. (For support, see the article in Chapter 10 § 4, entitled "Canadians Abroad: Canadian Mining Money moves overseas")

The underdeveloped and the developing nations are striving to overcome their lower living standards and attain a richer life-style, similar to that of the developed nations which have already largely developed their mineral resources. These Third World nations have openly solicited foreign mining industry to invest in the development of their wealth of minerals without the costly and stringent environmental and mine permitting regulations of the developed nations. They reason, to raise their standard of living they must exploit their mineral wealth first as did the developed nations; environmental concerns will follow. Members of the mining industry of the developed nations have responded to their invitation with very large expenditures. For support, see foreign advertising in Chapter 10 §4, *infra*. The following news item of 24 February 1995 from *The Mining Journal, London*, illustrates the mining movement away from the developed nations and was headlined,

#### U.S.-CANADIAN MINING COMPANY ECHO BAY MOVING ABROAD

"Echo Bay is set to change the geographical focus of its operations. ...all four of the company's gold mines... are in the U.S. and Canada. However, the Denver-based company is now setting its focus for growth on the international scene. Like most other North American mining companies, Echo Bay is increasing its foreign exploration expenditure (North America's share of an unchanged total exploration budget falling from 60% in 1991 to 40% this year) and has stepped the level of overseas strategic alliances.

\*\*\*Echo Bay would be concentrating its search on countries where mining companies were welcomed.

\*\*\*The executives also noted that Echo Bay would apply the same environmental criteria abroad as at home." (The Mining Journal, 1995 b)

Perhaps ironical, yet laudable and beneficial to the world environment, is the fact that some mine operators, while seeking lower mining costs in countries where environmental expenditures are negligible to non-existent, are taking some of their indoctrinated environmentally protective mining management principles with them to the essentially environmentally-unconcerned developing nations. As an example, in early 1994 the Bangladesh Government approved BHP Corporation's plans to explore and exploit coal reserves by open cast mining "incorporating full environmental safeguards". (The Mining Journal, 1994 a; emphasis added).



Since the Anglo nations, the United Kingdom, the United States, and Canada, are well advanced in dealing with and treating environmental problems, it is fortunate that they have not only a common language, but a common legal system evolving from England. All three nations have recognized an environmental need for regulation of surface mining and waste disposal, and all three have reacted with controls to aid in the prevention of further contamination and pollution of air and water resources. However, the formulation of controls for surface mining has taken place in the past on an individual national basis with little or no coordination between the nations to resolve common problems. That is not to say that international mining symposia have not stressed and ultimately effected mining environmental awareness amongst the various nations.

The advanced state of development and higher standard of living of the industrial nations have brought with it other serious environmental problems. Deterioration of water and air quality have steadily mounted in intensity and volume until society would no longer tolerate uncontrolled pollution by industry. High living standards in a deteriorated environment triggered society to cry out for quick relief, which in turn brought stern corrective measures for the culpable industrial world. The higher standard of living, with its often superfluous amenities for an easier life-style, also has brought with it massive volumes of waste resulting in the problem of how and where to dispose of it without further deterioration of the environment that fostered and gave birth to the higher life-style. Advanced technology of the developed nations, in response to the public's demand and craving to make a utopian dream of luxury a reality for every individual, has resulted in increased production to meet the continuous demand of higher living standards for all persons without regard to societal costs. Consequently, the pursuit of such luxury and abundance ideals has at the same time generated tremendous volumes of municipal, solid, hazardous and toxic wastes. Simultaneously, there has been a demand for immense amounts of energy supplied by fossil fuels, or alternatively by radioactive minerals, to meet the power requirements for the increased production. The wastes from increased amounts of fuels have only compounded the environmental problems. The developed societies, having lived in the lap of luxury for several decades since the end of World War I, without great concern for the deterioration of the environment, have come to realize that the time has come "to pay the piper" and make amends to the environment.

Mining, as a basic industry, produces the essential raw materials necessary for the manufacturing of societies' necessities and luxuries for its well-being. Lest we forget, and to illustrate with some typical examples of the many minerals provided by the mining industry to maintain the standard of living in the U.S., every day 18 million tons of raw materials must be mined, cut or harvested ("If it can't be grown, it must be mined") to meet the individual, daily demands and consumption of U.S. citizens for goods, ("things and stuff"), which amounts to about 150 pounds for every man, woman and child. (Similar figures would hold true for the U.K. and Canada.)



Daily mineral production required by the American public for products consumed daily :

3,000 new homes and 650 mobile homes are completed daily, requiring limestone, clay and iron slag for cement, and crushed stone for concrete for foundations, blocks, and driveways; asphalt for waterproofing foundations; iron and zinc nails, copper and aluminum for wiring, guttering and window frames; window glass (silica sand); steel beams and window frames; clay, feldspar, talc and silica in porcelain tiles, sinks, bathtubs and toilets; iron, brass, steel, aluminum, copper in plumbing fixtures; iron, zinc, brass light fixtures and bulbs; clays in brick and tiles; counter tops, fireplace and hearth stones of marble and granite; clay putty and joint mortars with limestone and gypsum; gypsum for wallboard ; asphalt roofing with stone grains embedded, mineral wool insulation from silica and silicate minerals; etc., etc.

carpeting: one square mile - 640 acres per day is woven daily and backed with barite and calcium carbonate;

plate and window glass : 9.7 million square feet - about 223 acres per day - are used-enough to cover 200 football fields - made from silica sand and trona ( hydrous sodium carbonate);

pavement: 2,750 acres of concrete and asphalt paving are laid daily - highways, roads, re-paving of broken highway surfaces, parking lots, driveways, etc., using concrete (limestone) crushed stone, sand and gravel, asphalt;

auto batteries: 150,000 lead-acid auto batteries are replaced each day (lead);

medical x-rays: 650,000 x-ray pictures are taken daily - each requires lead shielding for patients and technicians (silver, iodide, lead) ;

dental care - toothpaste: 550,000 pounds of tooth paste are used daily - 2.5 million tubes - (calcium carbonate/limestone, zeolites, trona, clays, silica )

dental care- cavity fillings: 80 pounds of gold are used to fill 500, 000 dental cavities daily;

light bulbs: 3.6 million light bulbs purchased daily - made from tungsten, trona, silica sand, copper, aluminum;

glass bottle and jars: 120 million are used daily - made from silica sands, trona;

telephone wiring: 150,000 miles of copper wiring is added daily to handle the 80 million telephone calls made daily;

paints: 3 million gallons of paint used daily for "sprucing up" 200,000 homes - made with titanium, iron, silica, wulfenite ( lead molybdenate), mica ;

mixed cement : daily ready-mixes make 187,000 tons daily enough to construct a 4-foot wide sidewalk from coast to coast - from limestone, sand and gravel, crushed stone;

photography: 21 million photos are taken daily - equal to more than 29 acres of wallet-sized pictures - made with silver and iodide; (SME 1995)

The list for the public's daily mineral consumption goes on and on. There are the many other large, obvious volumes of minerals consumed for manufacturing vehicles, autos, trucks, trains, aircraft, and ships; for personal and industrial electric and electronic equipment; for many medicines and hospital equipment; ad infinitum, all benefiting the public's welfare and well-being.



Mining, the procurement of essential materials from the earth, is as necessary to mankind's well-being as clean water and air. It is not suggested herein that all new proposed mining projects and solid waste disposal sites be given *carte blanche* approval, but does suggest that for one to oppose new waste disposal sites and new mining pits at public hearing is to oppose one's own continued well-being and high level of living. Unfortunately, for society to continue in the manner of life to which it has become accustomed, it is caught between the demands of cleaning up its deteriorating environment and having a continuing supply of basic raw materials for its mode of "good living". An advanced society must have "clean living" conditions at the same time with "good living", neither of which is expendable. The price tag for this combination must be paid by society. The price is, indeed high, and becoming higher every year with increasing environmental constraints placed on the mining and manufacturing industries. The caveat for society is to avoid extremism and over-regulation in environmental concerns.

As indicated, a part of the problem of restoring the environment to an improved state of cleaner living has resulted from the wastes generated in the manufacturing of the raw materials taken from the earth. In addition, society, itself, generates tremendous volumes of disposable waste from its consumption of products which have a short-term life, such as containers, paper and plastic products. The resulting problem is how to cope with increasing waste disposal without degrading the environment, or at least, minimising the degradation, and particularly to protect the water quality and supply.

Unclassified and unrestricted landfills, dumping in the oceans, rivers and large lakes have been former solutions for disposing of society's waste. In a few passing decades those methods boomeranged to haunt society and the environment, particularly in the more highly populated areas. Even attenuated landfills of a few years ago are revealing injury to the ground water sources. The current trends are toward incineration of bulk waste, controlled, classified, and totally contained sanitary landfills, and recycling of reusable materials.

Although incineration greatly reduces the bulk of waste, incineration has not been readily accepted because of its offensive odors and polluting emissions into the atmosphere. However, highly-utilitarian re-cycling of MSW is reviewed in Appendix A-1 §§1, 2. Recycling does not adequately resolve the necessary volume reduction for disposal of society's waste. A major problem for world-wide recycling advocates is that the daily volume of MSW is generating faster than the rate of recycling. Thus, large amounts of waste for disposal continues to be a problem. Undoubtedly, recycling is helpful in reducing the volume of MSW, but disposal of the remaining bulk in controlled landfills is the method still utilised and preferred. The waste disposal industry has mushroomed as a result. This is supported by a statement in a paper given by Paul A. Tomes, FIQ, M. Inst. W.M., Company Landfill Manager-ARC Aggregates, 2d October 1989, and presented to the Institute of Quarrying, Annual Conference Symposium at Bristol, "The waste



management business in Britain has a turnover of £ 5 billion (annually).” (Tomes, 1989) The industry has continued to grow since 1989 with ever-safer landfilling technology. Hughes has also stated, “Certainly waste and its disposal is now a major industry.” (Hughes, 1992, p.247).

New excavations for surface mounding-type landfills, i.e., either for initial grading of pockets for the waste and emplacement of the leachate collection systems, or for excavating cover materials for surface mounding of waste, must be made. With the enormous volumes of waste, more landfills are needed in an increasing amount of geographical locations. Along with this need comes the problem of siting, approval and permitting for landfills. The shortage and need for more landfill sites has become severely critical. The legislative mandating for re-cycling of worked-out open mine pits for landfilling with solid wastes, before otherwise inferior reclamation methods are employed, is the proposed solution investigated in this research. Mandatory re-cycling of surface mines, thus, relieves the critical shortage of disposal sites; offers full restoration of the land to its original surface thereby making fuller and better use of land, resulting in greater conservation of land.

#### **1.4. A Proposed Solution**

This study recognizes that there are many existing worked-out and abandoned surface mining pits in the industrialised nations left in an unreclaimed condition from before the era of enforced reclamation laws; also, many pits have been left in a “reclaimed” condition that have had only minor surface grading and allowed to fill with water. Special attention and emphasis is given to surface mining for construction materials, e.g., stone and rock for aggregate (crushed stone), clay, etc. As old pits are worked-out, new pits are being started every year. These new surface mines for crushed rock are normally located and opened in the proximity of the periphery of new and growing metropolitan areas, close to the new metropolitan-suburban area construction. This is largely true because crushed stone is a low-priced, high-volume, low-profit per ton mined material that generally cannot tolerate high-cost haulage or freight cost for distance in addition.

Many of the older, abandoned pits are located near urban areas where the generation of municipal solid waste is in the largest volumes because of high population densities. These older pits were abandoned, either because they were worked out, or the operation was forced to move further away from the metropolitan-urban area by the encroaching population. Still, they remain unrestored, partially filled with water. They are landfill-usable because backfilling has never been done. (These observations and comments are based on a life-time of geological work in the construction minerals industry and whilst



exploring for new aggregate and materials source-sites, either as replacement for older pits to be abandoned, or for new sites to meet expanding construction for new growth areas.)

Logic indicates that such worked-out mine pits are fortuitous locations for solid waste landfills. The critical-space deficiency of the municipal solid waste (MSW) disposal problem has provided an opportunity to make a further and maximum use of the once-used natural resource locations. In a proper sense, the abandoned and worked-out mining pits may be “recycled” as solid waste landfill sites. Currently operated pits and unmined pits of the future, may, in turn, as they are worked-out for their mineral content, or closed for rapid encroachment by population growth, also be recycled to fill the omnipresent, critical demand for disposal sites of society's solid refuse. Of even greater logic is their common bond by virtue that one excavates a hole in the earth, and the other requires an earth site to deposit wastes. Mining of construction materials is concentrated in proximity to the population centres where major construction is also concentrated. Those same populations centres generate society's larger volumes of solid waste. The location compatibility of the two industries are made for unification of purpose from beginning to end. This relationship is referred to, *infra*, as the “urban quarry-landfill cycle”.

The excavation of new holes in the earth and further earth disturbance simply to deposit solid wastes is misused, unnecessary environmental disturbance, wasted land use, and expense when ready-made excavations for waste disposal are provided by the construction mineral industry. In addition, excavating holes in the earth separately for two purposes, i.e., to mine construction minerals, and secondly for depositories of solid waste, only serves to exacerbate the crisis of land-shortage in metropolitan areas by taking twice as much land than needed to serve the two purposes. Furthermore, the spoil piles present at abandoned and working pits provide a ready-made and suitable source of daily landfill cover material. It replaces the overburden from whence it came.

Research included here investigates the possibility of promulgating uniform laws for mandatory recycling of the worked-out mine pits as landfill sites. Under the present applicable regulations in all three Anglo- nations, the U.K., the U.S., Canada, open pit and solid waste landfill site permitting are separate processes often involving difficult, arduous, and exhaustive environmental assessment investigations. There are open pits in the U.K. that are already simultaneously being filled with municipal waste whilst being mined. The U.K. has already successfully proven to a satisfactory degree the practicality and utility of reclaiming worked-out open pits by infilling with solid refuse. This study gives support to that British practice, but proposes that the practice become universal, and in addition, the study proposes that the permitting processes be combined and coordinated from the beginning of the planning stage with the end purpose that before completion of mining, the open pit site, upon pre-planned safe, pre-studied and pre-determined conditions, automatically becomes an environmentally approved disposal site for solid wastes. The

economic, political and practical advantages to simultaneous environmental investigations for a dual purpose opening of the earth's surface should be obvious.

With the conveniences of a common language and a common legal system, it is urged that the Anglo nations make concerted and cooperative efforts to adopt a best practice model law proposal herein in Appendix A-3 to develop uniformly beneficial environmental regulations for the mandatory recycling of worked-out surface mine pits for solid waste disposal sites in the land reclamation and land conservation process. Beyond adoption by the Anglo nations, the prospect may be entertained that environmental laws and practice regulating the dual use of open pit mining with landfilling may be eventually copied, emulated and transferred from the developed and industrialised nations to the developing nations.



## **SECTION II - HISTORICAL REVIEW TO CURRENT REGULATIONS**

### **CHAPTER 2**

#### **A BRIEF HISTORY OF MINERAL LANDS AND REGULATION**

##### **2.1 Introduction**

Mining in the Anglo nations [Anglo nations or countries hereafter in this work refers to the United Kingdom (U.K.), the United States (U.S.) and Canada] falls into two land control groups, viz., (1) privately owned lands, and (2) government-owned lands, e.g., Crown lands for the U.K., the public domain or federal lands for the U.S., and Crown/federal lands for Canada.

A brief history follows from the birth of the nation until the period just prior to the "green revolution" for each nation's development of its interest in and control of minerals, mining and mineral-bearing lands along with the manner of division into privately owned and governmentally owned mineral lands.

##### **2.2. Mineral Land Interests**

###### **2.2.1 United Kingdom**

Knowledge of mining in the British Isles antedating recorded history of the Roman occupation is scant to non-extant. The long history of mining in the Isles is evidenced by the discovered underground workings for flint made during the Paleolithic period in East Anglia. However, a recent announcement of an archeological discovery was made of prehistoric tribesmen mining for copper, and possibly lead, in 2,200 B.C. in County Kerry, Ireland. "Among the debris were found hundreds of stone hammers. To extract the copper ore, the prehistoric miners drove tunnels at least 15 m. into the hillside. Rock was removed by heating it with fire (decrepitation) and then shattering it with stone hammers. Rubble was removed with shovels made from the shoulder blades of oxen." (Mining Environmental Management, 1993).

Six hundred years before the birth of Christ, the Phoenicians referred to the British Isles as the Cassiterides, meaning the Tin Islands. Herodotus (c. 485-425 B.C.), sometimes called the "father of history", in writing about Europe, said "that the Greeks obtained their tin from the furthest part of Europe." The tin country alluded to was supposedly the Cornwall district. And Caesar in his writings after his invasion of Britain (c. 54 B.C.), reported that tin was produced in the midland, and iron from the maritime area. Discouragingly, Cicero (c. 50 B.C.) wrote, "In Britannia nihil esse audio neque auri neque argenti." [In Britain there is neither gold nor silver] (Rogers, 1876, Chapt. VI).



By right of conquest and according to Roman law, the ownership proper of all lands was vested in the State (*dominium strictum*, i.e., strict domain), and while it might have claimed the beneficial use (*dominium utile*, i.e., useful domain), its possessory ownership and enjoyment was vested in the grantees or tenants of the State subject to rents or royalties payable to the State. (Bainbridge, 1900, p.106-107). Thus, the broad distinction between the titled ownership of the State and the equitable or beneficial ownership by tenants through their tenure and occupation was formed. Consequently, under the Roman occupation and rule of *dominium strictum*, all mines, minerals and quarries belonged to the state. Though Emperor Tiberius (c. 14-26 A.D.) reportedly claimed absolute dominion over all mineral lands and minerals, that doctrine was abandoned later, and in accordance with *dominium utile*, a demand was made for royalties on minerals produced by private persons who worked mines. Under Emperor Gratianus of the West (c.367-383 A.D.), all gold and silver was reserved to the State; for all other, baser metals and minerals the general right to mine from private lands was granted to the beneficial land owner on a royalty payment of 1/10th to the state. If the mining was performed by another under agreement with the beneficial owner, the mine-worker paid 1/10th to the State and 1/10th to the property owner. Such doctrine of mineral royalties was known as *canon metallicus* (metal, or "mining" law). (Bainbridge, 1900, p.108) That mineral land policy was adopted and continued by succeeding Roman rulers over Britain, e.g., Valentinian II and Theodosius I (c.346-395 A.D.), Theodosius II (408-450 A.D.) and Valentinian III (425-455 A.D.). According to Rogers, "In some of the Roman-ruled provinces, on the allotment of the land to private individuals, the conquerors reserved the rights to the mines, minerals and quarries, for the benefit of the state; in other provinces mineral rights were assigned to the allottees of the soil. Hence, the property in minerals became, not infrequently, distinct from the property in the soil." (Rogers, 1875, p.20).

An innovative feature for the promotion of mineral development was created under a Valentinian II rescript decreeing that state mineral lands could be worked by private persons for gold for their own advantage by paying a royalty to the state. The royalty was set at "eight scruples (i.e., 1/3 oz.) in gold dust for each worker in the mines." However, a right of pre-emption was included for the state to take over the mine when the gold discovered reached a certain quantity (Rogers, 1876, p.21).

With further Roman rule, the doctrine of absolute ownership of property in the State, and later, in the sovereign or Crown, became firmly established; also, the principles that mines and minerals on state lands belonged exclusively to the State; and, on private lands where there had been a grant of property from the state, the concession became entrenched that ownership of the surface was *prima facie* (at first sight) title to ownership of the non-royal minerals therein and thereon. It also became established that all mines and mineral lands were subject to certain servitudes and became a source of revenue for the sovereign.



Thus, it was the hypotheses of Rogers' and Bainbridge's works that the civil law of the Romans, as applied to mines and mineral lands in all continental lands under Roman rule and in Britain as well for several centuries, was perpetuated by succeeding sovereigns in Britain, viz., that royal mines, or gold- and silver-bearing lands, were the exclusive property of the Crown; and, all other mines, referred to as baser metals or substances, were conceded in *prima facie* as belonging to the surface owner, *ab inferis usque ad coelum* (from below all the way to the sky). (Bainbridge, 1900, p.108).

In the intervening six centuries, between the end of Roman rule (c. 449 A.D.) and the beginning of Norman rule (1066 A.D.), the invasions, occupation, settlement and rule of Britain by the Jutes, Angles, Saxons and Danes occurred. There appears to be a hiatus in recorded history of mining and mineral land activities during that time. With the subsequent Norman occupation and rule, the Normans, having adopted the strong Roman influence of making written records under centuries-long occupation, recorded once again English history of mining, mineral lands and mining law which have been left for study.

The Norman rulers gained title *in posse* (in possibility; not in actual existence) to all lands of Britain by virtue of their conquest. William I, The Conqueror, demanded fealty of the defeated Anglo-Saxon barons, and the lands of those not giving allegiance were confiscated, thus becoming sovereign lands *in esse* (in being, or actuality) as well as *in posse*. The earliest Norman grants of royal lands, which included the minerals thereon, were made by William I to the earldom of Cornwall, a half-brother of William I, and to other Norman royalty in Devon which included, even in those times, the well-known tin mines.

In the reign of Richard I, the *Charta Stannararium Domini Regis*, 1198 A.D., concerned and protected certain rights of the Crown in the stannaries (tin deposits and mines) of Cornwall and Devon. In 1201 A.D., King John granted "the celebrated charter of liberties to the tinnors of Cornwall and Devon which may justly be considered the foundation of their rights." (Rogers, 1876, p. 164). However, the ownership *in esse* of the tin mines of Cornwall in particular, and those in Devon, was the subject of dispute between the King and lesser lords for several centuries. The question, whether the tin mines were 'royal mines', was at constant issue and unsettled. The answer, in turn, depended on whether the attendant occurrence of the 'royal' minerals of gold and silver along with the occurrence of tin in the stanneries, or with any other minerals, as in the mines of copper, lead, et al, made the occurrences 'royal' mines.

England, seemingly, was not blessed with an abundance of the royal minerals. Gold was discovered in the Dolgellau area of North Wales as early as the 12th century. However, gold mining in the area did not have any import until 1863 when the Gwynfyndd mine was started and continued until 1916. (The mine was reopened in 1981, and new zones of mineralisation were found in 1992.)



It was not until 1568, after the great *Case of Mines*, [1567] 1 Plowden 310, 75 E.R. 472 (Exch.), between Queen Elizabeth and the Earl of Northumberland was heard, that an attempt was made to settle the question of when mines are to be considered 'royal' and in the domain of the Crown. The Queen claimed as the royal prerogative entitlement to all "mines and ores of gold and silver, and of all other metals whatsoever containing in them gold or silver, with the appurtenants, which might or could be found in any lands within the realm of England or other the dominions thereof, \*\*\* in the soil of the Queen and in the lands of any of her subjects;\*\*\*" In the case at bar, gold and silver occurring in the copper mines on the lands of the Earl of Northumberland were at issue. Prior to the action, the Queen had ordered mining to be done on the Earl's lands for the winning of the royal metals. In so doing, the copper content of the ores was taken along with the gold and silver since the royal metal could not be separated without smelting. The Earl "hindered and disturbed" the mining by the Queen causing the action and claim by the Queen, and for damages of £1,000. The Court of the Exchequer held that the copper mines containing gold and silver, and also the ores therefrom, belonged to the Crown (Bainbridge, 1900, pp. 110-11). Much later, in the case of *Lyddal v. Weston*, [1739] 2 Atk. 20, it was decided that the *Case of Mines* upheld the right of the Crown for the working of royal mines to enter private lands and to use and disturb the surface, i.e. surface rights, including the right to cut timber (Bainbridge, 1900, p.113).

The uncertainty of the status of royal mines continued for mines where baser minerals (lead, tin, copper) were contained with gold and silver. Contention lay between the argument that if any gold or silver were present, it was sufficient to be a 'royal' mine, and the argument that to be deemed a 'royal' mine, the value of the gold and silver contained therein must exceed in value the other mineral with which it was found. According to Heton's Account of Mines, p. 21, it was laterally found from the *Case of Mines* decision that "if the gold or silver, although of less value than the other mineral, was yet sufficient to bear the charge of refining it, or was of more worth than the base metal spent in refining it, then it was a mine-royal, and as well the base metal as the gold and silver in it belonged to the Crown." (Bainbridge, 1900, p. 113-114). Nevertheless, the difference of opinion and dissension continued until William and Mary's Act I, c. 30, was passed declaring that "no mine of tin, copper, iron, or lead should thereafter be taken to be a royal mine, although gold or silver might be extracted out of the same." It was further enacted, Act 5 of William and Mary, c.6, entitled "An Act to prevent Disputes and Controversies concerning Royal Mines", that "all owners or proprietors of any mines in England or Wales, wherein any ore then was, or thereafter should be discovered or wrought, and in which there was copper, tin, iron, or lead, should hold and enjoy the same mines", notwithstanding claims of the Crown to be royal mines, the Crown was given the right to purchase the ore of any such mines, other than the tin ore in Devon and Cornwall counties, within thirty-days after the ore was "raised, washed, and made merchantable" .



Act 5 also set prices for the ores of copper, tin, iron and lead for purchase by the Crown. If the Crown failed to make the purchase, the miner was free to sell the ore to other buyers. (Bainbridge, 1900, p.114-115).

As to Crown claims on other minerals, in 1607, under the reign of James I, in the *Case of Saltpetre*, 12 Rep. 1, the court unanimously found that the Crown had no claim to the mine, but in the interest of the "defence of the realm" could grant licences for the working of the saltpetre (potassium nitrate) for gunpowder on private lands, and finally, that the owners of saltpetre-bearing lands could not be restrained from mining it. Similar holdings were found for alum-bearing lands [potassium aluminum sulphate] (Bainbridge, 1900, p.115). The more common minerals and rocks, used mainly as construction materials and obtained by surface mining, were in far less contention as to rights to mine, quarry or dig and that title was in the surface owner. It may be noted here, the Judkins Quarry-Landfill example, located in North Warwickshire, and discussed in Appendix A-2, § 8.2, *infra*, may be traced back to 1581 when quarrying of stone on Hartshill Ridge for construction materials was first mentioned.

Over the ensuing centuries, it became evident that British mining law could trace its roots to doctrines and principles established by Roman civil law, was perpetuated by the Normans and, subsequently, adopted by the British. However, the developing English common law varied from the Roman civil law in that it incorporated and firmly developed the Anglo-Saxon's ideals of the importance of rights of the individual in opposition to, and to the exclusion of, oppressive property rights of the sovereign. With regard to mineral lands, mineral ownership and mining rights, Crown ownership was gradually reduced over time from a claim to 'all minerals whatsoever' to a claim only over gold and silver mines. The claim to the "royal" minerals was extended to the British colonies and dominions overseas.

### 2.2.2 United States

During the Colonial period as the Crown lands of the American colonies were disposed of for settlement, the sole concern for minerals was in the Crown retaining royalty rights from discovered and operated deposits. Even then, only interest in the "royal" metals was reserved. Most of the colonial charters contained royal-mineral royalty reservations. The 1584 Carolina charter from Queen Elizabeth to Sir Walter Raleigh reserved one-fifth of the gold and silver that might be discovered or mined. Similar reservations to the Crown were contained in the charters of several American colonies; one of the Virginia charters reserved "a one-fifteenth of all copper"; other charters for Massachusetts Bay Colony (1629); New Hampshire (1629); Maryland (1632), Maine (1639), Rhode Island and Providence Plantations (1643); Connecticut (1632); and, Carolina (1663 and 1665) reserved one-fourth of all gold and silver ores. (Lindley, 1914, Sect.31).



After thirteen of the American colonies severed ties with Great Britain, large areas of mineral-bearing lands went into private ownership to encourage western settlement without the state governments succumbing to the royal interests therein. An exception was in New York, where the state asserted a right to mines of gold and silver at an early date. "The New York statute also declared that 'mines of other minerals on lands owned by persons not citizens of any of the United States' are also claimed by the State of New York." (Kent, 1896).

Along with other English cultural traits deeply embedded in the American colonies was its judicial system of the English common law, inherited from its mother country and retained after its independence. Under the common law, the property owner was the *prima facie* owner of the minerals in the land, with three exceptions, viz., (i) "royal mines" which contained gold and silver; (ii) particular customs to the contrary, such as practiced in the tin mines in Cornwall and Devon, or the lead mines in Derbyshire ( Note: The influence of "particular customs to the contrary" in the formulation of early U.S. mining law is discussed later in (2) Government-owned lands (a) United States, *infra*); and, (iii) cases where the minerals had become severed from the surface and were held in different, private ownership. [Am. Law of Mining, 1986, Vol. I, Chapt. 4, Sect. 4.03, citing *Lindley on Mines*, Sect. 2 (3d ed.1914)].

The Continental Congress enacted the Land Ordinance of 1785 calling for a method of surveying the public lands of the new nation. Included, were directions for the surveyors to list "...all mines... that shall come to his knowledge" and also provided for a royalty reservation of "one third part of all gold, silver, lead and copper mines, to be sold, or otherwise disposed of as Congress shall hereafter direct." [Ordinance of May 20, 1785, 28/ Continental Congress 375, 376, 378 (Fitzpatrick ed.1930)] After the end of rule by the Continental Congress, the reservation ceased to be in force.

The first acquisition of public lands for the new nation took place after the end of the hostilities with Britain, gaining the area westward of the coastal colonies to the Mississippi River by the Treaty of Paris, 1783, and with the cession of claimed lands from the former colonies to the federal government during the period of 1781 to 1802. With further rapid acquisitions and areal expansion of the U.S. through the Louisiana Purchase in 1803, the cession from Spain in 1819, the Oregon Compromise with Great Britain in 1846, the Texas acquisition in 1845-1850 (lands outside of the state of Texas), the Mexican Cession of 1848, the Gadsden Purchase of 1853, and the purchase of Alaska in 1867, the public domain out-grew the pace of settlement. (see Figure 1, Growth Map of the U.S., 1776 to 1867, page 39.)

In the early part of the nineteenth century, large areas of copper-bearing lands of Michigan in the Northwest Territory (NW of the Ohio River, see Figure 1) went to the highest bidder. Between 1829 and 1847, mineral resources in the central U.S. and the region of the Great Lakes went into private ownership as a result of various Congressional Acts offering mineral lands for sale.



## The Growth of the United States from 1776 to 1867



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Credit: C.S. Hammond & Co., N.Y.

Figure 1 - Growth of the United States, 1776 to 1867



In the following decades of frenzied development of the Western U.S., wholesale land grants in fee simple were made by the federal government to the public at large. Nearly 130.5 million acres of the public domain were granted to railroad companies for construction of lines to encourage the westward building of them and for settlement of the acquired western lands. In some cases of railroad grants, reservations of the minerals were made by the federal government, although with frequent exceptions for "coal, iron, and other minerals". Thus, up until the first half of the nineteenth century, public lands had been regulated by the federal government with concern mainly for revenue and disposal for settlement. Under the common law, the property owner was the *prima facie* owner of the minerals in the land. Consequently, a large amount of mineral-bearing lands in the U.S. became privately owned. The development of federal land law by which mineral interests were retained in public lands did not start taking place until the enactment of the Mining Laws of 1866 and 1870.

A threefold distinction results when referring to mineral land ownership in the U.S., viz., (1) those lands which came under private ownership in the 13 original colonies; (2) those lands in which private ownership has since been granted by the federal government under sale or patents; and (3) those lands which still belong to the federal government. As a practical matter, and as in England, the owner of originally private lands is the owner of everything *ab inferis usque ad coelum* (from the interior to the sky).

### 2.2.3 Canada

The earliest disposal of mineral rights and levy of mineral royalties on government lands in Canada reputedly took place "in 1654 when King Louis XIV of France granted a concession to Nicholas Denys to mine gold, silver, copper and other minerals on Cape Breton Island, now a part of Nova Scotia." Denys subsequently discovered coal on Cape Breton in 1672. As a result, the French government levied "a royalty of 20 sous per ton on coal mines in Cape Breton." (Hodgson, 1966, p. 1).

Although the first settlement in Canada was made by the French in 1604, the British militarily gained control of New France, or Quebec, in 1759, which was confirmed in the Treaty of Paris of 1763. Ownership thereby passed to the British Crown. Former New France lands became British Crown lands with minerals subject to the laws of Great Britain along with other separate colonies in British North America. Mineral rights in Quebec, prior to the Confederation of 1867, had been granted under French seigniorial tenure or English tenure. In the case of lands granted under the former, mineral rights remained reserved to the Crown unless expressly granted; under the latter, lands granted for agriculture or colonization purposes, the mineral rights, except for gold and silver, formed part of the grant unless expressly reserved to the Crown. Private owned mineral rights in Quebec are, however, subject to provisions of the Civil Code (Hodgson, 1966, p.125).

Canada suffered various periods of political strife in its early history which undoubtedly served to slow the process of settlement and development of its mineral lands,



## The Growth of Canada from 1791 to 1949



Credit: C.S. Hammond & Co., N.Y.

Figure 2 - Growth of Canada, 1791 to 1949



e.g. (i) external pressures of border disputes with the United States in the central, Great Lakes, area as well as at its eastern (Maine) and western (Oregon) extremities; and, (ii) internal disputes and problems between the Anglo Protestants and the French Canadian Catholics. With reference to the latter issue, after the acquisition of New France by the Treaty of Paris 1763, Britain faced the problem of fitting an old colony with alien laws, religion and institutions into the existing British imperial structure. After failing in its early attempt to govern New France as if it were an ordinary English-peopled colony, Britain attempted in 1774, by enactment of the Quebec Act, to assuage the Canadian French with measures of self-autonomy and acceptance. The Quebec Act provided for a governor and council with limited legislative powers, opened public offices to Roman Catholics, and gave statutory protection to the Church. The Act added to the grievances of the English colonists but the British felt that it had kept the French Canadians neutral during the struggle with the rebelling English colonists of the thirteen American Coastal Colonies to the South.

After the Colonial Revolution, the regular British representative system continued to be acceptable to the English of Nova Scotia, but the Quebec Act was no longer satisfactory to the peoples of the St. Lawrence River Valley area (later, Ontario). In 1791, the old province of Quebec was divided into Lower Canada, largely French and Catholic, and Upper Canada, predominantly English, loyalist and Protestant. Each had a governor, an appointive council, and an elective assembly (Scott et al, 1959). In succeeding decades with rapid growth of the area of the Great Lakes, Upper Canada became Ontario and Lower Canada became Quebec. (see Figure 2, Growth of Canada, maps of 1791 and 1873, page 41.) Both were founding provinces in the Confederation of 1867.

A vast area of western and northern Canada, known as Rupert's Land, was under the jurisdiction of and governed by the Hudson's Bay Company by a charter granted in 1670 by King Charles II until the British North American Act of 1867, the Act of Confederation, which made Canada a federal state. Mineral interests under the Hudson's Bay Company were subject to Crown reservations. At the time of the 1867 Confederation, Rupert's Land was divided between the provinces of Ontario and Quebec. (see Figure 2, Canada 1791 map, page 41.)

Although Canada's rich mineral wealth compares favourably with that of the U.S., the development of its mineral lands grew at a less frenzied pace. This is likely due to several factors; (i) the colder climate of Canada was less conducive to large waves of immigration for settlement and mineral development in the nineteenth century; (ii) the internal strife and disunified status of the various British colonies delayed land development; (iii) later colonial status comprising British North America until past the middle of the nineteenth century, kept mineral lands solidly in control of the English Crown minimised disposal to private ownership; (iv) the confederation of British North America did not occur until 1867, well past the United State's earlier period of attractive-



to-immigrants, wholesale development of its public lands for mining and settlement; (v) upon confederation of the provinces, ownership of minerals was continued in the provincial governments [Note: At the time of confederation, July 1, 1867, only four provinces were included in the federal union, viz., Ontario, Quebec, New Brunswick and Nova Scotia. Manitoba entered in 1870; British Columbia in 1871; Prince Edward Island in 1873; Alberta and Saskatchewan in 1905; and, New Foundland in 1949. As provinces were created and joined the Confederation, they acquired ownership of the Crown mineral resources located within their boundaries, except on reserved federal lands; see Figure 2, Canada growth map, page 41.]; (vi) Canadian Provinces did not enact programs of wholesale disposal of fee simple and mineral rights on its lands to entice development as did the U.S.; and (vii) government participation in mining.

### 2.3 Privately-Owned Lands

Generally, in all three Anglo countries, where purchasing or leasing of surface mining rights or on private lands was concerned, it was, and remains, a contractual matter between the land owner and the mine operator. In leasing, or by *profit a prendre*, the essential terms for mining of the minerals as to area, duration of the right, royalties to be paid for minerals removed, surface rights, restrictions, damages and liabilities, were expressed in the contract. Except in the U.K., little control was exercised over surface mining until recent decades of safety and environmental regulations.

Whether by ownership or leasing on private lands, where the working of minerals by surface mining was involved, the owner's or lessor's expectations for the life of a surface mine was generally long enough that any thought for reclamation of the land on termination of mining was seldom given consideration. Further, it was the established custom of surface mining to simply pile the stripped overburden into a spoil-bank on the surface of the property leaving it for natural reseeding and Nature to take over. If reclamation of the mined land was agreed to between lessor and lessee, it was a contractual matter between the parties and enforceable under contract law or a common law action. Furthermore, properties with open pit operations often had histories of being re-opened at a later date after being closed for some reason other than being worked-out. Reclamation even under private contractual agreement with the mining operator would only have hindered and made re-opening less possible or inviting. This is still true today, and a point of contention between pit operators and governmental regulations that mandate reclamation of the land after a regulatory-stipulated short period of inoperation (example: 2 years). At times, mineral economics may cause temporary periods of enforced closures. Present U.S. governmental reclamation regulations are quite intolerant of mineral economics that govern open-pit operations' forced temporary closings. Mandated, pre-mature reclamation before a pit is worked-out serves as an unnecessary cost and a deterrent to its re-opening and



extended life for maximum extraction of the natural resource. Again, Britain was the early history exception for the reclamation of surface-mined lands, and for maintaining a liberal time period before legally finding that a surface mine has been "abandoned" (see "abandoned mine" discussion in Ch. 2 § 3.1, ¶ 3, United Kingdom, *infra*).

### 2.3.1 United Kingdom

The right to work mines and minerals on private lands as developed in the history of the U.K. in II, 1(a), *supra*, has been and remains to the present, a private contractual matter between the fee or mineral owner and the prospective mine operator. However, the operations of all underground and surface mines in the U.K. (inclusive of Scotland and Ireland) have been subject to government inspections and enforcement of comprehensive mining regulations at a considerably earlier date than in the U.S. and Canada. The Metalliferous Mines Regulations Acts, 1872 and 1875, governed "all mineral operations whatsoever except those that the Coal Mines Regulation Act, 1872, applied to", viz., coal, stratified iron, shale and fire clay (Rogers, 1876, p. 708).

Early mine case law in the U.K. defined an "abandoned" surface mine and the need for reclamation, whilst the U.S. and Canada were unconcerned about unreclaimed, abandoned and worked-out mines. Although under the English common law of all three Anglo nations actions for damages to the surface of the land due to surface mining could be made, the U.K. exhibited an earlier concern in its history for surface protection from mining. As early as 1718 the case of *Bishop of London v. Web* [1718] 31(2) L&T; involved a lease for the surface mining of brick-clay. The court stated that where a lease permitted the lessee to exhaust the "brick-earth" (i.e., to mine it out completely), it was "subject to his afterwards leveling the field". And, in *Rosse (Earl) v. Wainman* [1845] 11 Comns, which involved a stone quarry, the court found that the stone belonged to the lord, who may quarry it, but the Inclosure Act (giving use of the surface to the commoners for cultivation), expressly provided that the lord should preserve the top-layer of the 'soil' for respreeding on the surface. The court's interpretation of the Act showed a clear intent that where the winning of stone by quarrying was contemplated, the surface soil shall be kept separate and the surface subsequently restored. Lastly, in *Boileau v. Heath* [1898] 34 Mines, where pit waste had been piled on the surface in a spoil-bank, the surface miner was "under a duty, at the end of his lease, to fill up the pit, and to remove the spoil-bank, and to restore the surface land to its original agricultural condition." (Bainbridge, 1900, pp.3;19; 262).

With regard to the argument against pre-mature reclamation under present U.S. regulations of the so-called "abandoned" mine, or quarry, referred to in § 2.3, *supra*, a more fitting nomenclature in some cases might be "dormant". As argued, *supra*, a quarry closure by the operator might be for market or economic reasons at the time without permanent closure or abandonment intended. This more appropriate description of "dormant" for a temporary closing was found in older case decisions in the U.K. holding



that a mine closure may be either "abandoned" or "dormant". According to the decision in *Bagot v. Bagot* [1863] 2 Agric, it is " a question of degree, that is to say , depending on enquiry, whether the mine may yet be considered an 'open mine' or not ; after one hundred years' abandonment, it would probably not be considered an open mine, but after twenty or thirty years' abandonment, it might be otherwise; and (if any rise in the price of the mineral produced (*sic, coal*), justified the expense of re-opening) it might , in such case, be regarded as an open mine." Similar holdings were found in *Stoughton v. Leigh* [1808] 34 Mines; *Bartlett v. Phillips* [1859] 19 Eccl (Bainbridge, 1900, p.18).

### 2.3.2 United States

Prior to World War II, the U.S. federal government had not possessed any powers over minerals and their development on private lands. They had been governed exclusively by the state law in which they are located. Generally, state governments have never exercised any sovereign rights over the minerals. Up until World War II, and for approximately two decades thereafter, mining on privately owned or leased lands had simply been a matter of starting excavating on one's own land, or as a contractual matter between the fee /or mineral owner, as the lessor, and the mining operator as the lessee, or in the case of a severed mineral estate, by agreement with the mineral estate owner. Not until 1891 did any mining operations first become subject to very limited federal mining regulations by an Act for the Protection of the Lives of Miners in the Territories. This Act provided for one, annual mine inspection of underground coal mines in the territories and did not apply to the states, or to non-coal surface mines.

From its inception, regulation of mining in the states had been considered beyond federal constitutional concern and jurisdiction, being strictly within the jurisdiction of the individual states according to the constitutional powers reserved to the states. Hence, the 1891 Act, above, was limited to coal mines in the federally-controlled territories. The U.S. Supreme Court's position on this jurisdictional issue of control over mining operations continued to be maintained for almost fifty years after the 1891 Act. The Court's position in preserving for the states the power of regulation over mines was based on its interpretation of the federal Constitution's Commerce Clause (U.S. Const., Article I, Section 8). Federal control of interstate commerce under the commerce clause could only be found and affirmed for goods " in interstate commerce", i.e., between the states. Mine ores, concentrates and unfinished mineral products were considered as produced "for interstate commerce", consequently, mineral products and the mines producing them were not subject to federal authority. In 1936, in the case of *National Labor Relations Board (NLRB ) v. Jones & Laughlin Steel Corp.* , 301 U.S.1 (1936), the U.S. Supreme Court changed its former position holding that Congress had the power to regulate production of goods *for* commerce as well as goods *in* commerce. However, no further federal legislation for mine regulation was enacted until 1941 with the Coal Safety Act. Although



coal mine inspections were authorized by this Act, there were no penalties authorized (American Law of Mining, 1986, Sect. 201.01[4]).

During this long period, surface mines for metals and non-metals remained without federal or even state regulation. In more settled, urbanized areas, zoning restrictions for/against allowing heavy industry might be the only controls encountered when opening a surface mine. Even then, a re-zoning might be arranged, e.g., agricultural land to heavy industry, allowing location of a surface mine without incurring the protests of an irate community over environmental concerns. In fact, environmental concerns over surface mining operations were rarely expressed in the first half of the twentieth century. The first federal mine regulation that affected non-coal surface mining was the federal Metal and Non-Metallic Mine Safety Act, 1966, but not made effective until July 31, 1970. This Act provided for primacy of state control whereby a state might enact its own version of the regulations but wherein equal stringency was required.

Thus, in the U.S. until 1969 when the great, popular tide of the "green movement" overcame the nation with mounting national environmental concerns causing its federal congress to respond with enactment of the National Environmental Protection Act (NEPA) of 1969, surface mining operations were virtually unrestricted by governmental regulations. In fact, it would be a few more years before the concerns of NEPA filtered down to all fifty state levels where surface mining would be affected by regulations. Initially, before NEPA, state and federal mining regulations were concerned only with safety practices. After NEPA and its ensuing ancillary legislative acts, earth reclamation measures for surface mining followed, and lastly by preventative air, water and waste pollution and contamination regulations.

The Surface Mining Control and Reclamation Act of 1977 (SMCRA), applicable only to surface coal mining operations, mandated a federal study for the Congress' consideration of whether to enact similar legislation for the regulation of non-coal surface mining. A report prepared by the Committee on Surface Mining and Reclamation is commonly referred to as the COSMAR Study (1979). COSMAR found that non-coal surface mining can be categorized in two types, viz., (i) construction materials mines, and (ii) regional mineral deposits as iron, porphyry copper, sedimentary uranium, phosphate, and oil shale. The study concluded that the mining of such near-surface deposits has limited reclamation potential due to the complete removal of the ore body thereby leaving little to no overburden material to be replaced, and that the impacts from mining such deposits are localized. In addition, such mineral deposits were less frequent than coal, giving them lesser national significance, and there were more variations in mining methods than in coal. As a consequence of the COSMAR Study, the federal government left the regulation of non-coal surface pit and quarry mining to control by state law (Am. Law Mining, 2d Ed., Sect.173.02).



### 2.3.3 Canada

It is noted here that, as in the U.S., Canada's legal system is firmly rooted in the English common law system. In many areas of the law, Canadian courts receive both English and American authority in law. However, Canada's legal system has the additional influence of the French civil law, although largely confined to the province of Quebec. By the Treaty of Paris in 1763, England allowed the province of Quebec to retain its civil law system, which is in effect today. Some mineral rights are owned privately in all Provinces of Canada. The acquisition of those rights took place in title grants from the Crown, from previous fee simple grants, or were acquired under mineral laws granting mineral titles in fee simple with work and fee requirements to be met, similar to the patenting process of the U.S. In some Provinces, title to fee simple mineral holdings may be reclaimed by the Crown where no development work has been done for a statutorily specified number of years.

Mining agreements with private property owners, where the owner held title in fee simple and without mineral reservations by the Crown, and until the green movement overflowed the northern border of the U.S., were also largely a contractual matter between the owner and the mineral operator. In 1976, "approximately 80% of mineral aggregate producers were operating on lands having privately owned mineral rights. (Blakeman, 1977, p.41). Where the mining operator owned the minerals in fee simple, the operator was free to start excavations without governmental restraints. Until recent decades, the largest concern for beginning a mining operation was for foreign individuals and corporations. Prior to the environmental movement, as in the U.S., for surface or open cast mines in Canada, overburden was piled on the earth's surface to become a part of the earth's surface and left for Nature to reclaim.

## 2.4 Government-Owned Lands

Historically, there has been a notable difference between the amount of government-owned lands and the consequential treatment of mineral interests in Great Britain and those of the U.S. and Canada. The difference is certainly accountable by two pertinent facts regarding the population and area of each, viz. : (i) that the former is ancient in time and fully settled having a present population of approximately 62 million people, while the latter two are relatively newer lands with populations of approximately 250 million (U.S.) and 25 million (Canada), and (ii) the land area of the U.K. being 244,109 square kilometers (94,226 square miles), with a population density of approximately 253 per square kilometer (660 per square mile) (England's density is 362 per square kilometer or 940 per square mile), and the latter two with areas and population densities, respectively of : U.S., 9,169,277 square kilometers (3,539, 341 square miles) and 27 persons per square



kilometer (71 persons per square mile); and Canada, 9,978,780 square kilometers (3,851,809 square miles) and a population density of 2.5 persons per square kilometer (6 persons per square mile). (National Geographic Society, 1990) It should be noted that large areas of Canada's far North are ice-laden much of the year, or subject to permafrost all of the year, making them relatively uninhabitable or the surface difficult to work.

Such figures make obvious the facts that the U.K. is population-density saturated, with virtually no unexplored land areas under government ownership for mineral development and settlement, whilst the U.S. and Canada are sparsely settled with vast amounts of government-owned lands for mineral development and settlement. England was well-developed and settled centuries before and whilst the American colonies and Canada were just being discovered. As a consequence, there are a limited amount of Crown lands in the U.K. where the opening of new mines may be encouraged, or on which new minerals may be discovered.

#### 2.4.1 United Kingdom

As a result of the decision of the *Case of Mines* (1585) certain areas were excepted from its application to Crown rights, e.g., in Devon and Cornwall as to tin, in Derbyshire as to lead, in the Forest of Dean and the Hundred of St. Briavel's in Gloucester County, and the Isle of Man as to the baser minerals, generally. These Crown mineral rights remained intact for several hundred years. Under the Crown Lands Act, 1873, the power of leasing was created for the Commissioners of Forest and Woods to grant leases of any mines, metallic or non-metallic minerals, for mining and quarrying in any of the foregoing areas, gold and silver being excepted. (Bainbridge, 1900, p. 123).

The following provisions for mining on Crown lands of the sea-shore and sea-bed demonstrate the early concern for disruption of the local environment and as established under the Crown Lands Act, 1866, whereby :

"\*\*\* one moiety ( a half) of the net annual income of the land revenue of the crown received in respect of any coal, ironstone, or mineral, stone, slate, clay, gravel, sand, or chalk or of any substance obtained by mining, quarrying or excavating, shall be treated as capital, and the residue thereof as income. ... And all persons for the time being entitled, in right of or under the crown, to, or to the management of any beds, seams, veins, mines, or quarries in or under the foreshore, or in or under any lands immediately adjacent thereto, and their respective tenants, may (subject to the provisions of the Act) enter into possession of, and use or pass over or under, any portion of the foreshore under the management of the Board of Trade, in order to make or sink any pits, shafts, adits, etc.; or to erect and repair steam and other engines, buildings, works and machinery; or generally, to do any such other acts as are for the time being necessary or convenient for working, searching for, digging, raising, carrying away, dressing, or making merchantable the coal, stone, or other minerals, ... giving at least two months' previous notice in writing of the intention to exercise the powers of the Act, and doing as little damage as may be in the exercise of those powers, and making full compensation (to all persons interested) for all damage sustained by them by reason or in consequence of the exercise of such powers; ... nothing in the Act is to authorize any person to sink, drive, or make any pit, shaft, adit, etc., which will injure, weaken, or endanger, or be likely to injure, weaken, or endanger, any pier or other structure on or near the foreshore; ...



and the person for the time being, exercising the powers conferred by the Act, is required to make and maintain all works and conveniences necessary or proper for the safety and accommodation of the public." (Bainbridge, 1900, pp. 124-125).

By virtue of its longevity as a civilised and settled nation, the United Kingdom had also greatly developed its laws to regulate mines and mineral lands more than a century before its offsprings (i.e., the United States and Canada) were first considering such controls. By the time the U.S. had enacted its first meaningful law (1872) to register mining claims on public lands, and by the date that Canada was first forming its unification, the Confederation in 1867, various Acts had been passed in England for the inspection and regulation of mines. In 1872, all former acts regulating mines in the U.K. were repealed and two new comprehensive Acts were enacted, viz., the Coal Mines Regulation Act and the Metalliferous Mines Regulation Act (MMRA). All surface mines were included in the Acts.

The U.K.'s Mines Regulation Acts, 1872 and amended 1875, covered regulatory ground in one act that took the U.S. a period of 75 to 85 years to similarly cover. The MMRA provided for inspection of all mines in the U.K.; for the powers and duties of inspectors; for duties of owners and agents; age and sex restrictions for employees in mines and surface plants; for provision of wages and hours; for storage and use of explosives; for mine maps and plans; for reporting mine accidents and deaths and investigations of causes thereof; provisions for opening and closing mines; for fencing and enclosing dangerous abandoned mine openings [also under the Quarry (Fencing) Act, 1887]; provisions for liabilities and damages, civil and criminal penalties for violations of all regulations of the Act. The extensiveness of the Act is illustrated by its provision authorizing the Commissioners of Public Works "to lend and advance money out of the Consolidated Fund, to any person or company, for the support of any mine or colliery." (Rogers, 1876, p. 746).

As commented by barrister John R. Pickering in his 1957 review of the Mines and Quarries Act, 1954, "It is perhaps remarkable that in such industries as mining and quarrying, in which new techniques are being constantly developed and new knowledge acquired, the legislation which has governed their working, namely the Metalliferous Mines Regulation Act, 1872, and ... the Quarries Act, 1894, should have remained in force without substantial revision for so long a time." The 1954 Act still dealt mainly with health and safety measures in mining. Reputed to be a more comprehensive and stringent Act than its predecessor, it was actually only an updated post-war version. It provided for greater responsibilities and liabilities of the mine operator, raising the duty of the owner from one of reasonable care to conform to that of absolute compliance (Pickering, 1957, pp.1-3). Claims for environmental damages remained under the common law actions of nuisance and trespass.



Beginning in the early 1960's, the general public's concerns for the environment mounted, including those resulting from the dereliction of land by the surface mineral extractive industry. By the mid-1970's, surface mining was taking about 5,059 ha (12,500 acres) per annum with very little acreage being restored after completion. Approximations at that time calculated that 60,704 ha (150,000 acres) in Britain had accumulated in waste lands from former mining operations, and by 1974 some 3,2337.5 ha (8,000 acres) had been affected by mining, mine plant, mine buildings, and lagoons in National Parks and Areas of Outstanding Natural Beauty (AONB) (Hughes, 1986, p.240). The nine British National Parks in 1986 comprised 9% of the land in England and Wales, whilst 33 AONB's comprised 37,546.6 square kilometers (14,493 square miles) in 1986, or 9.6%. (Hughes, 1986, p.187). Total AONB area increased to 44,259 square kilometers (17,084 square miles) by 1992. However, David Hughes, Senior Lecturer in the Faculty of Law at the University of Leicester notes that "There seems also to be little consistency with regard to mineral applications in National Parks. In 1979 permission was centrally refused for potash mining in the North York Moors National Park, but in 1978-80 permission to quarry limestone on the Peak Park was given ministerially." (Hughes, 1986, p.245).

Over the decades of the twentieth century, planning law has played an increasingly important role in affecting and for permitting surface mining operations. Barrister David Hughes traces the history of planning law back to Edwin Chadwick, who, in 1873 "called... for a new class of 'town surveyors', men trained in science and engineering, able to build healthy towns with adequate protection for health." And, the emergence of the term "town planning" appears to have originated in a report of the City of Birmingham Housing Committee in 1906. The term was first given legal recognition and status in the Housing, Town Planning &c Act 1909. The making of plans was made compulsory in the amended Act 1919. Further planning powers were incorporated into the Town and Country Planning Act 1932. Various Royal Commissions in the early 1940's reported on studies made, and a new pattern of thinking and principles was founded for land development. The Town and Country Planning Act 1947 declared that "all land is subject to the jurisdiction of planning authorities." (Hughes, 1986, pp.16-17). Consequently, permission for new-start surface mining has required approval under the Act. However, under the 1971 Regulations, it was stated that " \*\*\**generally*, 'use' in relation to the development of land does not include use of land by carrying out mining operations." (Hughes, 1986, p. 246). Nevertheless, various litigated cases over permitting for new mining operations have involved the Town and Country Planning Act.

English legislative acts and the common law had early on shown concerns for protecting the rights of others from injurious acts to the environment, persons and property. Common law actions in nuisance, defilement of waters, and personal injuries covered all the ground that modern environmental and mining regulations attempt to resolve. The improvement in law for the general public through mining and environmental regulations



is that the problem, potential or actual, is sought to be diminished or abated at the source by enforced compliance rather than letting each harmed individual bring his own action for damages after the injurious or tortious act has occurred.

#### 2.4.2 United States

Environmental controls and regulations for mining operations on private or public lands did not make an appearance until after NEPA (1969). Until NEPA, public lands had only been regulated by the federal government with concern to allocation for revenue, disposal for settlement, and resource conservation. The nation has since moved toward a period of retention of resources and management thereof. While the federal government has been the owner of the surface and minerals of public lands, unlike Canada, it has never made any attempt to work the minerals itself, e.g., the phosphates deposits of Saskatchewan.

Federal leasing of minerals on a royalty basis for a concession found its beginnings around 1807. Shortly after the discovery of lead in Missouri, Congress passed an act establishing a leasing policy. The mineral leasing policy was extended to lead and copper in the Lake Superior region. The program deteriorated from pressures to sell the lands for agricultural purposes, various abuses and confusion. Congress terminated the lead leasing in Missouri in 1829 with the sale of the mines, and eventually abandoned the entire mineral leasing program by 1847. (James, 1898).

No meaningful federal mining law had been established in the U.S. until the enactments of the Lode Law of 1866, the Placer Law of 1870 and the General Mining Law of 1872. Their formulation had taken into consideration the mining laws established in the earlier western districts following the California gold rush of 1849. Similarities are noted between the laws and customs established in the California gold districts and those of the lead miners of Derbyshire, England. Notable were the making of rules by the miners, diligence in working and marking their claims, reference of disputes to miner's courts, emphasis upon the vein as opposed to a surface area, and customs with reference to crossing veins and extralateral rights. (Lindley, 1914, Sec. 8) Miners' courts in the California gold district had precedent in the Stannary Courts of Cornwall and Devonshire for the administration of justice among the miners and tanners. These courts were held by virtue of a privilege granted to the tin miners to sue and be sued in their own courts only, in order that they might not be drawn away from their business by having to attend law suits in distant courts (Black, 1968, p. 1577, "stannary courts"). In Derbyshire, the customs were limited to those of the lead mines. In Australia today, Wardens Courts, and in the U.S. administrative law courts, serve a similar purpose in hearing complaints of miners before being passed on to the superior or circuit courts when an appeal is sought.

In early California, mining districts were organized with a camp recorder to keep record of the claims and transfers. By-laws were adopted for claim registers, conflict resolutions, and the settling of other claims, transgressions and complaints between miners



(Gates, 1968, p.709). From 1849 to 1866, more than a thousand mining districts had been organized throughout the new West (Shinn, 1884). The major elements adopted for the mining laws of 1866, 1870 and 1872 that came from various mining districts were, e.g., that the first in time is first in right; rules dealing with the amount of land that may be claimed; discovery as an essential element of a possessory right, with a work requirement to show good faith to hold a claim; and, extralateral rights for a lode deposit [Am. Law of Mining, 1986, Sect. 4.09 fn. (citing Lindley on Mines, Sects. 68-74, "Some of the miners' regulations appear to have been copied in part from customs or laws in the Galena (Illinois) district, from Cornish miners in England and from Mexican law traditions.", id., Sects. 5,13.)]

The General Mining Law of 1872 in effect rewrote the mining laws of 1866 and 1870. The 1872 Law established the first of three current policies governing the exploration, development and production of minerals on public lands. Under it, where public lands are open to mineral location, i.e., not having been withdrawn for specific allocations as for national parks, forests, wildlife reserves, locators are able to initiate rights to mineral deposits merely by discovery and without prior administrative approval. The locator may acquire legal title to the land claimed where the deposits are proven "valuable", by applying for a form of deed known as a patent. Even without a patent, the miner may produce minerals without any payment in any form of royalty, fee or tax. Although the 1872 law itself does not define the meaning of "valuable mineral deposits" [Note: 30 U.S.C. Sect. 22 (1976) simply states "valuable mineral deposits"; Sect 23 states "gold, silver, cinnebar, lead, tin, copper, or other valuable deposits..."], subsequent legislative changes, court and administrative agency decisions over the years have narrowed the application down to only hardrock metallic minerals which may be located and mined. (For an overview on current debate over the U.S. General Mining Law of 1872, see the article from *Mining Magazine*, London, October 1994, Appendix C).

The loophole, whereby unreserved minerals passed to homesteading patentees under agricultural entry statutes, was closed in 1916 with the enactment of the Stock Raising Homestead Act. Under that Act, the grantee's patent for homesteading land contained a reservation by the federal government reserving "all coal and other minerals in the land so entered and patented". However, under the same Act, a prospector may enter agriculturally granted lands and locate mineral deposits and receive a mineral patent on them, subject only for liability and to the rights of the surface owner (43 U.S.C. Sect. 299). The Act was amended in 1982 and makes "leasable" minerals subject to the Mineral Lands Leasing Act of 1920 (see *infra*).

Nearly one-third of the U.S.'s land area is publicly owned, and roughly 55-percent of that was open to mining in 1991. The Bureau of Land Management (BLM) manages the largest part, approximately 190,206,394 ha (470 million acres), lying in eleven western states and Alaska. The National Forest Service (NFS) manages about 76,891,947 ha (190 million acres) in forty states. NFS claims the presence of over forty industrial (non-



metallic) minerals on NF lands. Aggregate stone production from open pits on NFS lands has made it the one of the larger crushed stone producers in the U.S.

It is reported that during the entire history of mining on public lands in the U.S., less than one-quarter of one per cent of the available public lands have been touched by mining. As stated above, there are three different federal policy systems governing the exploration, development and production of minerals on U.S. unappropriated public lands, viz., (1) hardrock (generally, metallic) claims under the General Mining Law of 1872; (2) mineral leasing under The Mineral Leasing Act of 1920; and (3) by the minerals disposal system under the Materials Act of 1947. The latter two acts, in general, affect minerals that are usually mined by open pit, or surface mining methods.

Under the Leasing Act of 1920, specific minerals (e.g., phosphate, sodium, potassium, zeolites, et al) were removed from coverage by the General Law and placed under the Leasing Act. [Aston, 1992 a, p.33; Note: "Zeolites, as double salts, become problematic as to whether they are locatable or leasable minerals. A two-pronged test to determine whether a zeolite is locatable or leasable was developed in a 1977 case, GFS (MIN)34(1977). Under the test, if a zeolite is classified as a silicate of sodium, it is locatable, provided the sodium present is in sufficient quantity to be commercially valuable; or, if the presence of sodium or any other material listed in the Mineral Leasing Act is essential to the existence of the mineral.] Under the 1920 Leasing Act, deposits of borates, carbonates, chlorides, nitrates of potassium, sulphates were authorized to be leased. [Aston, 1992 a, p.33 Note: "In addition, a potassium lease may include magnesium, aluminum or calcium that is associated with the potassium. However, in the case of *Footo Mineral Co. v. U.S.*, 654 F.2d 81 (Cl.Ct. 1981), it was determined that lithium is not a deposit associated with potassium."] The leasing method requires annual rentals until production, with royalties paid thereafter. The responsible, supervising government agency has complete discretion to accept or reject offers.

The Materials Act makes available common minerals as sand, gravel, pumice, volcanic cinder, stone, and clay, at a market price usually determined by competitive bidding (contract sale). The non-metallic minerals are acquired by mining claim or by a sale contract which is based on their chemical composition, physical properties and prospective use. Uncommon varieties of sand, gravel, stone, pumicite, clay, etc., are locatable under the Act of 1955. [Aston, 1992 a, p.34; Note: "Common quartz varieties as jasper, obsidian, opal, etc., are not locatable unless they exhibit uncommon qualities. Semi-precious minerals as amethyst, garnets, topaz, geodes, etc., and precious stones (emerald, ruby, sapphire) are locatable."] Geothermal steam and associated geothermal resources on BLM lands are also leasable under the Geothermal Steam Act of 1970. ( 30 U.S.C. 1001-1025, 1976, Suppl. V, 1981). Under the Mineral Leasing Act and the Materials Act, agency permits are required for explorational activity for the minerals thereunder.

#### 2.4.2.1 The U.S. Conservation Movement and Increased Regulation

Beginning around 1864, the progenitors of conservationism sowed the seeds of concern which eventually lead to modern resources environmentalism. The seeds grew at a



slower pace than did development of the public lands. One of the progenitors was a lawyer and diplomat by name of George Perkins Marsh. In his travels over Europe and the middle East, he noted massive deforestation with resultant soil erosion, and man's interference with the balance of nature. Marsh published a book in 1864 entitled *Man and Nature*, in which he not only described his observations of results of man's poor stewardship of Nature through wasteful practices in forestry and agriculture, but also advocated restorative measures.

The creation of Yellowstone National Park in 1872 is regarded as the initial act of the U.S. government's concern for conservation of the nation's natural resources. This environmental concern and advocacy of measures to conserve natural resources did not take a serious hold until the 1890's when the U.S. Congress authorized the President, by the General Revision Act of 1891, to establish forest reserves on the public lands. In 1891, large amounts of the public domain were withdrawn for national forests. Several milestones of natural resources conservation followed in the early twentieth century, e.g.; 1902, the Reclamation Act for water resources in the West; 1905, the Forest Service was created as part of the Department of Agriculture to manage the forests; 1906, Congress's authorized mineral lands were withdrawn from entry until valuations could be made by the Department of Interior; 1906, Land-Grant colleges were established to promote improved farming practices in the states; 1908, Theodore Roosevelt "fathered" a conservation spirit for planning of natural resources and national parks under a conference producing a "Declaration of Principles on Conservation"; 1909, Theodore Roosevelt hosted a North American conference for advocating natural resources conservation; the National Park Service was created in 1916, although 16 national parks and about 18 national monument sites had already been created by that time.

From the early decades of the twentieth century, natural resources concern has grown and many federal acts have been passed in an effort to conserve and preserve resources. The advent of the environmental "green" movement of the sixties eventually lead to Congressional response by passage of the National Environmental Policy Act of 1969 (NEPA, effective January 1, 1970), and establishment of the first observed Earth Day, April 22, 1970. With the subsequent plethora of environmental laws created for industry, including mining, whole volumes are now being devoted to mineral and environmental regulation. Special attention and stress affecting the mining industry is being placed in the areas of air and water pollution and reclamation of mined land.

#### 2.4.3 Canada

Before confederation of the Canadian Crown colonies, mining legislation in British Columbia and Ontario influenced regulations of the later-founded prairie provinces. Ontario's mining statute of 1846 established regulations for licences to explore for and discover minerals on Crown lands. A licence gave the right to explore on a 5 mile by 2 mile area, and upon discovery of a mineral, entitled the discoverer to purchase the lands in fee



simple at 4 shillings per acre. The area was limited in 1853 to 400 acres. Ontario's Gold Mining Act, 1864, introduced the staking of a "mining claim" and conferred a right to mine, but curiously did not require an actual discovery of minerals (Bartlett, 1984).

Under the British North American Act (B.N.A. Act) of 1867 (the Confederation of Canada), authority to make laws relating to mining and mineral-bearing lands was divided between the federal and provincial governments, and the provincial legislatures were given jurisdiction over management of Crown/public lands [Note: The B.N. A. Act, is also known as the Canadian Constitution Act (1867); Section 109 states that all "Lands, Mines, Minerals and Royalties" shall belong to the provinces.] Subsequent judicial decisions have redefined the allocation of various powers. Provincial legislatures now have the power to enact laws over mineral titles, the exploration and development of minerals, and for mine operations [Am. Law of Mining, 1986, 210.03(2)]. Present provincial powers also include conservation of mineral resources and environmental protection. Current Dominion, or federal power and control of mineral lands, essentially, exists only over the Northwest and Yukon Territories.

Early Canadian mining and mineral land legislation was in reaction to the gold rushes of the times. During the Cariboo gold rush in British Columbia, the "free miner" concept was adopted from Australian models and employed in the Goldfields Proclamation, 1859. Prospectors could obtain a free miner's certificate enabling them to stake a claim on any waste lands of the Crown not already lawfully occupied, and by which the exclusive right was granted to take the minerals (Crommelin, 1974).

The Ontario Mining Act, 1869, set precedent for the later incoming provinces to the Confederation by establishing the right to a staked mineral land claim and conferring fee simple title upon payment of \$1.00 per acre. The area of a mining claim, or location, was generally fixed at 320 acres, with no limit as to the number of mining locations that could be purchased. Until 1963, under the Ontario statutes, it was still possible to obtain title in fee simple by performance of an annual assessment work on a mineral claim. Since 1963, mineral land claimants may lease lands for a period of 21 years upon performance of assessment work. Entitlement to a patent may still be obtained by the holder of a mining lease who satisfies the Minister as to continuous production of substantial quantities of minerals (Bartlett, 1984)

Similar to the U.S., ownership of non-granted minerals and mineral-bearing public lands is vested in either the provincial or federal government and titled in the Sovereign/Crown. Minerals in Indian reservations, national parks, and other federally-owned lands are owned by the federal government [Canadian Constitution, Const. Act, Sects. 91(24), 108 (1867)]. Title to minerals in Canada's two territories, the Yukon and the Northwest, are in the Crown. Minerals under territorial seas and the continental shelf are in the federal government. The practice of reserving the mineral interest from fee simple Crown grants was established near the end of the 19th century. Later legislation insured that all minerals were reserved from Crown land grants and became subject to leasing



policies. The free miner concept still prevailed in the controlling legislation , but present day claim staking usually leads to a lease from the Crown rather than a fee title or patent. Mineral claims have at times still received Crown mineral grants in fee simple, e.g., as under the Mineral Act, R.S.B.C. 1936, c.181 (repealed 1977, c.54) and mineral claims that have been leased may obtain patents in certain provinces, e.g., in Ontario, under the Mining Act, Ont. Rev. Stats., Ch. 268, Sect. 96 (1980) which provides that leases can be taken to patent if in continuous production for more than a year. Unfortunately, under an interim British Columbia Mineral Act, 1973, the entitlement of a mineral claimant to lease was removed; the claimant could only apply for a lease. The application was evaluated by the Minister and, reputedly in his discretion, to insure that the best method of development of the minerals was to be used. "Mining was no longer clearly a right... instead this right was replaced by a permission granted by the Minister. The security of the right to mine was lost... assurance was removed that development of a deposit was possible after a discovery was made." A great outcry of public protest brought a change by the Mineral Act, 1977, and reversion was made for the claimant to mine the land claimed without the discretionary approval of the Minister. ( Bartlett, 1984).

The Dominion Mining Regulations of 1889 provided for the disposition of minerals, other than coal, on vacant Crown/Dominion lands, and required actual discovery. In 1917, the entitlement of a claim holder to a fee simple grant from the Crown was rescinded, however, under the Quartz Mining Regulations , 1917, the holder of a claim was entitled to a lease for 21 years for a fee of \$50, and renewable for another 21 years for \$200. Such leases were not assignable without the consent of the Minister. The government's attitude toward mineral land leasing was greatly altered by 1961, as expressed in the enactment of the Mineral Dispositions Regulations. The concept of a mineral exploration licence was introduced, which did not confer a right to mine minerals discovered, but provided for mining of minerals only under a leasing arrangement. As in the British Columbia experience, above, the uncertainty of miner's rights was increased. Bartlett stated in 1984 that "The evolution of mining legislation in Canada suggests a continuing movement towards retention of a larger interest and discretion by the Crown (Bartlett, 1984, pp. 22, 27).

The right to prospect, explore and exploit minerals owned by the Crown required meeting permitting, licencing and leasing procedures under the governing provincial laws. Crown-land minerals are separate from surface estate ownership and rights to mine are granted independently from the surface rights in all parts of Canada. Permission to use the surface, timber, water and access reserved to the Crown were usually granted to the extent necessary for mineral development. National park lands are not open to mineral prospecting or development, except where valid mineral claims and title existed before creation of the park. And, as in the case of *Casamiro Resources Ltd. v. British Columbia*, 1991 , *infra*,



those reserved grants of mining rights in British Columbia have been encroached upon by subsequent legislation until finally lost.

Several prominent acts principally govern the disposition of Canadian mineral rights and are briefly discussed.

(i) The Public Lands Grants Act 1990: regulates and governs the sale and leases of public lands, including mines and minerals.

(ii) The Territorial Lands Act 1978, revised 1985, regulates and governs the disposition of public lands, including mines and minerals, in the Yukon, and Northwest Territories. The Northwest Territories covers one-third of the land mass of Canada. The Territories have been divided into mining districts ( four in the Yukon, viz., Dawson, Mayo, Whitehorse and Watson Lake; three in the Northwest, viz., Nahanni, Mackenzie, and Arctic and Hudson Bay). The Act is administered by an official, the Mining Recorder, located in each of the district headquarters. The Mining Recorder acts in a quasi-judicial position, recording claims, issuing permits and licences, and interpreting regulations under the Act.

Under the Act, "mineral" is defined as "all deposits of gold, silver, and other naturally occurring substances that can be mined, excepting soil, limestone, gravel, peat, coal, oil, helium, natural gas, or other related hydrocarbons." Territorial dredging regulations allow dredging for gold and silver and other natural substance, but not for clay, sand and gravel. Territorial quarrying regulations apply to limestone, granite, slate, marble, gypsum, marl gravel, loam, sand, clay, volcanic ash and stone. Mineral claims are for an initial term of 10 years and for as much as 160 acres for the specified quarrying materials, except for loam, which is limited to 20 acres (Hodgson, 1966, pp.9, 14-15).

Under the 1985 revision, a preliminary prospecting licence is required. Without it, a claim may not be recorded. A prospecting licence entitles a prospector to stake a claim up to a maximum area of 2,582.5-acres. Representation work requirements are required for both the permit and the staked claim. If production of over C\$100,000 in minerals per annum is expected, a lease is required, and may be obtained by the claim holder for 21-years (C.R.C. 1978, c.1516 under Territorial Lands Act, R.S.C. 1985.)

(iii) Construction Materials acts: These lesser mining acts , although of no great import to the more glamorous segments of the mining industry, are important to this work as they provide the applicable laws for surface mining pits for which surface voids are made as potential landfill sites. Non-metallic minerals and common rocks, or construction minerals, as sand and gravel, clay, and stone, for use primarily in aggregate and brick manufacturing, are ordinarily excepted from provincial mining acts and in some provinces are placed under separate acts, e.g., Saskatchewan's Sand and Gravel Act, R.S.S. 1978, places ownership of sand and gravel with the surface owner; Ontario regulates construction minerals under their Aggregate Resources Act, R.S.O. 1990, with sand and gravel being specifically excluded from its Mining Act. Certain other non-metallic minerals on Crown lands are regulated under both Acts. Under Quebec's Mining Act 1987, S.Q. c.64, §§ 5,6,



separate provisions are made for surface minerals, e.g., building stone, limestone clay, and marl. British Columbia has banded about its treatment and inclusion, or exclusion, as the case may be, of construction materials between its Land Act, S.B.C. 1988, c 5, § 65, and its Mineral Tenure Act, R.S.B.C. 1979, c.214. The latter now includes limestone, dolomite, marble, shale, clay, volcanic ash and diatomaceous earth.

(iv) The Yukon Quartz Mining Act 1952, 1970, revised 1985: Although only applicable to the Yukon, this act is important because of the great mineral wealth of the territory. Minerals are defined by the Act as including a list of some 23 metallic and sub-metallic elements, and additionally, asbestos, emery, mica, mineral pigments, corundum and diamonds. It also defines and lists certain earth materials as not being considered minerals and therefore, are part of the agricultural surface of the land: viz., "limestone, marble, clay, gypsum, or any building stone when mined for building purposes, earth, ash, marl, gravel, sand, and any element forming a part of the surface". Location of claims for mining iron and mica are regulated separately. (Hodgson, 1966, p.16)

Under the Act, a staked mineral claim, not exceeding 51.65 acres (20.9 ha), is valid on an annual basis, providing initial working requirements are met, e.g., claim has been surveyed, \$500-worth of work done, and a discovery of a deposit made. The claimant may get a certificate of improvements, which entitles the claim holder to extract minerals without a lease, or to keep the claim without further work. However, a 21-year lease is obtainable after receiving the certificate.

(v) Yukon Placer Mining Act 1906, rev. 1985: Placer mining is defined "to include every method of working whereby earth, soil, gravel or cement may be removed, washed, sifted or refined for the purpose of obtaining gold or such other minerals or stones, but does not include working rock in place."

Water rights are defined and regulated under the Act. "The owner of a claim is entitled to use that part of the water naturally flowing past his claim, which is not already lawfully appropriated, as may be necessary to the working of the claim. A water grant may be made by a mining recorder which gives the applicant the right to take water from any stream or lake. It also conveys the right of entry for constructing or repairing ditches and flumes, provided that the applicant has posted a bond securing payment for damage caused by such construction."

The Act also stipulates compliance by the holder of mining rights with acts and regulations governing Indian Mining Regulations and Indian Reserves (Hodgson, 1966, pp.18-19).

#### 2.4.4 Provincial Acts And Regulations Governing Minerals And Lands

In each province, adaptations of the various prominent federal acts affecting mineral lands and mining rights were made. The acts frequently defined and specified which minerals may be claimed and worked, and which were not minerals but were included in the surface estate ownership. These regulations are still important in determining for



surface mining whether the prospective pit operation has to deal with a private surface owner, a private mineral owner, or the Crown. Royalties for Crown mineral rights under the provincial acts were established for many of the mineral lands.

As indicated, authority over the Crown mineral lands and disposal of minerals and rights within the provinces had been delegated to the provincial governments. A brief historical summary of provincial mineral land regulations follows.

**2.4.4.1 British Columbia:** In 1859, the Crown declared ownership of all mines and minerals in the colony. British Columbia was the first province to join the Canada Confederation after its formation in 1867. It retained full control of its Crown lands and mineral rights. Rights to minerals were included in Crown grants under the Land Act until 1891, and surface rights were included in Crown grants under the Mineral Act until 1893. Thereafter, mineral and surface rights were separated in most Crown grants. Crown grants of freehold mineral rights have been both in fee simple, i.e., inclusive of surface, but have not necessarily included all minerals. Such involved and restrictive grants require careful examination of the granting terms themselves. In 1957, the Mineral Act was amended whereby fee simple Crown grants were replaced by a mineral leasing system. It is of interest that British Columbia offered bounties in 1960 and 1961 for the production of iron ore, and for blister and refined copper, respectively, mined and smelted in the province (Hodgson, 1966, pp.38-39,42,46,48).

**2.4.4.2 Alberta:** By the Alberta Act of 1905, enacted upon entry of Alberta as a province, the control of mineral resources remained under federal control. In 1930, under the passage of the Alberta Natural Resources Act, full control of its minerals and Crown lands was transferred to the provincial government, except for National Park and Indian Reserve lands. Prior to 1930, some 19% of provincial mineral rights were granted to homesteaders, the railways and Hudson's Bay Company. The remaining 81% of Alberta's mineral lands and rights were placed under a leasing system in 1930.

Special acts in Alberta declared clay, marl, sand gravel belong to the surface owners and were not minerals. However, those materials may be leased for mining under the Public Lands Act (Hodgson, 1966, pp.52-68)

**2.4.4.3 Saskatchewan:** Similar to Alberta, Saskatchewan was taken out of the Northwest Territories and made into a province by Act in 1905, and control of its natural resources remained in the federal government until 1930. Prior to 1930, about 50% of its mineral rights had been alienated. After 1930, the province assumed control of mineral rights of its lands.

Under the provincial Mineral Resources Act 1961, surface rights were protected from mining dispositions. A mining rights holder was conveyed no automatic right to use the surface and was required to compensate the surface owner for any surface area that might be required or damaged as a result of a mining operation. Also, the Act's Subsurface Mineral Regulations (1960), made applicable particularly to potash deposits, contained an



interesting protective measure for the surface owner, presumably against destruction of the surface by open pit mining to reach shallow mineral deposits. Crown mineral rights ("including all mineral salts of boron, calcium, lithium, magnesium, potassium, sodium, bromine, chlorine, fluorine, iodine, nitrogen, phosphorus, sulphur, and their compounds... or such other minerals as may be designated from time to time...") could only be disposed of for deposits "lying more than 200 feet below the agricultural surface of the land...".

The Saskatchewan mining regulation raises two interesting questions concerning the ownership of minerals above the 200-foot (60.96 meters) level; whether they belong to the surface owner, or to the Crown ?; and, who has the right to mine them ? The U.S. State of Texas has litigated a similar question in which the Supreme Court of Texas developed the "surface destruction" test to determine whether mineral estate owners had the right to surface mine minerals (uranium and iron) from shallow mineral deposits occurring less than 200 feet (60.96 meters) below the surface [*Crewes v. Plainsman Trading Co.*, 827 S.W.2d 455 (Tex.App.-San Antonio 1992)].

In 1957, with regard to surface mining, Saskatchewan enacted The Quarrying Regulations in which " 'quarriable substance' was defined to include bentonite, building stone, clay, granite, gravel, gypsum, limestone, marble, marl, sand, slate, volcanic ash and any other substance that may be declared a quarriable substance by the Lt. Governor in Council." It should be noted that under Saskatchewan's Sand and Gravel Act, the surface owner is "\*\*\* entitled to all sands and gravel found on the surface of the land and that which is obtainable by stripping off the over-burden or other surface operation. " and, "The owner of the mineral rights is also entitled to all volcanic ash, marl, bentonite, ceramic clays and other industrial clay except any clay required for the construction of an earthen dam or road grade." (Hodgson, 1966, pp. 69-87)

The Mineral Disposition Regulations 1961 greatly altered the mineral tenement. No longer was the right to mine conferred, but in lieu, provided for mining by leasing from the Province.

2.4.4.4 Manitoba: Manitoba was carved from the Northwest Territories in 1870 by the Manitoba Act. Provincial mineral resources were placed under the control of the federal government until 1930 at which time full control of its mineral resources were transferred to Manitoba. Prior to 1930, Crown-owned mineral rights had been granted in substantial areas making up about 80% of the total. The remaining 20% of Crown mineral rights land have been held under a leasing system since 1930 (Hodgson, 1966, pp. 92-109)

2.4.4.5 Ontario: As Ontario was one of the original four founding provinces at the time of the Confederation, it has had control of Crown mineral lands within its borders since 1867. About 88% of the land in Ontario is presently held by the Provincial Crown, 1% by the federal Crown, and 11 % is privately owned. (Blakeman, 1977, p.32).

Modification of its mineral land granting system in 1963, whereon the mineral leasing system was substituted. Mineral rights may be granted under a leasehold patent



from the crown upon fulfillment of assessment work and other requirements. A freehold patent could be acquired after 1963 by achieving specified quantities of mineral production.

Ontario's Mining Act 1960, Part vii, dealt with Quarry Permits, requiring that a permit must be obtained for mining on Crown lands for "any stone or rock quarried for any industrial or commercial purpose; limestone, marble, granite, quartzite, feldspar, fluorspar, gypsum, diatomaceous earth, clay, marl, peat, sand or gravel." (Hodgson, 1966, pp. 110-116).

The Mining Act was revised in 1970 and amended several times in subsequent years. The Mining Act was augmented by the Pits and Quarries Control Act 1971 and as amended. These two acts were the two basic statutes regulating the mining of mineral aggregates and industrial minerals in Ontario. The Mining Act applied only to operations on Crown lands, whereas the P & Q Control Act was applicable to operations on private land and to those on Crown land if it was situated within a designated township. However, the new Aggregates Resources Act 1990 replaced former provisions of the two acts governing aggregate operations. Ontario's Mining Act is claimed to be the most comprehensive mining statute in all of Canada.

**2.4.4.6 Quebec :** Quebec is the largest province in Canada and as one of the four founding provinces joining the Confederation in 1867, Quebec maintained control of its Crown mineral resources from that date. Prior to 1880, the time of its first mining act, mineral rights had been granted under French seigniorial tenure or English tenure [See 2.1.3 Canada, ¶ 2, supra]. The Mining Act of 1880 separated mining rights from surface rights and reserved the rights on all minerals to the Crown. Grantees of land for agricultural purposes, or for colonization, no longer received land in fee simple, i.e., with the mineral rights. Under the 1880 Act, mining concessions could be purchased on mineral lands which gave the right to letters patent and absolute title. However, mining concessions sold after 1880 were made revocable by the Mining Act of 1965 under certain conditions of prolonged dormancy (mining inactivity) or failure to pay taxes. (Note: here, a similarity to U.S. dormant mineral and mineral lapse statutes is noted.)

In Quebec, the Provincial Crown owns by far the highest proportion of land with 92.5%, whilst only 7.3% is privately owned, and the Federal Crown owning the very small balance of less than 1%.

As to stone, sand and gravel in Quebec, the rights to mining of it were no longer reserved to the surface owner after 1966. The Lt. Governor in Council was authorized to dispose of working sand and gravel deposits after 1966. (Hodgson, 1966, p. 125, 130).

Quebec's Mining Act is the main regulating mining act. The Quebec Urban Community Act 1969 and as amended, and the Cities and Town Act 1972, and as amended, has empowered local and regional governments to have some control of zoning and by-law control over surface mining operations, and may exclude pits and quarries if thought necessary.



2.4.4.7 New Brunswick: As another of the founding provinces, New Brunswick maintained full control over its Crown mineral lands from the time of the 1867 Confederation. Grants of land made prior to 1784 when New Brunswick was part of the British colony of Nova Scotia contained a reservation to the Crown of "All mines of gold, silver, precious stones, lapis lazuli, lead, copper and coals." All minerals since 1805, with minor exceptions, have been reserved to the Crown. Crown-owned minerals since have been disposed of by mining claims, licence and leasing. The provincial Mining Act of 1962 applied to "all minerals" and "included salt, infusorial (diatomaceous) earth, ochres, or paints the base of which is found in the soil, fire clays, carbonate of lime, sulphate of lime gypsum, coal, bituminous shale and albertite and such others as may, from time to time, be declared mineral by the order of the Lt. Governor in Council".

Under New Brunswick's Crown Lands Act 1952, leases were "granted for the quarrying of building stone, for the taking of sand and gravel for construction purposes, and for the taking of ceramic substances, mineral waters, soapstone and peat." And, under the Sand Removal Act 1954, "the amount of sand and gravel that could be removed from a shore line was limited to 1/2 cubic yard (0.382 cubic m.) per day unless a lease had been granted under the Act." (Hodgson, 1966, p. 137,138,141).

New Brunswick was the first of two provinces in eastern Canada to make statutory distinctions between bedrock minerals and surficial minerals such as sand, gravel, clay and peat. The provincial Mining Act applies to the extraction, under licence or lease, of minerals from privately owned lands and those in which the mineral rights are vested in the Crown. Minerals in this act are defined "as any natural, solid, inorganic or fossilised organic substance, and other materials declared to be minerals by the Lieutenant Governor in Council, but excluding 'ordinary stone', building or construction stone, sand, gravel, peat, ordinary soil, oil and natural gas."

The Quarriable Substances Act applies to extraction under permit or lease on all Crown lands and designated shore areas which might lie outside Crown lands. Quarriable substances is defined as 'ordinary' stone, building or construction stone, sand, gravel, peat and peat moss. Similar to acts in the other provinces, local governments are empowered to regulate surface mines and pits within their jurisdiction, e.g., The Municipalities Act and the Community Planning Act 1972, amended.

Presently, the Provincial Crown owns about 43.1% of land, the Federal Crown owns 2.8%, whilst the balance of 54.1% is privately owned.

2.4.4.8 Nova Scotia: In 1861, before the formation of the Canadian Confederation, control of minerals and lands in Nova Scotia was under the Chief Gold Commissioner. As with the other original founding provinces of the Canadian Confederation of 1867, maintained full control over the Crown mineral lands within its borders under the British North American Act. Under its first mining act of 1885 exceptions to the Crown minerals were stated to be for limestone, gypsum and building materials which belonged to the



surface owners unless decreed otherwise by order in Council. Again, that power of decree excepted gypsum which, by regulation of the public interest, could never be declared a mineral. Under the Lands and Forest Act of 1954 exceptions to reserved Crown minerals continued to be for limestone, gypsum and building materials which were the property of the surface owner unless decreed otherwise by order in Council. The Mines Act 1954 apparently closed "loopholes" by stating that this Act applied to all minerals including limestone and building materials that have been declared to be minerals by order in Council.

Hodgson's Mineral Report 13 of 1966 declared that there are no fee simple mineral rights held in Nova Scotia. Also, under the province's Water Authority Act 1964, all waters are the property of the Crown. A permit is required by a mining operator for use of water, and discharged mine and mill processing waters are monitored and controlled by the Water Authority (Hodgson, 1966, pp. 144-145, 152). However, the largest percentage, 68.5%, of surface rights of provincial lands is owned privately, whilst the Provincial Crown owns 28.7% and federal Crown 2.9%.

By the Mineral resources Act 1975, the rights to all minerals, defined by the Act as any "natural, solid, inorganic substance or fossilised organic substance, except 'ordinary' stone, building or construction stone, sand, gravel, peat, limestone, gypsum, oil and natural gas, belong to the Crown. Further exceptions are those excepted surficial materials that were vested in the owners of the land prior to 1910 under previous surface right grants.

The principal Nova Scotian acts applying to minerals are the Mineral Resources Act and the Metalliferous and Quarries Regulation Act 1967, as amended. Under the former, the Minister of Mines has authority to require operators to eliminate or reduce practises which are injurious to the environment and to reclaim their lands. As with the other provinces, a Municipal Act 1967 and Planning act 1969 empower local governments with zoning controls for surface mining.

**2.4.4.9 Prince Edward Island:** Prince Edward Island joined the Canada Confederacy in 1873, but retained full control over its Crown mineral lands and minerals on its entry. All minerals were reserved to the Crown. Under its Oil, Natural Gas and Minerals Act of 1957, minerals are defined as "all naturally occurring minerals or any combination of them with themselves or with any other element including oil and gas, coal, salt, sulphur and potash." The mineral regulations of the province were almost totally directed to the production of oil and gas (Hodgson, 1966, pp. 154-155). This is attributed to the scarcity of mineral deposits on the island.

Although 100% of the minerals are owned by the Crown, 94% of the surface land area is privately owned, with the balance being in the Provincial Crown. Like New Brunswick and Nova Scotia, Prince Edward Island does not consider surface materials to be minerals. Therefore the right to extract and use sand and gravel is vested in the owner of



the surface. The Environmental Protection Act requires a permit for extracting sand, gravel and shale, and rehabilitation of closed pits.

2.4.4.10 Newfoundland: Newfoundland was the last to join Canada as a province, in 1949, having been a royal British Colony until then. Before provincial status, its first mining law of 1860 empowered the Governor General to issue mining leases for terms of 99 years with options for grants of fee simple. The Crown Lands Act 1930 offered the same mining leases terms convertible to fee simple grants. In 1966, 2.7% of the land area of the province was held in fee simple mineral rights. In 1951, the Mines and Quarries Act provided for a leasing system of mineral rights, and do not include surface rights. Under the Crown Lands (Mines and Quarries) Act 1961, minerals were defined as "any naturally occurring inorganic substance, not including quarry materials, coals, oil, natural gas or salt. Quarry materials are limestone, granite, slate, marble, gypsum, peat, marl, clay, sand, gravel, any building stone and volcanic ash." (Hodgson, 1966, pp. 160, 162).

Although the provincial Crown owns title to 95% of the land, various subdivisions of provincial government made numerous land grant and development concessions to pulp and paper, construction, railway, mining and development companies prior to joining the Confederation in 1949. "Consequently, the land surface of the island is now subdivided into an interminable number of 'lots' of various sizes and shapes. These lots are classified as being 'fee simple', 'fee simple mining grants', grounds under development licence or mining leases and concessions." (Blakeman, 1977, p.61).

The Crown Lands (Mines and Quarries) Act, 1961, above, was replaced in 1970 by a same titled act, and again replaced in 1977 by the Minerals Act and the Quarry Materials Act. The latter act regulates the extraction of quarriable construction materials, requiring permits for mining on government lands. Operations on private lands at that time did not require permits for mining. Permits for mining leases are available for 20-years, renewable for two more 20-year periods. Environmental controls for mining are exercised under the Act. Again, local and municipal controls for surface aggregate mines are found in the Urban and Rural Planning Act, 1970.

#### 2.4.4.11 Canadian Conservation Movement and Increased Regulation

By the late 1960's and early 1970's confrontations between citizens groups, government agencies, and members of the mining industry were becoming commonplace. This was particularly so in the more densely populated areas where mining's visual intrusion into the landscape was much more apparent than in remote and rural areas of Canada. "In Southern Ontario, particularly, the conflicts centred on issues involving 'rape of the landscape' and degradation of the visual environment, disturbance of water tables, destruction of agricultural lands, damage to recreational lands /parks, in addition to noise, dust, truck traffic and public nuisance, all of which are normally associated with rock quarry and gravel pit operations. \*\*\* Due to an apparent lack of environmental concern exhibited by many operators, it is easy to understand why the industry acquired a poor



public image, and why the sentiment is often expressed -- "Yes, we realise that mineral aggregates are vital to the economy, but the pits and quarries don't have to be here !" (the Canadian NIMBY syndrome)

"Consequently, measures were taken to protect the land, water, and air environments through provincial statutes and regulations, \*\*\* and through municipal / regional zoning by-laws which, in many instances, essentially prohibited sand, gravel and rock aggregate operations within local boundaries." (Blakeman 1977, p.1, 2, 66. ).

## 2.5 Conclusions and Comments

The principles of state-owned minerals and privately-owned minerals in the Anglo nations are based on Roman law. Other mineral rights that developed from Roman law were: the right of the landowner to possess or work the minerals in his land; royal minerals, that is auriferous and argentiferous, or gold- and silver-bearing, belonged to the State; state-owned minerals on state-owned lands could be worked by publicans on a royalty-basis reserved to the State; the ownership of 'royal' minerals on all lands has been preserved by the U.K. and Canada, whilst the U.S. has not retained its title to them on privately-owned lands; title and the right to mine all baser metals and non-metallic minerals on private lands belongs to the surface owner, except where severed from the surface ownership.

U.K. mining law, regulating mining operations, developed fully about 1875, 75 to 85 years before the U.S. reached the same degree of regulation. Many of the modern U.S. protective regulations governing mines, mining health and safety had long before been incorporated into those of the U.K. Similarly, the U.K. led the U.S. in developing laws governing zoning and land use for mining operations.

In the younger U.S., a government policy, more or less, of *laissez-faire* has been in place for minerals to encourage free-enterprise development of mineral lands, mining, and the industry in order to bring about settlement of the vast new country. In slightly over a century, since the General Mining Law of 1872 regulating minerals on public lands, the nation has been slowly moving toward a period of retention of resources and management thereof. Since 1992, a battle has been taking place between the environmentalist and mineral industry proponents to strongly revise, if not scrap the 1872 Mining Law, or to keep it intact, and which has embroiled the U.S. Congress.

In Canada, also a younger Anglo-nation, the historical development of its mineral lands grew at a less frenzied pace than in its neighboring cousin's land. The retention of large areas of Crown lands were reserved upon which minerals might be located. Further, title to the minerals located on Crown lands were often retained and the right of free entry



(free mining) was limited. Since the formation of the Canadian Confederation, control over mineral lands and mining has been the bailiwick of the provinces, with little control by the federal government except in the Northwest and Yukon Territories. Present day claim staking usually leads to a lease from the Crown rather than a fee title or patent.

Dissimilar to the U.S., has been Canada's governmental participation in the mining of its minerals. Participation in mining by both the federal and provincial governments has been in several forms, e.g., direct equity investments, loans or loan guarantees, or provision of infrastructure as roads, railways or electricity . The federal and provincial governments have the legal authority to undertake direct investment in the mining industry through the exercise of their general spending powers. Special government-owned corporations as mining investment vehicles may be established through legislation at either level of government. A more recent example was the provincial Saskatchewan government playing a direct part in the development of potash deposits through the formation of a Crown corporation, Potash Corporation of Saskatchewan (Am. Law of Mining, 1986, 210.04, and fn. 6). Direct federal involvement has also been justified in the mining development of uranium under the Atomic Energy Control Act, R.S.C. 1970, C.A-19.

By the 1960's, public concern had mounted and materialized in the form of environmental activism before the legislative tools had been provided by government to respond to public opinion and pressures. Within a very few years, the Canadian provincial and federal governments were responding with several and various environmental acts, many of which affected surface mining. In the following chapter, the early-history claims of pollution and damages caused by open pit mining operations are reviewed.



## CHAPTER 3

# **A BRIEF HISTORY OF ENVIRONMENTAL DAMAGE AND LITIGATED POLLUTION CLAIMS FROM NON-FUEL SURFACE MINING WITH EMPHASIS ON WATER RESOURCES**

### **3.1 Introduction**

A German scientist, Georg Bauer, reviewed the effects of surface mining on the environment and the charges made by environmentalists opposed to surface mining's effects, and wrote:

“ \*\*\* The strongest arguments of the detractors is that the fields are devastated by mining operations. Also, they argue that the woods and groves are cut down, but there is need for an endless amount of wood for timbers, machines and the smelting of metals. And when the woods and groves are felled, then are exterminated the beasts and birds, very many of which furnish an agreeable and pleasant food for man. Further, when the ores are washed, the water which has been used poisons the brooks and streams, and either destroys the fish or drives them away. Therefore, the inhabitants of these regions, on account of the devastation of their fields, woods groves, brooks, and rivers find great difficulty in procuring the necessaries of life, and by reason of the destruction of the timber they are forced to greater expense in erecting buildings. Thus it is said, it is clear to all that there is greater detriment from mining than the value of the metals which the mining produces. “

Though sounding in modern-day environmental complaint, this quotation was written approximately in the year 1550 by Georg Bauer, better known by his Latinized name as Georgius Agricola, in his treatise *De Re Metallica*, translated from Latin to English by Herbert Hoover (Agricola, G. (1556).

Agricola, writing to defend the cause of mining, stated, “Without doubt, none of the arts is older than agriculture, but that of the metals (mining) is not less ancient, in fact they are at least equal and coeval for no mortal man ever tilled a field without implements .... when an art is so poor that it lacks metals, it is not of much importance, for nothing is made without tools.” He considered that mining should not be minimised, or “neglected”, since it was in his opinion, “ one of the most ancient, the most necessary, and the most profitable to mankind...”.

In his defense of the “detractors ‘ ” charges of devastation by mining to the environment, Agricola, wrote:

“If we remove metals from the service of man, all methods of protecting and sustaining health and more carefully preserving the course of life are done away with . If there were no metals, men would pass a horrible and wretched existence in the midst of wild beasts; they would return to the acorns and fruits and berries of the forest. They would feed upon the herbs and roots which they plucked up with their nails. They would dig out caves in which to lie down at night, and by day rove in the woods and



plains at random like beasts, and inasmuch as this condition is utterly unworthy of humanity, with its splendid and glorious endowment, will anyone be so foolish or obstinate as not to allow that metals are necessary for food and clothing and that they tend to preserve life. (Agricola, 1556, Hoover translation., p. 14.)

Thus, nearly five hundred years ago, the same contentions, arguments and concerns between surface mining and environmentalist existed.

### **3.2 A Review of Historical Mining Pollution Claims**

Historically, prior to the new era of intensive environmental regulation for surface mining in the Anglo nations, surface mining was lightly regulated in England, but virtually unregulated in the U.S. and Canada. Where existing statutes fell short in providing penalties for private or public "environmental" damages caused by mining operations, the English common law system filled the statutory shortfall. Common law liability for damages to the environment are strictly of local and personal concern, i.e., for damaging the environment of one's neighbour, or neighbours, or the neighbourhood.

Environmental regulatory violations and damage claims, allegedly resulting from surface mines of the present, are essentially pollution and contamination of air, water, public health and property caused by various mining and mineral processing activities. In reality, they are the same type of claims made before the advent of the environmental regulatory revolution. In the past and recent history prior to the 1960's, private grievances and relief from such environmental damage claims were left to individuals to pursue through the common law and courts of the Anglo countries. "Environmental" grievances and relief for the general public were made as claims of a "public nuisance" and pursued in law by the local government.

Grounds for grievances and complaints for "environmental" damages from mining pollution and contamination were found in the legal tort doctrines of nuisance, both private and public, trespass, non-trespassory invasion of property, negligence, and employing the equitable doctrine of injunctive relief. Except for claims brought by government entities in the name of the public, the burden of seeking damages and relief for private claims fell upon the individual. Reclamation of private surface mined land was a matter of contract law between the land owner and the miner. No concern was given to reclamation on public lands.

### **3.3 Claim Definitions**

The legal doctrines under which early "environmental" damage claims were made in the Anglo countries with their common English law are defined as follows:



### 3.3.1 Nuisance

Generally defined in law, a nuisance is an unreasonable interference with the use and enjoyment of another's property. Illustrative cases defined a nuisance as : "An act by one which annoys and disturbs another in possession of his property, rendering its ordinary use or occupation physically uncomfortable to him " [*Yaffe v. City of Ft. Smith*, 10 S.W. 2d 886, 890 (1928)]; " annoyance; anything which essentially interferes with enjoyment of life or property " [*Holton v. Northwestern Oil Co.*, 161 S.E. 391 (N.C. 1931)]; "that class of wrongs that arise from the unreasonable or unlawful use by a person of his own property and conduct, working an obstruction or injury to the right of another, or of the public, and producing material annoyance, inconvenience, discomfort, or harm that the law will presume resulting damage" [*City of Phoenix v. Johnson*, 75 P.2d 30 (Ariz. 1938)] (Black, 1968, p. 1214).

Nuisances are classified as public, private and mixed. A public nuisance is one which affects an indefinite number of persons, or all the residents of a particular locality, or all people coming within the extent of its range or operation, although the extent of injury may be unequal. [*Burnham v. Hotchkiss*, 14 Conn. 317 (1841)]. A private nuisance, as distinguished from public nuisance, includes any wrongful act which destroys or deteriorates the property of an individual, or few persons, or interferes with their lawful use and enjoyment thereof, \*\*\* or causes them a special injury different from that sustained by the general public [*Baltzeger v. Carolina Midland R. Co.*, 32 S.E. 358 (S.C. 1894)] (Black, 1968, p.1215). A mixed nuisance would, obviously, be one that affects both public and private rights.

### 3.3.2 Trespass

The doing of an unlawful act, or of a lawful act in an unlawful manner to the injury of another's person or property [*Waco Cotton Oil Mill of Waco v. Walker*, 103 S.W. 2d 1071, 1072 (1937)]; an unlawful act committed with violence, actual or implied, causing injury to the person, property, or relative rights of another; an injury or misfeasance to the person, property, or rights of another, done with force and violence, either actual or implied in law [*Southern Ry. Co. v. Harden*, 28 S.E. 847 (Ga. 1897)]. In its more limited and ordinary sense, it signifies an injury committed with violence, and this violence may be either actual or implied; and the law will imply violence even though none is actually used, when the injury is of a direct and immediate kind, and committed on the person or tangible and corporeal property of the plaintiff. \*\*\* of implied, a peaceable but wrongful entry upon a person's land.

Trespasses are often described as *continuing* or *permanent*.. A permanent trespass is one which is in its nature a permanent invasion of the rights of another; as, where a person builds on his own land so that a part of the building overhangs his neighbor's land [*H.H. Hitt Lbr. Co. v. Cullman Property Co.*, 66 So. 720, 721(Ala.



1914)]. A continuing trespass is one which consists of a series of acts, done on successive days, which are of the same nature, and are renewed or continued from day to day, so that, in the aggregate, they make up one indivisible wrong (3 Blackstone's Commentaries 212, Black, 1968, p. 1674).

The term non-trespassory invasion is frequently applied where there has been an encroachment by gases, odors, dust, objects ( as thrown rock), airborne particles, etc., which have emanated from the acts of the wrongdoer on his property and invaded the land, property or rights of another, but have involved no physical entry by the body of the wrongdoer himself.

To establish a prima facie claim for trespass there must be an act of physical invasion of another's property. Intent to trespass on another's land is not required, but intent to do the act that constitutes or causes the trespass is sufficient. Gross recklessness resulting in the unlawful invasion of another's property may be sufficient, even in the absence of intent. It is not necessary that the wrongdoer come on to another's land; a trespasses will exist where the "trespasser" throws rocks onto the land, or floods it.

### 3.3.3 Nuisance-Trespass : Detail and Differences

As may be inferred, the difference by definition between a trespass and a nuisance may be a gray area at times. A trespass is an interference with a landowner's right to exclusive possession, which includes the quiet enjoyment of his land. Still, a nuisance is also an unreasonable interference with the landowner's use and enjoyment of his land, but lacks the challenge to exclusive possession.

It is noted in the Restatement, Second of Torts, Section 826(a)(1977) that in the case of a socially useful activity , such as a factory or commercial establishment, the defendant's conduct must be "unreasonable" and cause the plaintiff "substantial" harm. The determination of reasonableness is a balancing process for the court considering the gravity of the harm and the utility of the defendant's conduct.

To consider the gravity of the harm of a nuisance, American courts consider various factors that are summarized by the Restatement (Second) Section 827 as follows:

1. the extent of the harm involved;
2. the character of the harm involved;
3. the social value which the law attaches to the type of enjoyment invaded;
4. the suitability of the particular use or enjoyment invaded to the character of the locality; and,
5. the burden on the person harmed of avoiding the harm.

The factors used to determine the utility of the defendant's conduct in an alleged nuisance are stated in Section 828 of the Restatement:

1. the social value which the law attaches to the primary purpose of the conduct;
- 2 the suitability of the conduct to the character of the locality; and
3. the impracticability of preventing or avoiding the invasion.



At common law, the rule was *sic utere tuo ut alienum non laedus*, or, "use your own property so as not to injure that of another", and when violated, such harm was actionable. Courts retained some discretion to determine what type of injury was actionable [*William Aldred's Case*, 9 Coke 57B, 77 Eng. Rep. 816 (K.B. 1611)]. It should be noted that "\*\*\* the common law differed from later American practice in providing a cause of action for nuisance without a showing of negligent or intentional damage." (Schoenbaum, 1985, pg. 36)

#### 3.3.4 Negligence

The law of negligence is founded on reasonable conduct of reasonable care under all circumstances of a particular case [*Charbonneau v. MacRury*, 153 A. 457, 462 (N.H. 1931)]; the doctrine of negligence rests on duty of every person to exercise due care in his conduct toward others from which injury may result [*Johnson v. Grand Trunk Western R. Co.*, 224 N.W. 448, 449 (Mich. 1929)]; it is the omission to do something which a reasonable man, guided by those ordinary considerations which ordinarily regulate human affairs, would do, or the doing of something which a reasonable and prudent man would not do [*Schneider v. C.H. Little Co.*, 151 N.W. 587, 588 (Mich. 1915)].

The classification of "negligence" as "gross", "ordinary", and "slight" indicates only that under special circumstances great care, ordinary care, or slight care are required, but failure to exercise care demanded is "negligence" (39 Del. Laws, c.26) (Black, 1968, p. 1184-1185).

#### 3.3.5 Injunction

A prohibitive writ (order) issued by a court of equity, at the suit of a party complainant, directed to a party defendant in the action, forbidding the latter, or his servant or agent, to do some act which is threatened, or the continuance of an act already performed, such act being unjust, inequitable or injurious to the plaintiff, and cannot be adequately redressed by an action at law. (*City of Alma v. Loehr*, 22 P.2d 424); a judicial process operating *in personam*, and requiring a person to whom it is directed to do or refrain from doing a particular thing [*Gainsburg v. Dodge*, 101 S.W. 2d 178, 180 (Ark.1937)]. (Black, 1968, p.923).

Injunctions may be of varying durational time limits for enforcement. They may be temporary, preliminary, provisional, interlocutory, or permanent.

### 3.4. A Review of Litigated Claims Against Mining Damages

A review and inspection of some of the historical types of pollution claims that were made against surface mining operations and the manner in which they were treated and resolved prior to the advent of the great environmental legislation revolution reveals that there are not any new environmental wrongs in the present age; just more of them.



Present day mine regulations attempt to eliminate them at their source, i.e.," by treating the disease, not just the symptoms" .

### 3.4.1 United Kingdom

As will be shown in the following historical litigated claims, lawful acceptance and judicial tolerance for alleged damages from mining operations was considerably greater a century or two in the past. Mining operations were allowed much greater leeway in creating dust and gases that fouled the air and fell on surrounding nearby vegetation and residences, releasing pit and mine waters and assorted contaminants into and fouling public waterways, and in leaving the surface of abandoned or mined-out pits disturbed with accompanying spoil piles unvegetated, and the surface generally un-reclaimed or un-restored for another use. Such tolerance was generally accepted because mining was a basic and necessary industry providing essentials for the general public's welfare. Additionally, the country had a lower population density, and media coverage to dramatise and publicise nuisance grievances and events was limited in earlier days to a few newspapers. Consequently, organised activist and militant groups were lacking to provide present-day "people power".

In fact, under common law an alleged act causing a private nuisance, mining or otherwise, if continued for twenty years without successful challenge, became established as a prescriptive right, therefore, legalized. Thus, any subsequent purchaser of property complaining of a mining nuisance, had "come to the nuisance" and would be required to "take subject to the nuisance" without complaint. *Wright v. Williams*, [1836] 1 M & W 77. And yet, contra, individual property rights were protected and preserved against a mining nuisance where a claim for physical damage was made which affected the enjoyment of property. In *St. Helen's Smelting Co. v. Tipping*, [1863-4], 35 L.J.Q.B. 66 (H.L.), a nuisance was found where the trees and shrubs of an adjoining property to the smelter were withered by the vapours from the smelting works. That court found that there was a distinction to be drawn between nuisances producing personal discomfort and nuisances producing physical injury to property. It was also noted that it mattered not if the complainant came to the nuisance where there was injury to property.

In the 1851 case of *Walter v. Selfe*, [1851] 4 DeG. & S. 315, where a brick kiln had been erected within fifty yards of a residence, and smoke, vapours and floating substances (dust) became mixed with the air of the house and pleasure grounds, Viscount Justice K. Bruce, said "the plaintiff, although not entitled to air as fresh, free, and pure as at the time of building his house, was yet entitled to have the air kept in such a condition as was compatible with physical comfort; and the nuisance not being fanciful, but very real and sensible, and materially interfering with the ordinary comfort of existence, he be granted the injunction." *Walter v Selfe* established that where a nuisance is proved, an injunction generally will be granted unless damages are shown to be an adequate remedy (also, see *Luscombe v. Steer*, [1867]15 W.R. 1193) (Bainbridge, 1900, pp. 433-434).



Similar nuisance principles were found in the cases of : iron works (*Shotts Iron Co. v. Inglis*, [1882] 7 A.C. 518) where the injunction set a distance limitation of one mile from a habitation; copper works (*Tipping v. St. Helen's Smelting Co.*, [1865] 1 Ch. 66); cement works (*Umfreville v. Johnson*, [1875] 10 Ch.580); chalk works or lime works (*Walter v. Selfe*, supra). (Mac Swinney, 1897, p.484).

It is noted that in Mac Swinney's treatise on the Law of Mines, Quarries and Minerals of 1897 for the U.K:

"But, as in the case of brick-burning, an actual substantial nuisance must be established. Sentimental grievances, or prospective, contingent, or remote, **cases of nuisance will not be allowed to interfere with the great industries of the country**, especially where the persons who complain reside in the seats of those industries. (*Shotts Iron Co. v. Inglis*, supra)(Emphasis added)

"The provisions of the Public Health Act, 1875, do not extend to mines, so as to interfere with or obstruct the efficient working of the same; or to the smelting of ores and minerals; or to the calcining, puddling and rolling of iron and other metals; or to the conversion of pig iron into wrought iron, so as to obstruct or interfere with any of such processes. (emphasis added) [*Re. Dudley*, (1881) 8 Q.B.D. 86] On the face of it, this exemption applies only where there is an interference with, or obstruction of, the working or the processes. (*Patterson v. Chamber Coll. Co.* [1892] 8 T.L.R. 278). And it extends only to liability under the provisions of the Act, and is not a protection against the common law liability. (*A.-G. v. Logan*, (1891) 2 Q.B. 100 (a decision under the repealed Act). (Mac Swinney, 1897, pp. 482-485)." (Emphasis added)

Early claims for pollution of water were termed as the "fouling of water". It was established under riparian rights that an owner may use the water from his stream in a reasonable degree, or divert it in reasonable quantities (*Weeks v. Heward*, [1862] 10 W.R. 557). A mine operator might use the stream water for the purpose of working his machinery, as a means of transporting his minerals, or other uses in his mining process in a reasonable degree; and by washing his minerals or by pumping water from his mines or pits into the stream which might alter its quality to a reasonable degree. However, the miner was neither allowed to substantially diminish the quantity, nor to materially alter the quality. "And he must not impregnate it with poison or foul matter." (*Hodgkinson v. Ennor*, [1863] 4 B & S.229).

A mining operation could acquire, by grant or by prescription (over twenty continuous years), the right to foul a stream (*Carlyon v. Lovering* [1857] 1 H.&N. 784). The right of prescription could be obtained at common law or under the Prescription Act. Such was the case in *Carlyon*, supra, where both parties were riparian owners on the same stream. Lovering's tin mine was located upstream from Carlyon. In the washing process, the tin miner introduced a quantity of sand, stone and trash down stream contaminating, or fouling Carlyon's flowing waters. Carlyon brought a nuisance action against Lovering. The tin miner plead a right to do so under the Prescription Act, which was upheld by the



court. Another of Lovering's successful pleas was **his right as a custom immemorial and of the trade** of the stanneries of Cornwall to do the act complained of. **The court found the custom to not be unreasonable as it was necessary to the working of the mines.** (emphasis added).

In a similar water pollution action, *Wright v. Williams*, [1836] 1 op.cit., Wright complained of the fouling of his watercourse by Williams' operation of a copper pit upstream. The copper miner plead his right to "sink pits on his own land; to fill such pits with iron; to cover the same with water pumped from the copper pit for the purpose of precipitating the copper contained in such water; and then, a right under the Prescription Act to let off the water impregnated with metallic substances into the watercourse." The copper miner's plea was upheld by the court (MacSwinney, 1897, pp. 461-462).

It is noted that in 1876 the U.K. passed the Rivers Pollution Prevention Act (RPPA) . This Act provided:

"Every person, who puts the solid refuse of any quarry into a stream, so as to interfere with its due flow, or to pollute its waters, commits an offence against the Riv. Poll. Prev. Act, 1876. Every person, who puts any solid matter from any mine into any stream, in such quantities as to prejudicially interfere with its due flow; or any poisonous, noxious or polluting solid or liquid matter proceeding from any mine, other than water in the same condition as that in which it has been drained or raised from such mine; commits an offence against the Act; unless, in the case of poisonous, noxious or polluting matter, he shows to the Court, that he is **using the best means to render it harmless.**'(emphasis added)

It should also be noted in the emphasis above, that even in 1876, the forerunner of our terms "best practical means" and "best practical available technology" were used in the Act.

Proceedings for court action under the RPPA could not be taken against any person who put refuse from a mine into a stream except by a sanitary authority, nor without the Local Government Board. However, if the sanitary authority refused to take legal action, an individual seeking damages might apply for an action through the Local Government Board (Mac Swinney, 1897, pp.461-462).

A point of conflicting miner's water-use rights of the period, between the British position and an American court's position, was commented on in the case of *John Young & Co. v. Bankier Distillery Co.*, (Lord Watson) [1893] A.C. 691, 439 A.E.R. (1891-94), decided by the House of Lords. The Scotland-origin case upheld the British position as decided in *Hodgkinson v. Ennor*, [1863], supra, which held the miner was neither allowed to substantially diminish the quantity, nor to materially alter the quality; "And, he must not impregnate it with poison or foul matter."

Young was a coal miner operating a pit upstream from the Bankier Distillery which used water from the same stream. Young pumped water from the "lower strata" of the pit into the nearby stream. The water so pumped in, "although pure, was hard



(‘acidulated’) and although it did not effect the water for ordinary purposes, it rendered it much less suitable for distilling purposes.” Lord Shand stated, “ A lower proprietor must submit to the flow of water which comes down upon his lands by natural force, whether flowing in a defined channel or not, or above or below the surface; but he is not bound to receive water pumped from below the surface by artificial means, which would never have reached his land by the ordinary force of gravitation.”

In the course of pleading Young’s defence in the lower courts, the miner’s counsel introduced an American case, *Pennsylvania Coal Co. v. Sanderson* , 56 Am. Rep.89 (1866), as legal authority to justify its pumping of mine waters into the stream. *Pennsylvania Coal* was decided in the Supreme Court of Pennsylvania in a 4-3 decision. It essentially held that the owners of a (coal) mine were entitled to pump up water from the lower strata of the mine, to send it into an adjoining stream with its quality so affected as to render it totally unfit for domestic use by the lower riparian users. The Pennsylvania decision reflected the enormous value placed on mining by that State at the time. Lord Shand took note of the American court’s decision which stated, “ The use and employment of a stream of pure water for domestic purposes by the lower riparian owners, “ who were settled there “before the opening of the mine... must *ex necessitate* give way to the interests of the community, in order to permit the development of the natural resources of the country, and to make possible the prosecution of the lawful business of mining coal.”

Lord Shand further commented that the American case had no application to the case at bar; that the Pennsylvania court appeared to him “to be making law rather than interpreting the law so as to give effect to sound, just and well-recognized principles as to common interest and rights of upper and lower proprietors in the running water of a stream.”; and the Pennsylvania decision “ affords no good legal ground for allowing the proprietor of a mine to work his minerals for his own profit as to destroy or greatly injure his neighbour’s estate, by subjecting it ... to the burden of receiving water destroyed in quality, without payment of compensation or damages for the injury done.”

Thus, *tunc pro nunc*, (then for now) the seeds of pollution claims resulting from surface mining operations were sewn in the English common law.

### 3.4.2 United States

As previously indicated in Ch.2 § 3.2, United States, *supra*, until 1936 in the decision of *National Labor Relations Board (NLRB) v. Jones & Laughlin Steel Corp.*, (op.cit.) where the U.S. Supreme Court changed its former position, it was long held by the U.S. federal government that mining in itself was a local enterprise which Congress had no power to regulate. Consequently, "environmental", or pollution and physical damage claims were pursued in state court systems, whether private or public, except in claims involving mining activities on federal lands, federally controlled "navigable waters", or where there was a question of federal law involved.



(i) Nuisances: Mining had been viewed as a lawful and necessary business, as well as a reasonable use of property, and surface mining was not a *nuisance per se*, so long as the mining activity was conducted in the usual manner with customary precautions recognized by the trade. In *McCaslin v. Monterey Park*, 329 P.2d 522 (Cal.App., 2 Dist., Div.3, 1958), the California court stated the business of excavating rock and gravel is a lawful and useful operation and not a nuisance per se.

So long as the business was conducted in the ordinary way and with the usual and customary precautions, the operator was not accountable for incidental annoyances to others that necessarily follow the mining operations. However, where excessive smoke, fumes, or dust from the mineral operations resulted in damage to crops and vegetation, or to the discomfort of neighbouring residents, there were grounds for finding the operation a nuisance (*Shannon v. Missouri Valley Limestone Co.*, infra; *Brede v. Minnesota Crushed Stone Co.*, 143 Minn. 374 (1919). Excessive noise and vibrations from surface mine blasting and the operation of mining equipment might constitute a claim for a nuisance [*Ledbetter Bros., Inc. v. Holcomb*, 108 Ga. App. 282 (1963); *Hakkila v. Old Colony Broken Stone & Concrete*, infra; *Blackford v. Herman Construction Co.*, infra; *Lademan v. Lamb Constr. Co.*, infra;] (Am Jur 2d, 1971, Vol. 54, p. 382).

In *Hartung v. Milwaukee County*, 86 N.W.2d 475, rehearing 87 N.W.2d 799 (Wis.1958), the Wisconsin court held that quarry operations, including blasting, grinding and crushing stone, which necessarily produced stone, did not constitute a private or public nuisance where there was no showing that anyone had moved from the area because of the quarry operations (Am Jur 2d, 1971, p.382)

Claims of "nuisance" against surface mining operations were generally for an alleged "environmental" violation of noise, air or water pollution, and occasionally for causing excessive, noisy, and unsafe traffic conditions. At times, the surface mining operation had started and been long in operation before the locale surrounding it became densely settled and prior to local zoning ordinances. After zoning regulations were in place, the zoning boards required the mining operator to obtain a non-conforming use permit to continue its operation in a non-industrially zoned area. In *Hakkila v. Old Colony Broken Stone & Concrete Co.*, 162 N.E. 895 (Mass.1928), the Massachusetts court said, "The fact that the owner of a quarry has a permit issued by the proper authority to use explosives in the operation of his quarry does not provide him with a defense against an action for maintaining a nuisance, where the blasting operations threw stones onto neighboring premises." [Also, in *Barnes v. Graham Virginia Quarries, Inc.*, 204 Va. 414 (1963)]. (Am Jur 2d, 1971, p.382).

In earlier years, some courts in the U.S. had supported a defensive doctrine known "as coming to the nuisance" which had been long and successfully employed as a defence by surface miners against alleged claims of the open pit mine or quarry as being a nuisance. Simply stated, where a surface mine, or other industrial operation, or foul-



smelling agricultural or stockyard location, had been in place prior to the complainant's coming to an adjoining area, the alleged nuisance claims were made invalid because the complainant had "come to the nuisance" knowing full well, or should have known (expected), that such conditions complained of existed before his arrival. A related doctrine, *caveat emptor*, or buyer beware, supported the "coming to the nuisance" doctrine. Those who bought properties in the area of an existing quarry, or some objectionable industry, and then complained of its operation were subject to both legal doctrines. Their claims were given little credence under those two legal doctrines.

In the case of *Barrett v. Vreeland*, 182 S.W. 605 (Ky.App.1937), where eight Kentucky residents across a river from a limestone quarry were unsuccessful in their claim of a private and public nuisance in the manner of the operation of the quarry. The quarry owners claimed their operations started in 1906, predating most of the claimants' nearby residency, and on a site where stone had been quarried since 1852. The complainants were accused of moving to the nuisance.

The property owners claimed the physical structures of their homes were injured by the shock from excessively heavy blasting, which threw stones upon the properties, filling the air with dust, and were disturbed at night by the noise of rock crushing machinery which at times was so great as to prevent ordinary conversation in their homes and prevent sleep at night. They sought an injunction against further operation of the quarry. The injunctive relief was denied on the basis that there was insufficient evidence to show injuries.

Contra to the doctrine, in 1908, the St. Louis (Missouri) Court of Appeals in *Blackford v. Herman Construction Co.*, 112 S.W. 287 (Mo.App.1908), found that the use "of explosives in a stone quarry contiguous to another's property in a large city is unreasonable, and will authorize either injunctive relief as against a nuisance, or an action for damages, though the business is entirely lawful and prosecuted with the utmost care." And, in 1927, the same court enjoined the West St. Louis Quarry Company from further operation in a dense residential area, finding it a nuisance by its blasting to cause "throw" rock to fall and damage nearby buildings, to cause cracks in walls, and causing dust, and continuous noise, all of which rendered their lives and the enjoyment of the property uncomfortable [*Lademan v. Lamb Constr. Co.*, 297 S.W. 184 (Mo.App. 1927)]. In *Fagan v. Silver*, 188 P. 900 (Mont. 1932), the Supreme Court of Montana upheld an injunctive order for a stone quarry to cease its operation in a residential area of Butte as it was found to be a nuisance to the residents.

In Kentucky, contra to *Barrett v. Vreeland*, supra, its Court of Appeals in 1937 found in *Rogers v. Gibson*, 101 S.W.2d 200 (Ky.App. 1937), that Rogers' operation (d/b/a Louisville Crushed Stone Company) of a stone quarry was a nuisance whether the acts complained were due to negligence, or not; and that a nuisance may exist with, or without, negligence. Although the quarry was outside the city limits and the neighbourhood not



thickly settled, the quarry operation was enjoined from further blasting which interfered with neighbours' use and quiet enjoyment of their buildings and property.

It becomes apparent that surface mining operations were beginning to lose ground against nuisance complaints of their operations. In 1941, the New Jersey case of *Benton v. Kernan*, 21 A.2d 755 (N.J.Ct.App.1941), a compromising decision was reached by the court as indicated by its *dicta* and results. The court's syllabus stated:

"1. Held, under the circumstances of this case, complainants are entitled to an injunction against quarry blasting that causes physical damage to their properties and that causes stones to be thrown on their premises, but not against blasting that merely jars, vibrates or shakes their buildings without physical damage thereto.

2. To justify the enjoining of a perfectly legal business on account of the noise made in conducting it, the evidence should be clear and convincing.

3. Noise sufficient to enjoin the operation of a business must be such as to affect injuriously the health or comfort of ordinary people in the vicinity of an unreasonable extent, and must pass the limits of reasonable adjustment to the conditions of the locality and of the needs of the maker to the needs of the listener." (op.cit. ,p.756)

The quarry operation in *Benton* had been established 33 years prior to the complaints. Though the doctrine of "coming to the nuisance" was not put forth as a prime defence, the court gave consideration to the doctrine in its *dicta* :

"While we do not hold that the fact that the quarry was in existence long before complainants moved into the locality is conclusive, it is an element to be considered in determining the reasonableness of the disturbance to them. Most of the complainants moved to the neighborhood within four or five years prior to the filing of the bill, and the quarry had been in continuous operation for over thirty years. It was less active during the years of the depression than it has been lately, although its most active years were from 1925 to 1929. At any rate, persons moving into the vicinity of a quarry in operation had less reason to expect perfect quiet than persons in the country or a residential area remote from industrial activity would naturally expect." (ibid)

Additionally, the complainants in *Benton* sought an injunction against the noise created by the operation of trucks going to and coming from the quarry on the public streets in front of their homes. The court declined to restrain the operation of trucks.

The *Benton* court stated that "the evidence presented failed to establish that health or comfort of residents in the vicinity of the quarry were injuriously affected to such an unreasonable degree by noise incident to operation of quarry machinery as to warrant an injunction, particularly where the quarry, which was operated only from 8:00 a.m. to 4:30 p.m., had been in operation for many years before."

Although traffic, road haulage to and from the quarry, and dust therefrom was a minor issue in *Benton*, supra, it became the major issue in the 1963 Iowa case of *Shannon v. Missouri Valley Limestone Co.*, 122 N.W. 2d 278 (Iowa 1963). Neighbouring



property owners sought to enjoin a nuisance arising out of the hauling of limestone from the quarry. The Court in deciding for the property owners, stated that a common law "nuisance" was created by dust raised by trucks hauling crushed rock from the quarry over a limestone and dirt surfaced three-mile road along which 40 homes were located where the dust was irritating to the skin, noise and throat, making the ordinary use of the homes and lawns impossible during dry weather, and was not merely a temporary situation. . . . A limestone quarrying company was liable for and was properly required to abate the nuisance created by the trucks hauling from its quarry."

The anticipation of all the terrible injury that "will occur" when a surface mining operation is merely planned took form in the 1951 alleged nuisance action decided by the State of Washington's Supreme Court in *Turner et al v. City of Spokane*, 235 P.2d 300 (Wash 1951). "The evidence justified dismissal of action by neighbouring residents and property owners to enjoin a proposed operation of rock quarry and crushing plant and use of explosives by city on ground that danger of dust, noise and confusion, danger to wells and loss or pollution of water, and danger and annoyance to plaintiffs' comfort, health, repose and safety due to proposed operations were not of sufficient imminence at time of hearing to warrant granting injunctive relief. ... While a court of equity may enjoin a threatened or anticipated public or private nuisance, where it clearly appears that a nuisance will necessarily result from the contemplated act or thing which it is sought to enjoin, the court should not interfere where the injury apprehended is of a character to justify conflicting opinions as to whether it will, in fact, ever be realized."

(ii) Trespass: An action in trespass was the basis for a damaging dust claim from a nearby limestone quarry and cement manufacturing plant in the 1961 California case of *Roberts et al v. Permanente Corporation*, 10 Cal. Rptr. 519 (Cal.App.1961). The court stated that "an act which will, to a substantial certainty, result in entry of foreign matter on another's land is intentional trespass on which liability may be based. ... A statute prohibiting a private individual from enjoining the operation of manufacturing of cement permitted by a local zoning ordinance does not bar recovery of damages for trespassory invasions of another's property occasioned by conduct of such manufacturing." The lower court denied damages to the claimant because negligence was not proven. However, the appeals court reversed the decision adding that no negligence or intent was required to be proven against the trespasser.

(iii) Negligence: Owners or operators of quarries are liable to owners of other property when their performance becomes so careless and negligent as to cause injury to adjoining and proximate premises. However, if in their excavating for minerals, an injury occurred to the owner of adjoining land without fault or negligence on their part, some jurisdictions will find no liability. There has been a split among the states as to whether negligence was required for liability, or whether the liability was strict, i.e., without fault, negligence or intent. In *Cass Co. Contractors v. Colton*, 139 Colo.593, the court found that the



defendant quarrier was guilty of negligence in causing damage by blasting, while in *Davis v. Palmetto Quarries Co.*, 212 S.C. 496 (1948), the court found no negligence but only strict liability for damages from quarry blasting.

Negligence was found by an Arkansas court in the operation of a rock quarry in *McGeorge v. Henry*, 101 S.W.2d 440 (Ark. 1937), where water wells on land near the quarry were drained five days after blasting rock in the quarry. The jury's damage awards of \$750 to two plaintiffs were found to be excessive; that the well water loss was temporary; that new wells could be drilled deeper at a cost of \$1 to \$2.50 per foot to reach a deeper aquifer. However, in a 1966 decision favourable to a claim of loss of water in a well due to blasting, the Arkansas Supreme Court sustained a finding that negligence was not necessary for such liability for damages to the water well. [*Western Geophysical Co. v. Mason*, 402 S.W.2d 657 (Ark 1966)].

As illustrated by the two Arkansas cases, *supra*, interference with the flow of water in wells or streams, pollution and contamination of streams for downstream riparian owners, and flooding of adjoining properties by mining operators carry with it liabilities for damage.

A mine operator may have been liable to one whose well flow has been destroyed, or whose well has been contaminated by the proximate causes of mining. However, in *Bayer v. Nello Teer Co.*, 256 N.C. 509 (N.C.1962), a rock quarry, operating with the best practices of open pit mining, which pumped no more percolating waters from its pit than necessary, was found not liable in damages to an adjoining landowner for contamination of his water supply from waters percolating into his well.

In *Gilmore v. Royal Salt Co.*, 84 Kan. 729 (1911), a salt mining company deposited a large quantity of refuse salt upon its land, and by action of rain upon it, the water underlying an adjacent tract was impregnated with salt water through percolation, making it unfit for use and harmful for vegetation in irrigation, the mine operator was liable to the adjacent landowner. And, in *Sunray DX Oil Co. v. Thurman*, 384 S.W. 2d 482 (Ark. 1964), where a pit constructed to hold salt water overflowed onto the land and killed vegetation and timber, the lessee was held liable for the damages from flooding.

Also, in *Freel v. Ozark Mahoning Co.*, 208 F.Supp. 93 (1962), an action for damages was brought against a fluorite mining company in Colorado for injury to private property and health resort from contamination and pollution of stream and flooding of such property by failure of the company to contain its mill tailings ponds. The court found that the plaintiffs were entitled to recover damages without proof that the conduct of the defendant mining company was negligent or intentional. Evidence demonstrated, however, that the defendant's conduct was negligent, willful, wanton and reckless.

The mining company had built several large tailing ponds containing harmful and noxious chemicals from the plant's flotation process, and later had failed to repair a smaller breach of the ponds containing walls. The downstream initial harm and injury to



Freel was caused by leaking of the chemicals into the nearby stream. Greater injury was exacerbated on two occasions when the containing walls were breached and flooding from the mill ponds severely damaged the Freel's health resort buildings and polluted its mineral springs.

For an Arizona open-pit copper mining operation, the court found that the right under the Arizona statutes to use the water of the public streams for mining purposes did not give such user any right to send tailings and waste material from his reduction works down the stream to the destruction or substantial injury of the riparian rights of a user below for irrigation purposes [*Arizona Copper Co. v. Gillespie*, 230 U.S. 46 (1913)].

Similarly, in *Montgomery Limestone Co. v. Bearden*, 256 Ala. 269 (1951) a cause of action for a nuisance was made where the quarry operated a sump pump for the purpose of keeping the pit de-watered from flooding, run-in waters. The de-watering resulted in the deposit of debris in the river which then flowed through the complainants premises in a polluted condition.

After World War II's great industrial expansion and with the advent of environmentalism accelerating in the 1960's, in addition to the historical type of damage claims from mining operations, as noise, vibrations and dust from blasting and mine machinery, new types of claims were entering the field of litigation, i.e., damages to public waters, stream pollution, fish-kills and wildlife. An example from 1963 was the case of *People (of California) v. New Penn Mines, Inc.*, 28 Cal. Rptr. 337 (Cal.App. 3 Dist. 1963), which was an action by the state's attorney general in the name of the state for abatement of an alleged public nuisance caused by drainage of toxic mine and mill wastes into a river, resulting in damage to fish life.

The State's complaint alleged: The Penn mine, once an extensive producer of copper and zinc, had been relatively inactive in recent years. During its operation, fluid ore tailings and mill wastes were placed in settling ponds, and mine waste rock piled in dump areas. The rock dumps and tailings ponds are rich in mineral salts. During the rainy season, surface waters flow over the dumps and ponds, picking up concentrations of minerals which drain into the Mokelumne River. The river is a seasonal spawning ground of the king salmon and steelhead trout. The mineral pollutants are extremely harmful to the fish life and have resulted in kills of salmon and trout. Injunctive relief was sought.

The Court held that while the owner of an inactive mine was not "discharging" industrial waste within the meaning of the water pollution act, yet when the surface water or some other mechanism causes drainage of accumulated mine wastes into a public stream, a condition of pollution or nuisance, actual or threatened, may occur.

New Penn Mines correctly objected on the grounds that the State in the person of the attorney-general lacked jurisdiction to bring the suit. The court upheld Penn Mine's position that the injunction must fail on the ground that such an action must be brought by the appropriate regional water pollution control board acting under the provisions of the



Dickey Water Pollution Act 1949. (Also, see Ch. 7 § 3.2 for Penn Mine 1993 violation of NPDES permit requirement.)

In a few years after 1936, federal jurisdiction and power was greatly expanded by the 1936 decision in (National Labour Relations Board) *NLRB v. Jones Laughlin Steel*, supra, thus, allowing Congress to extend its legislative enactments and control over mining which had hitherto been subject largely to regulation by the states. (Note: for background on Congressional limitations prior to the *NLRB v. Jones Laughlin Steel* decision, refer to the discussion, supra, at Ch. 2 § 2.2 - United States, ¶¶ 1, 2.) It had been widely recognized that the coal segment of the mining industry affects the public, while the non-coal-mining segment's affect was found to be more localized. The states, in the exercise of their "police powers" (governmental supervisory powers) for the public welfare, had been able to reasonably regulate non-coal mining.

The great growth of population and industrial production of post-World War II caused a slowly mounting proliferation of contamination and pollution claims by the 1960's, which may be attributed to the intensification of industrialization responding to public demands for more goods. Such proliferation of damage claims made the older system of individual suits unmanageable and less effective. More extensive and new media-methods, as television, gave greater coverage and called more attention to contamination and pollution. As greater public concern grew, new and drastic regulatory and legal measures were called for, not only to deal with the large increase of claims and occurrences of nuisances and pollution from all industrial sources, but more expediently, to eliminate the causes for pollution and contamination claims at the source. Hence, the situation was ripe for environmental legislation which was based on the sovereign's right of exercising its "police powers" for the protection and benefit of the general public's welfare and health.

### 3.4.3 Canada

There appears to be a paucity of early "environmental" or nuisance claims against surface mining operations in the provinces of Canada. Much of the early mining litigation concerning trespass and nuisance occurred in British Columbia and the Yukon Territory regarding disputes between gold miners over encroachment on claims and the spilling and flooding of waters from one gold placer operation onto another gold miner's operation.

The paucity of litigation in the latter part of the 1800's until the first third of the 1900's involving nuisance claims against surface mining, particularly in the more populous eastern and central provinces where more construction materials quarries were located, suggests again, as in the U.K. and the U.S., that the courts had a much greater reluctance to hear these types of complaints. The courts and the public had a greater reluctance to litigate and a greater tolerance for putting up with potential claims of nuisances against surface mine and mill operators.



A noteworthy comment at this point concerns the possible reasoning for paucity of Canadian litigation over nuisance and “environmental” violation claims from surface mining from former decades even to the present day. A Canadian attorney and colleague in aiding the author with the search for litigated Canadian claims explained the scarcity of cases found by commenting that “Canadians are far less litigious than Americans, and where there are such contentious matters, Canadians tend to resolve them without court involvement.” (Evidence for the litigiousness of Americans is offered, *supra*, at Ch.5§2.2)

Canadian judicial precedence for dealing with industrial nuisance and pollution claims had long before been set in England by earlier case decisions which generally exhibited legally established anti-claim positions. The following examples illustrate English case law of the earlier era which would have been followed by the Canadian judiciary: (1) the prescriptive right of an industrial nuisance. An alleged act causing a private nuisance, mining or otherwise, if continued and uncontested for twenty years, became established as a prescriptive right. Therefore, a long-established mine, smelter, or mill could acquire a legalised right to pollute or contaminate the local area; (2) such prescriptive right gave establishment to the doctrine of “coming to the nuisance”. Thus, any subsequent purchaser of property complaining of a mining nuisance, had “come to the nuisance” and would be required to “take subject to the nuisance” without complaint [*Wright v. Williams* (1836), 1 M & W 77]; (3) as voiced in the English case, *Shotts Iron Co. v. Inglis*, (op.cit) “... cases of nuisance will not be allowed to interfere with the great industries of the country, especially where the persons who complain reside in the seats of those industries.”; and (4) in the 1881 English case, *Re. Dudley*, 8 Q.B.D. 86, the Court said, “The provisions of the Public Health Act, 1875, do not extend to mines, so as to interfere with or obstruct the efficient working of the same, or to the smelting of ores and minerals; or to the calcining, puddling and rolling of iron and other metals; or to the conversion of pig iron into wrought iron, so as to obstruct or interfere with any of such processes.”

Faced with such existing precedential case law, the probable futility in bringing a nuisance claim against industry, large or small, in a Canadian court would likely overwhelm and discourage potential claimants. The courts of the early era were less prone or likely to find liability for damages by the mining industry. Thus, the public tolerance of mining pollution was perhaps involuntarily placed on it. Still, for better or worse, the mining industry enjoyed a position of far greater prestige and acceptance by the nations as a whole.

A review of some of the few Canadian cases, given in chronological order, illustrate the types litigated.

(i) Nuisance / Water Pollution. *The Columbia River Lumber Co v. Yuill*, et al, [1892] Vol. II B.C.R. 237: A lumber mill operator had obtained an injunction restraining upstream gold miners from fouling the waters in such a way as to prevent the proper working of



the saw mill. The miners were using hydraulic mining, washing tree-roots, earth "tailings" down stream which obstructed the mill-race, blocked its flume and machinery and prevented operation of the saw mill. The miners sought to dissolve the injunction against their uncontrolled use and fouling of the stream waters. The court refused to dissolve the injunction, finding that no regulations allowed the nuisance complained of to continue injuring the rights of the downstream riparian user.

(ii) Nuisance / Quarry blasting: *Etobicoke v. Ontario Brick Paving Co.*, [1913], 25 O.W.R. 327, 5 O.W.N. 356: Plaintiffs were a municipality, a nearby public school and a private resident. An injunction was granted to restrain the owners of a quarry from continuing reckless blasting in such a manner as would cause a nuisance. However, the court ruled that if the quarry could be operated on a subdued basis as recommended by an explosives expert, further operation would not be considered a nuisance.

(iii) Trespass /Water Pollution: *Nepisiquit Real Estate & Fishing Co. Ltd. v. Canadian Iron Corp. Ltd.*, [1913] Vol. 42, 26 N.B.R. 387: The plaintiff, a sport-fishing group, was granted an injunction restraining the iron mining pit owner from discharging allegedly polluted mill-waters into a stream thereby injuring the sport-fishing rights of another riparian owner. Even though there was no evidence at trial to show that even one fish has been killed, and no evidence of poisonous chemicals, on the basis of discolouration of the stream flow (a muddy colour) the court issued a temporary injunction. Plaintiffs charged a trespass by discolouration deposited on their stream banks from the discharge waters of the iron mill. Defendants argued that "It would be an unfortunate thing if the law found that such a large industry has to give way to fishing for sport."

The *Nepisiquit* court in its holding stated that , "**...but, as the works of the defendant (i.e. the iron mine) were important**, the court orders that the injunction should not become operative for over three months, in order that the defendant might have an opportunity to prevent the pollution by alterations to its plant." (emphasis added). The Court added that if the mine did not stop the flow of polluted waters, the plaintiffs could apply for a perpetual injunction.

(iv) Nuisance / flooding: *Suttles v. Cantin*, [1914] Vol. 21 B.C.R. 139; In this nuisance action, one placer gold miner in the Yukon Territory allowed his stream-diverted waters to pass through his tailings piles carrying debris onto the land of another placer mine site. Plaintiff miner brought a successful action in nuisance and for damages against the Defendant miner.

(v) Nuisance / blasting: *Fuller v. Thames Quarry Co.*, [1921] ( 1st Div. Ct. App.) 20 O.W.N. 374; Injunctive relief was granted to the owner of a dwelling across the street from a stone quarry in St. Mary's restraining the quarrier from working their quarry so as to cast stone on the private land by blasting The claimant was granted the injunction and damages of one dollar with costs of court.



(vi) Nuisance / flooding: *Salvas v. Bell* , [1927] 4 D.L.R. 1099; A successful action by a lower riparian farmer against an upper riparian mining operation in Yale County, British Columbia, for damages done to the claimant's land by the dumping of material into the watercourse and altering the flow thereof flooding the farm lands with water and debris from the mine.

(vii) Nuisance/ blasting: *Pillitteri v. Northern Construction Co.*, [1930] 4 D.L.R. 731; "One is liable for damage done to the premises of an adjoining occupier by reason of the escape of vibrations and the falling of stones thereon as a result of blasting operations."

(viii) Negligence/blasting: *Aikman v. Mills & Co.*, Ontario Supreme Ct. [1934] 4 D.L.R. 264; same results as *Pillitteri*, supra.

(ix) Nuisance / noxious fumes: *McNiven et al v. Crawford*, High Ct. Justice [1939] O.W.N. 414, affirmed, Ont. Ct. App. [1940] No. 27 O.W.N. 323; a nuisance action to recover damages for injuries to plaintiffs' peach orchards and crops caused by the escape of fumes from defendant's brick plant. Damages were awarded to plaintiffs.

A change in the courts' hitherto legal position and attitude, as being protective of the mining industry where nuisance claims were made, began to show evidence of change around the 1930's. Signs were showing in litigated arguments, and in the decisions handed down by the courts, that it was becoming no longer viable that complainants had to suffer and accept the inherent annoyances that accompany the operations of a great industry. The following case exemplifies the changing attitude toward mining in Canada.

(x) Nuisance/dust: *Kent v. Dominion Steel & Coal Corp. Ltd*, Newfoundland Supreme Ct., [1964] 49 D.L.R. (2d) 241; Where the plaintiff lived near the defendant's iron ore pit, and the company built a private, ore-haulage road passing within 100 feet of plaintiff's home and property, ore trucks "raised dust to such an extent that the house was materially damaged and the land was rendered unfit for cultivation." Plaintiff's action for damages for nuisance was dismissed at trial on the grounds, *inter alia*, that the dust in question was an unavoidable consequence of defendant's necessary operations. Also, "... that the plaintiff, as an employee of the iron mine and living in an industrial area, must accept the unpleasant consequences of his employment and residence;". Thus, the exalted and protected position enjoyed by the mining industry had been preserved.

However, that hitherto protected position so long enjoyed by the mining industry crumbled on Kent's appeal. The Supreme Court of Newfoundland held that the defendant's iron ore mine "had created an actionable nuisance and the plaintiff was entitled to damages therefor." In a split decision, Justice Puddester in joining the majority opinion, and referring to the fact that defendant had built his home knowing the annoyance existed, wrote " The plaintiff certainly did not agree to accept the risk of damage to his property and even if he built in an industrial area, and therefore may have to put up with certain conditions which would not be tolerated (*in other areas* ), \*\*\* does not relieve an industry from liability for an unreasonable and unjustified interference with a person's



right to the protection and enjoyment of his property \*\*\* ". Thus, the older doctrine for a complainant's "coming to the nuisance" with full knowledge of its existence was no longer viable, or given weight or credence by this court. To substantiate this argument, a further statement of the presiding judge in *Kent* is offered in evidence.

Justice Puddester continued, " \*\*\* the view that certain industrial nuisances, such as noise, smoke or odour, affecting the enjoyment of property must be tolerated **in a modern society** (emphasis added) has absolutely no application to a situation where the land has been made unfit for cultivation and the dwelling made virtually uninhabitable. A nuisance occasioning such consequences, wherever it occurs, is an unreasonable use of land and an unjustifiable interference with the right of adjoining owners to the enjoyment of their property and accordingly constitutes an actionable nuisance."

### 3.5 Conclusions and Comments

In the search for litigated claims of groundwater water pollution from non-fuel surface mining affecting water wells and aquifers supplying individuals and communities adjacent to and near the pit, there was a noticeable lack of them, regardless of the periods of time. This was found to be so whether in the older era where a judicial and societal tolerance against mining nuisances prevailed, or in a later or more recent time of an increasingly active society against environmentally-destructive operations.

Only three litigated claims were found where an allegation was made that quarrying had affected water wells, and two of those were for loss of water due to blasting. Even there, the loss of water in the well was temporary and water was found to flow again, uncontaminated, after a brief interruption. In the third well case, and the only well-water pollution claim, *Bayer v. Nello Teer Co.*, supra, was an allegation made of well water contamination from a stone quarry, and there, the quarrier was not found culpable or guilty. Further, the alleged contamination of subsurface water at the well was attributed to the discharge of surface water inflow from the pit affecting the downgradient landowner's well, not from groundwaters flowing from the pit itself.

Thus, the main complaints brought against surface mining, as found in this search and reported herein, were predominantly for blasting, noise, dust and thrown-rock. Where claims were alleged in water pollution or contamination, the cause was found to be from a surface discharge of the mineral operation's processing plant, or from a settling or tailings pond leak with a breach of the pond's bank into a public stream affecting downstream riparian users. With the exception of pit blasting activity allegedly cutting off a water supply, groundwater contamination from quarrying itself appeared to be of little to no concern to the local public. All this appears to be true, not only in the past and up to the advent of universal environmental consciousness, but in the present as well.



Support and corroboration is given to this argument herein by a Research Report released in 1992 by the U.K. Department of the Environment entitled "Environmental Effects of Surface Mineral Workings" wherein it referred to findings of a survey based on 41 stone quarries that "complaints were of dust, traffic noise, blasting and visual effects. \*\*\* **Water pollution is generally not reported as a problem** except where run-off (water) is contaminated with fuel, dust, etc." (emphasis added) The UK Research Report further cited, concerning sand and gravel workings, that a survey of 35 sand and gravel pits reported in descending order of significance, "traffic, noise, dust and visual effects were the main sources of complaint. " It is notable again, that water contamination was not given as a leading complaint. (*Environmental Effects of Surface Mineral Workings*, (U.K. Department of Environment, Research Report, HMSO, London, 1991, p.7)

The noticeable lack of claims for pollution and contamination of ground waters, effecting water wells and aquifers supplying persons and communities adjacent to and near non-fuel surface mines amongst the litigated cases researched and reviewed suggests that the author's theory may be viable, viz., that, in general, non-fuel surface mining has a negligible to no polluting effect on subsurface waters. This point is further corroborated by the UK Research Report (op.cit.) wherein it is stated: "The specific operational problems created by surface mineral workings based upon public complaint are, in approximate order of significance: traffic, blasting, noise, dust, visual effects. Other matters, i.e., **water**, wastes, ecology, archeology, agriculture and forestry may be equally important environmental considerations **but are less usually the subject of public protest.**" (emphasis added). This appears to be true in the U.K. the U.S. and Canada.

Although, historically, only one unsuccessfully litigated claim of pollution of subsurface waters by non-fossil fuel surface mining was found, claims of potential groundwater pollution are frequently made in current hearings before the fact of actual mining. Groundwater contamination is commonly conjectured and alleged as a future possibility in zoning and mine permitting hearings, even made in the post-environmental stringent regulation period. They are commonly without basis, as is well-illustrated in *Florida Rock Industries v. U.S.* , 21 Cl. Ct. 161 (1990). In *Florida Rock*, the federal government argued that quarrying in the local limestone would pose a risk of contaminating the sole aquifer supplying drinking water for the city of Miami, and Dade County, Florida. The government did not contend that limestone mining would actually contaminate the aquifer. The government's argument of speculative groundwater pollution from Florida Rock's future quarrying failed in view of the Court's noting that none of the presently operating quarries in the immediate area in the same rock formation had polluted, nor were they presently polluting, the aquifer in question.

The power of intimation and suggestion that detrimental hydrological contamination "may result" from a newly planned surface quarry if approved, as used by the federal government in *Florida Rock* , failed under the scrutiny of the examining court.



Unfortunately, this same "scare" tactic without foundation in fact has been too often successful in defeating quarry permitting at many public hearings.

A very germane article by an eminent, expert engineering geologist and professional engineer substantiating this argument of the high improbability that groundwaters are affected by quarrying's excavations and activities, particularly blasting, is offered in evidence to refute the lay-public's allegations to the contrary.

**BLASTING DAMAGE; DYNAMITE AND GROUNDWATER**  
by Allen W. Hatheway, Ph.D.

"Human irrationality runs especially high when blasting agents are mixed by bulldozer blades into a groundwater litigation cocktail. Most cases of alleged water well damage from blasting and/or excavation are filed in the name of concerned citizens who are awakened by construction activity and then begin to notice the hitherto overlooked physical and structural flaws and frailties of their own homes, places of business and water wells.  
\*\*\*

My estimate, however, is that a significant percentage of "visible" or media-treated construction projects employing blasting and hillside excavation are eventually confronted by such claims. By visible I mean that a considerable number of persons are able to see and take cognizance of the project and that the construction lasts perhaps more than one single season of the year.

Naturally, projects in suburban or rural areas in which residents are on residential wells or small water supply systems are most susceptible to these claims, and, more likely, the smaller and tighter-knit and intercommunicative the community, the greater the chance of claims as word of the alleged effects spreads like a common rumor.

My basic premise is that America's civil and public works contracting industry is well aware of its need to conduct blasting and hillside excavation in such a manner as to not actually incur physical and property damage to the residents bordering and surrounding their projects.

Depending on the amount of explosives employed in each detonation, along with delay conditions, the causative blast would necessarily have to be in very close proximity to the damaged well. The most susceptible of geological conditions would be those of friable and/or poorly-cemented, cohesionless weak rock. This situation can be unfavorably aggravated in older, uncased, and poorly-maintained water wells. The very same geologic conditions are more often directly responsible for deterioration of the esthetic quality of well water in the absence of blasting or road-cuts. \*\*\*

The automatic premise of blasting induced damage is a technically inferior argument to begin with. \*\*\* here are the often-heard, yet basically implausible arguments that blasting can:

1) Fracture rock masses far beyond (say, 20-40 times the shothole diameter) the pre-split limits of the actual blast; hence form competing conduits for groundwater flow around or away from the well;

2) Induce fault-like displacements along joints and bedding planes, such that flow pathways for groundwater moving toward the well are sealed or otherwise obstructed;

3) Shake wall rock into the well so as to damage or otherwise obstruct water flow into the well or to create associated pump and screen maintenance problems;

4) Release slug-like bodies of natural pollutants found at some other stratigraphic location within the flow-migration distance of the well. Commonly, natural residual petroleum compounds such as tar and oil globules are cited;

5) Undefined objectionable tastes, such as are naturally encountered in the presence of iron in the range below 10 ppm, whereby reduction



bacteria produce objectionable taste, odour, greasy feel and cause staining of laundry;

6) Water wells have finite lives, especially those constructed before introduction (early 1970's) of modern non-corrosive well materials such as PVC (polyvinyl chloride). State wellhead protection laws, passed in accordance with the USEPA Groundwater Protection Strategy of 1984 and the subsequent requirement for State Wellhead Protection Plans resulting from the June 1986 amendments to the Federal Safe Drinking Water Act. State agricultural extension representatives now frequently advise those experiencing water quality or water quantity problems to close and replace older (say pre-60s or pre-70s) wells as actually or potentially unsafe sources of water.

Of the above phenomena, old wells and iron-loving bacteria constitute the plausible and frequent cause of constructed-cited problems. Release of other natural contaminants generally can be explained as a result of changes in the groundwater regime brought about by non-construction causes. Among the suspect alternate non-construction causes is improper well maintenance, sloppy housekeeping and waste management practices in the vicinity of the well and lack of modern wellhead protection.

\*\*\* In the author's opinion, citizens suffering damage to residential water supply are more likely to be experiencing the effects of an overlapping or coincidental array of natural and sociological conditions unrelated to construction. There is a suite of generic geological conditions that can actually be more primary in their damage-mimicking capability (table 4) (omitted). (Assoc. of Engineering Geologists News, 38/4, 1995, pp. 37-39)

In addition to supporting the argument herein that quarry excavations and blasting are unlikely causes for destroying groundwater quality and flow, the preceding article gives credence to arguments throughout this work that public hysteria of "concerned citizens" toward new surface mining sites are often unfounded and without scientific basis.

Thus, the centuries-old respect, judicial and societal tolerance for the great mining industries in the Anglo nations came to its demise around 1960. An industry, which had so long provided not only the basic raw materials, chemicals and metals, for man's necessities of life, but for a multitude of conveniences for comfortable and improved living, went through successive periods from the 1920's to the 1940's of decreasing tolerance for, and increasing complaint against, surface mining. During those decades few successful challenges were made against mining's accompanying annoyances. After case precedent had been established in a few court decisions of finding nuisance, negligence, trespass by surface mining operations, and issuing injunctions enjoining the surface mines from creating further nuisances, those minority position decisions gradually gave way by the 1960's to becoming the position of the majority. Public tolerance for surface mining operations had gradually and finally been reduced to near zero. The public of the late twentieth century demanded that mining no longer be allowed to disturb or soil their world.

The Anglo nations had become fully developed countries with well-established societies, and their peoples affluent. Having attained a high degree of comfortable and luxurious living for the majority for several generations after World War I until the



1960's, interrupted for short periods by the Great Depression and World War II, the majority of peoples of the Anglo countries no longer found the struggle and compulsion of their antecedent generations for wealth necessary. This observation and statement is supported by Schoenbaum in his work, *Environmental Policy Law* (op.cit.) wherein he states, "In the 1960's material goods became relatively abundant for many, and there was a new emphasis on the quality of life." In further support of the author's statements that industry met the ever-increasing demands of an affluent society for more goods and luxuries thereby creating greater volumes of wastes, Schoenbaum also notes that concurrently with society's attainment of wealth, "there was a great increase in the volume and kinds of pollutants released into the environment, including toxic chemicals and pesticides." (op. cit., p.4). Additionally, the following supportive statement is noted in the Introduction to the U.K.'s Department of the Environment 's Waste Management Paper No. 26, that "As society has become more affluent, the quantities of waste to be deposited have increased and waste types have changed and increased in number." (HMSO, 1986, p.1).

Thus, in the century preceding 1960, mining in the Anglo nations had been widely and largely held as being a basic industry absolutely necessary to the well-being of the local and national economies, and for providing local employment and tax-based income, in addition to providing essentials and luxuries for the public at large. After 1960, in a world of accelerating population boom and general affluence, worthy causes became important to society, e.g., the environment; improving and enlarging existing parks, creating more parks, more elaborate public recreational and educational facilities, forests, scenic rivers, wildlife habitats, clean water, clean air, placing unlimited value on life for industrial safety, and cleaning up the world that industry and mining had so allegedly wasted. The cost to carry on the environmental clean-up campaign became secondary.

A *cause noblesse*, the environmental crusade, the "Green Revolution", enters the scene.



## **CHAPTER 4**

# **A BRIEF HISTORY OF THE DISPOSAL OF WASTES BY EARTH BURIAL**

## **4.1 Introduction**

Where there is consumption, there is waste. Even in nature, plants and trees consume sunlight, air and water, resulting in waste in the form of falling leaves, dead limbs, stalks and trunks; carnivorous and herbivorous wildlife consume natural matter and deposit excreta, and finally their carcasses are left on the earth's surface to be eroded as contaminants into streams and bodies of water. And so it is with man, the greatest consumer of all earth's inhabitants, who produces the greatest volume of waste. As civilisation developed, man consumed more and more raw materials, until the present day when the disposal of waste from man's insatiable consumption has become a problem that endangers water supplies, and not only his own existence, but of other forms of life on earth.

Debris from early man's daily living has been found in caves and other early dwelling sites. As man became more prolific, more sociable, and gregarious, cumulative wastes became a communal problem. In the Minoan civilisation, which flourished on the Isle of Crete from 3,000 to 1,000 B.C., solid wastes in the capital of Knossos were placed in large pits with layers of earth at intervals. (Priestley, 1968). In Egyptian biblical times, Moses (c. 1500 B.C.) proscribed burial of human body waste (Deuteronomy 23, vv.12-13). According to Dr. Allen W. Hatheway's 1993 work, a Chronological History of Industrial and Hazardous Waste Management, the Greeks were the earliest to organize the first municipal refuse disposal site in the western world in the city of Athens about 500 BC. Two, early Roman waste dumps are also reported as being discovered at Rome, Italy; the first from the sixth century, BC, and another from the second century, BC, established at Monte Testaccio. (Hatheway, 1993, p.2). However, Priestley (op. cit.) states that the Romans had no organised system of waste removal: "disposal and wastes accumulated in the streets and around towns and villages. The practice was said to have persisted until the 19th century."

Professor Rudolfo Lanciani in his 1890 sketch of the history of monuments of ancient Rome, *The Destruction of Ancient Rome*, describes the filling of new structural sites by placing waste to raise their base elevations. Lanciani writes, "In tracing the history of the destruction of the Rome of the Kings and of the Republic at the hands of the Emperors, three facts become prominent: (1) the complete covering over, for hygienic reasons, and consequent elevation, of large tracts of land; (2) the rebuilding, on a totally different plan, of one or more quarters of the City, after a destructive fire; and (3) the



clearing of large areas to make room....” Continuing, he states, “The first record that we have of the covering over and elevation of a large area for hygienic reasons dates from the time of Augustus (63BC-14 AD ). A part of Esquiline Hill was occupied at that time by a ‘field of death’, where the bodies of slaves and beggars and of criminals who had undergone capital punishment were thrown into common pits, together with the carcasses of domestic animals and beasts of burden. \*\*\* about seventy-five of these pits were discovered. In some of them the animals’ remains had been reduced to a black, unctuous matter; in others the bones so far retained their shape that they could be identified. The field of death served also as a dumping place for the daily refuse of the city. This hotbed of infection was suppressed by Augustus at the suggestion of his prime minister, Maecenas. The district was buried under fresh earth to the depth of 24 feet, and a public park, a fifth of mile in extent, was laid out on the newly made ground. The results proved of so great benefit to the health of the City... .” (Lanciani, 1890, pp.12-15).

## **4.2 United Kingdom**

There is a paucity of references and recorded information in the western world indicating whether Man had any serious concern for waste disposal for well over a fifteen hundred years after A. D. Epidemics, as the Black Death in 1349 in England, occasionally brought about a reaction to the accumulations of refuse and filth in the cities. As early as 1297, London imposed a legal obligation on every householder to ensure that the pavement in front of his tenement was kept clear. A 1354 decree ordered weekly removal of filth deposited in front of houses and rakers were employed to remove the weekly accumulations. The city had the power to levy a charge on householders who failed to remove their refuse. In 1387, a London committee was elected to discuss providing laystalls (local collections points) for depositing street refuse collections. Refuse from suburban laystalls was sold to farmers and market gardeners, while that from riverside laystalls was taken downstream and dumped on the Essex marshes. By 1407, Londoners were ordered to keep their rubbish indoors until it could be carried away by the rakers. King Edward III, in 1358, enlisted the aid of the Mayor and Sheriffs of London to stem the dumping of rubbish and filth into the Thames River. A 1387 ordinance forbade the throwing of refuse into the Walbrook. This local edict was closely followed in 1388 by an Act of the English Parliament prohibiting the depositing of filth and garbage “in public waterways and ditches”, and that all such refuse should be carried away to appointed places. Wilson further reports that enforcement was difficult, even in 1414, requiring payments to informers to report and gather evidence against offenders casting rubbish, offal and dirt onto the streets. Typified, is the 1421 example of one William atte Wood, who was arraigned for casting “horrible filth onto the highway” and making a great nuisance and



discomfort to his neighbors, “the stench of which was so odious, that none of his neighbours could remain in their shops.” Of note is a court record entry in 1515 at Stratford-upon-Avon which lists Shakespeare’s father as being fined for depositing filth in a public street. (Wilson, 1977, pp.2-3).

It is noteworthy that about the same time, the consciousness of raw waste accumulations was spreading in Europe. Paris, France, found that garbage disposal immediately outside the walls of the city interfered with the defenses of the city. (Hatheway, 1993, p. 2). It was reported that “some medieval German cities avoided the danger of being covered in their own wastes by requiring that departing wagons which had been used to bring produce into the city, return with a load of wastes to be deposited in the countryside.” (Wilson, 1977, p.1).

That a relationship existed between waste disposal, hygiene, and the periodic epidemics of Europe was not realized until early scientists introduced bacteriology, well into the seventeenth century . The disease causation relationship was determined after a Dutchman, Antony van Leeuwenhoek, the father of microscopy, described bacteria in 1693. (Hatheway, 1993, p.122). However, the presence of wastes had become objectionable enough, and to the point that means of disposal were being searched for. In the 16th and 17th centuries, raw sewage applied to the land, both as a means of disposal and as a fertilizer, began as a practice in 1531 in Bunzlau, Germany, and in 1650 at Edinburgh, Scotland. (Hatheway, 1993, p.3).

Scientists had not yet discovered the relationship of hygienic practices to avoid or control the water- and foodborne (so-called intestinal or filth) diseases, which may be transmitted by direct contact with infected soil, compost or decaying vegetable matter, or by vectorborne agents in contact with human and animal excreta in raw sewage. It was not until 1826 that Bretonneau described typhoid fever as “dothienenteritis”, or an abscess of the small intestine. The cause of the 1854 cholera epidemic in London was discovered to be a certain infected water well by physician Dr. John Snow . A nearby privy was the cause of contamination and infection. In 1856, the British physician William Budd discovered that typhoid fever is spread by carriers from human excreta. (Hatheway, 1993, pp.6, 10); but the typhoid bacillus (*Eberthella typhosis*) was not identified until 1884 by Eberth.

The Public Health Act of 1848, which created a General Board of Health , contained provisions for improving the supply of water and for supervising sewerage and drainage. A Royal Sanitary Commission was established in 1868, whose report led ultimately to the Public Health Act of 1875.

An 1885 English case in point is *Ballard v. Tomlinson*, [1885] 29 Ch D 115, wherein plaintiff Ballard complained of an adjoining property owner placing filth (draining his water closet) and other poisonous matter into its disused water well which was carried by the subterranean aquifer’s percolating waters to the plaintiff’s well in use. The issue became whether any one has the right to contaminate a common source of water, or water



reservoir. The Chancery Court determined that no one has a right to use his own land in such a way as to be a nuisance to his neighbour.

Thus, the public consciousness in Europe and North America was not seriously awakened to sanitation, waste disposal, and their effects on public water supplies until the mid-to-late nineteenth century with the discovery of sanitation-related diseases. Wilson (ibid.) reports that the refuse yards of Edinburgh, Scotland, remained the same size for a hundred years in the 18-19th centuries because everything brought to the yard was sorted and eventually sold. And, in London, he reports, that "one great heap (of refuse) at the bottom of Grays Inn Lane was not moved for a century until 1815 when the dust was extracted and sold to Russia to make brick for the rebuilding of Moscow after Napoleon's invasion. As recently as 1926, 41 English brickfields were using dust from London's refuse to produce stock bricks, and some continue to do so to this day." (Wilson, 1977, p.2). The modern system of English refuse collection and disposal by local authorities derived from the Public Health Act of 1875. Appointed days of refuse collection were established and householders were to place their refuse in a movable receptacle.

In Appendix A-1, § 7.2, *infra*, a Black Country reclamation project near Birmingham, known as Bowmans Harbour, is reviewed. The project is one of cleaning up old refuse tipping in former shallow coal workings from the nineteenth century industrial revolution.

#### **4.3 United States**

In the U.S., the first known ordinance for refuse was enacted by the city of Georgetown, Virginia (now in the District of Columbia) in 1795. It prohibited extended storage of refuse on private property or the dumping of it on a public thoroughfare. The second U.S. President, John Adams, used the first rubbish hauler to remove refuse from the White House, while the third U.S. President, Thomas Jefferson, contracted for the first refuse collection from government office buildings. Public collection of refuse in the District of Columbia did not start until 1856. However, Hatheway (1993, p.10) reports that even in 1860, the citizens of Washington, D.C., continued to dump garbage into the streets.

Thereafter, the public began its slow awakening to the need for sanitary disposal of wastes. In 1873, "the City of Los Angeles, California, established a garbage and dead animal plot for burial three feet below ground surface." In 1883, "New York State's Governor Cornell proclaimed an energetic campaign against industrial polluters. \*\*\* Newtown Creek in New York City had become a dumping ground for stable manure, fat-boiling and bone-boiling residues, fertilizer wastes, distillery slops, and bottoms from 13 petroleum refineries, along with wastes from thirty other offensive trades; in addition to



discharges of 22 miles of sewers.” (Hatheway, 1993, p.13; 17). New York City’s solution was to build a main sewer line to transport those wastes into the East River, in effect, only carrying the wastes further away from the population center rather than treating the sewage and reducing it to a less destructive and contaminating state. Solid wastes were loaded on barges and carried to sea for dumping. During this same era, the cities of Chicago, St. Louis, Boston, and Baltimore carted much of their refuse to open dumps.

As public concern continued to grow “the first recorded indictment ‘for industrial waste discharge nuisance’ made in the United States was in 1886 in Indiana against a Mr. Mergentheim ‘for discharging the water from his woolen mills into the canal at Perue...’.” As an early alternative to burial of wastes, the first municipal incinerators built in 1886-1887 and used at Wheeling, West Virginia, Alleghany, Pennsylvania and Des Moines, Iowa. Expressing the growing concern for waste disposal, even as early as 1889, the Public Health Officer for the District of Columbia (US) stated, “Appropriate places for (refuse disposal) are becoming scarcer year by year, and the question as to some other method of disposal ... must soon confront us.” (Hatheway, 1993, pp.19, 21).

The U.S. Congress reacted shortly thereafter with enactment of the River and Harbor Act of 1890 which provided for a “system of permits to be issued by the Secretary of War for the discharge of all forms of insoluble substances, including rubbish, filth, and other solid wastes into navigable waters.” U.S. Stat. 26, Sect. 426, 453-454. It should be noted that prior to the U.S. Act, the British Parliament created the Royal Commission on the Prevention of River Pollution in 1857 because of the gross pollution in British rivers. However, preventative legislation in the U.K. was not enacted until 1876 and again in 1890. It was in 1890 that the United States surpassed Great Britain in its volume of industrial output, which in turn, meant also, greater waste. (Hatheway, 1993, pp. 10, 21).

In 1899, a third Rivers and Harbors Act was passed by the U.S. Congress. Again, it made unlawful the disposal of any refuse matter onto the bank or into any navigable river, or any tributary. It included wastes from any ship, vessel, barge, or floating craft, but excluded the flow of liquid discharges from streets and sewers of municipalities of the U.S. However, just prior to the new federal act, a California court in 1898 granted an injunction against the city of Santa Rosa for emptying impure effluent from sewage irrigation into a creek. (Hatheway, 1993, p.20).

U.S. municipalities started opening “city dumps” about the turn of the 20th century, e.g., Warwick, New York in 1898; Anaheim, California, 1901. (Hatheway, 1993, pp. 26, 29). Professor Hatheway notes that the Warwick landfill accepted industrial wastes and sludges, and that key contaminants were VOC’s, PAH’s, phenols, other organics and metals.

In 1916, England reputedly made its first trial of sanitary landfilling. By 1920, at Bradford, England, “controlled tipping” of solid waste begun with a pioneering form of sanitary landfilling, i.e., placed in layers of approximately 60 cm., with daily cover and



control of windblown debris. (Hatheway, 1993, pp.48, 52). By 1932, the Ministry of Health developed a system of “recommendations” for locating suitable sites for controlled tipping of solid wastes.

With regard to mine waste disposal, 1915 marked the “beginning of alternative mining waste disposal in the Butte District of Montana. The “traditional means of disposal of tailings, mill products and smelting wastes directly into Silver Bow Creek “ were abandoned in favour of pre-treatment of the wastes before introducing it to the streams.

In 1927, North Smithfield, Rhode Island, started using a former sand and gravel pit for domestic, commercial and industrial wastes. (It should be noted that this site achieved final closure in 1985.) (Hatheway, 1993, p.64).

In all recorded history of the disposal of wastes , a most significant milestone was the U.K. Ministry of Health’s 1930 regulations for controlled tipping into landfills where refuse was to be deposited in series of layers, each layer not to exceed six feet in depth, and all surfaces were to be covered with soil or material suitable to prevent exposure to air within 24 hours of its emplacement. Screening was to be placed around the area to prevent wind dispersal of paper and other light debris. The screening thereby effectively diminished problems of fire, dust, vermin, birds, insects, windblown litter and odours, and improving the hitherto unsightliness of the disposal site.

In 1932, the City of San Francisco, California, began cut-and-fill landfilling of municipal refuse. The “first US ‘sanitary landfill’ was introduced in Fresno County, California, with the cut-and-daily cover method of solid waste disposal.” Experimentation with compaction of the piled waste in the landfills, thus saving space, became of increasing importance. One city, New York City, was faced with finding an alternative to its sea-dumping method since court actions by other coastal cities nearby were brought against it and its disposal method which was affecting them. The litigation against New York finally culminated in a decision by the United States Supreme Court in 1933 requiring the City to cease their ocean-dumping practice (at least within the twelve-mile coast line limits established at that time). [*New Jersey v. City of New York*, 290 U.S. 237 (1933)].

In the period between the World Wars, similar procedures of sanitary land filling were being tried by municipalities throughout the U.K., Germany, Canada and the U.S. During World War II, the large concentrations of men at military installations caused the military to seek and develop quick, efficient, economical and sanitary methods of waste disposal. The sanitary landfill being found successful in the U.K., the U.S. and Canada was tried. Daily compaction by heavy military equipment, as the “bullclam”, increased its success. By 1945, a survey of the U.S. reported that 100 American cities had adopted sanitary land filling, and by 1960, the number of cities had grown to more than 1,400. Gradually, with its success, open-air disposal site burning decreased , e.g., banned in 1947 in Los Angeles County.



## 4.4 Canada

It should be noted that federal law does not regulate solid waste disposal in Canada. The individual Provinces developed their own legislation and policies dealing with the management of solid waste, and this is still true. For the greater part of Canada, regulation of waste disposal within the provinces was almost non-existent until the twentieth century. As in most locations of the world, the earliest regulation of waste disposal began in the larger population centers of Canada where the greatest waste accumulations were made and affected the health of large numbers of people. Consciousness of waste disposal regulation did not become a matter of great concern until the coming of the environmental revolution in the 1960-70's. Even in the present era of much environmental law, the degree of waste disposal regulation appears to be governed by the density of population. As noted in § 2.4 of Chapter 2, the density of Canada's population is about 2.5 persons per square kilometer (6 persons per square mile), compared with 27 persons per square kilometer (71 persons per square mile) in the U.S., and approximately 253 per square kilometer (660 per square mile) in the U.K. Consequently, with Canada's very low density of population, the concern for contamination of the earth and groundwaters from land burial of solid waste is correspondingly small. Not to be misled by the low density figure, which is more accurate for the more sparsely settled western provinces, the areas and cities with greater densities, particularly in eastern Canada, have had some municipal waste disposal regulation from earlier dates in this century.

For the purposes of this work, and because there is a paucity of published history of waste disposal in Canada, the review is meager and covers about half of the Canadian provinces. Communication with several of the responsible provincial waste disposal agencies yielded very scant historical information ; nor was any publication found which featured information of historical reporting on the subject in Canada. Information gleaned from a sampling of provinces across Canada follows.

### 4.4.1 Saskatchewan

As reported by Saskatchewan Environment and Resources Management, "Prior to 1974 there were no provincial regulatory requirements for waste disposal grounds." It was also revealed that prior to 1972 some municipalities in the province developed waste disposal grounds in depleted gravel pits.

### 4.4.2 Alberta

As reported by the Material Management Branch of the Alberta Environmental Protection agency, municipalities within Alberta, owning and operating MSW sites are not required to report any information to the provincial authorities. Provincial waste management regulation was apparently not instituted or standardised until 1985 when the Public Health Act, Alberta Regulation 250/85, entitled "Waste Management Regulation"



was enacted. The use of open pits or surface mines for waste disposal is reportedly unknown to this agency.

#### 4.4.3 Manitoba

Provincial regulation of MSW is of recent vintage, occurring about 1988. The latent concern is a reflection of the low population density for the province. Municipal landfills of two cities, Winnipeg and Brandon, currently serve more than 60% of the provincial population.

#### 4.4.4 Ontario

Centrally provided regulations for this more populous province were initiated a few years earlier than in the lower population density provinces to the West. Licencing of waste disposal sites was initiated in 1970. Of interest to this work is the use of pits and quarries as landfills within Ontario. Two large open mining pits are of note, viz., the Keele Valley landfill located north of Metropolitan Toronto, and the Walker Brothers aggregate quarry-landfill operation at Thorold in the Niagara area.

#### 4.4.5 Newfoundland - Labrador

The department of Environment & Lands is responsible for the regulation of MSW disposal in this province. The Department draws its authority for regulation from The Waste Material (Disposal) Act, promulgated in 1973 and as amended in 1976.

With respect to waste disposal generally, and more specifically to domestic solid waste, the Minister has the authority under The Act to issue approvals for municipalities and others to operate waste disposal systems. Where there is no municipal body to take the responsibility for waste disposal in any given area, the Minister has the authority to appoint a Waste Disposal Committee or a Franchise Holder to handle the area's waste disposal needs. The Minister also has the authority to establish, construct, take over and operate, or manage waste disposal sites that are deemed to be in the public interest to do so. In fact, the Department has been active at one time in building and operating sites, but has relinquished operation to municipalities and private, licenced operators. (Dominie, 1992)

#### 4.4.6 Quebec

This province's Solid Waste Management programme operates under Division VII of the Environmental Quality Act (R.S.Q., Chapter Q-2). The province of Quebec is Canada's largest with an area of some 1.5 km<sup>2</sup> - approximately the size of India. The population numbers about 7.2 million, or about one quarter of Canada's total. According to its Minister of the Environment, Canadians generate almost twice as much waste as Europeans; and, in Montreal, Canada's most populous city, each Montrealer generates 1,000 lbs. of waste per year, with an annual total of one million tons per year for the city.

The Solid Waste Regulations (R.R.Q., c.Q-2, r.3.2) governing standards for design and operation of new landfills provide for use of open pit mines and quarries as depositories for solid waste. However, of the nearly 70 landfills in the province, a large



MSW site has operated since 1968 in the former Miron quarry at Montreal. To 1995, it has received 31 million tonnes of waste and is still in use. The quarry is equipped with a leachate pumping system and collects 20,000 c.f./min. of methane from 280 bio-gas wells.

#### **4.5 Conclusions and Comments**

History reveals that the most commonly used method for disposal of humankind's waste has been by depositing it in the earth, whether it be in a man-made excavation, or a natural depression in the earth's surface. Older chosen sites for depositing waste were more than likely to have been already considered waste lands, e.g., gullied, or marshland. Those living near coastal areas readily took advantage of the nearby large bodies of water, or the estuaries running to the sea, to carry off their waste where it would certainly feed the fishes of the sea, and the inorganic matter would settle to the seabed, possibly decompose in the salt water, and finally "return to nature" on the sea floor. Early concerns for man's environment were simply based on obvious, elementary reasoning: filth and waste drew vermin, created stench and foul odors. Once removed from the local majority's living area, his breathing space was much purer and his aesthetics were improved (out of sight, out of mind), and vermin would remain at the trough (the dump).

A twentieth-century encroaching problem, given little-to-no consideration until recent decades, was that the make-up of man's waste was no longer of a simple chemistry as it had been for centuries. Non-biodegradable plastics and toxic organic compounds had been discovered and played a major part in modern manufacturing. Not only had the chemistry of wastes changed drastically with the swift advances of industry and science in the mid-twentieth century, but the chemical changes of waste had become more deadly in infecting the earth, the seas, and groundwaters where deposits of waste were placed, thereby threatening all life on earth. Present considerations for waste disposal must take into account other factors, as greatly increased populations with the promise of even greater numbers of humans in the near future by extrapolations, rapidly diminishing space for depositories of waste, accompanied by an increasing volume of waste, et al, all of which only serve to exacerbate the solutions for the waste depositing problem. At present, the amount of concern for contamination of the earth and groundwaters by waste burial disposal still seems to be directly proportionate to the population density. Earth burial, or landfill, for mankind's wastes continues to be the most acceptable and predominantly used method for disposal, particularly in the western world. Inroads to burial alternatives, as incineration, are slow in acceptance. Recycling has been more accepted and therefore, successful, but only postpones the waste disposal volume problem. Noting that the volume of mineral excavations is reportedly five times the volume of solid wastes in the U.K., utilisation of existing, on-going, and future surface mining excavations for the deposition of wastes appears to be a most logical solution regardless of other volume reduction methods used.



## **CHAPTER 5**

# **A REVIEW OF THE ENVIRONMENTAL ERA REGULATORY ACTIONS FOR SURFACE MINING WITH LITIGATED INTERPRETATIONS**

## **5.1 Introduction**

Environmental law is thought of in present times as a new area of law. An environmental lawyer or environmental barrister/solicitor, was virtually unheard of in all Anglo countries prior to 1969. In truth, however, the practice of law for environmental matters and concerns for nature and ecology did have its beginnings several hundred years ago. Those concerns have been very slowly evolving until recent decades when it finally mushroomed into a vast new area of law and regulation.

In its earliest forms, it first showed itself in various unrelated fields of law, as in public health law where periodic gross contaminations affected the public at large and, consequently, further control was deemed necessary for protection of the general public health and welfare ; or, in real property law, where certain acts performed on one tract of land caused devaluating and damaging trespasses to be made on adjoining or others' lands; or in tort law, where injurious, contaminating and polluting nuisances and trespasses were made on other's persons and properties. Later, town and country planning, or zoning law, became involved with land control over industry and "bad neighbour" developments that might be undesirable sources of nuisances, contamination and pollution for a community.

Thus, environmental concern, protection and law as we know it today, is a much-revised, far more organised, and particularly pervasive product from its earlier forms. The proponents of better health conditions, natural resources preservation and conservation of the previous century gave way to the new social force of environmentalism which emerged in super-force about 1960. During the '60's, concern rapidly grew over environmental abuse, the exhaustion of natural resources and alteration of resource lands, growing population, radiation, increasing pollution levels, waste disposal, human impact on animal population, habitats and natural landscapes. International concern was shown by the holding of the Stockholm Conference on the Environment in 1972.

As previously stated in Chapter 3, "Having attained a high degree of comfortable and luxurious living for the majority for several generations after World War I until the 1960's, . . . the majority of peoples of the Anglo countries no longer found the struggle and compulsion of their antecedent generations for wealth necessary. Having attained relative wealth and luxury, affluent societies \*\*\* then \*\*\* devoted their efforts to such worthy causes as the environment." This statement is supported by Schoenbaum in his work, *Environmental Policy Law* (op.cit.) wherein he states, "In the 1960's material goods became relatively abundant for many, and there was a new emphasis on the quality of life." In further support of the author's statement that industry met the ever-increasing demands



of an affluent society for more goods and luxuries, Schoenbaum also notes that concurrently with society's attainment of wealth, "there was a great increase in the volume and kinds of pollutants released into the environment, including toxic chemicals and pesticides." (op. cit., p.4).

Although existing liability rules developed in the Anglo nations for common law nuisance claims against private and public property damage by pollution were not made in the name of environmentalism, they were the earliest form of fighting damage claims made on the individual's and the public's environment and property. In the area of an alleged public nuisance claim, an individual did not have the right, or standing in court, to join with a government entity for a claim of damage or abatement, unless the individual could show an injury that was different in kind from the public's claim. With the advent of environmental protection acts in the U.S., some federal acts provided for citizen's actions. States followed suit by enacting their version of the federal statutes with like-provisions making it possible for citizens as groups or individually to initiate environmental actions against an alleged industrial violator, or against a political subdivision for an alleged failure of a government agency to protect them against violations of environmental laws, particularly where air, water and other natural resources were concerned. However, the common law tort of a nuisance was, and still is, available and used for environmental damage claims in all three countries.

Inspection and review of laws and environmentally-related litigation concerning open pit mining and waste disposal/landfill cases in the United Kingdom, the United States, and Canada during the period from the 1950's to 1990 gives insight as to the manner and kind of environmental regulations that were formed, enforced, amended and carried out in the national attempts to clean-up the environment deterioration caused by surface mining.

## **5.2 An Overview of Early Environmental Regulation to 1990 for Open Pit Mining, Quarry Tipping and Backfilling with Waste Materials**

### **5.2.1 Public Health, Tort and Planning /Zoning Law**

The three mentioned areas of earlier law, viz., public health, torts and planning / zoning, that evolved into environmental regulation and which intensified over time to affect surface mining are reviewed. Historically, public health law had a very limited effect on mining with its chief regard for mining working conditions, as safety. The only health law concern for the mining on the natural environment was for any of its discharges into either the air or waters that might seriously affect public health, actually constituting a public nuisance. Early public health laws expressed greater concern for control over disposal of waste and sewage. Tort law, concerned with environmental nuisances and



trespasses, continued to be pursued in law and litigation as it had in the past. Litigated case reviews following illustrate its continued presence.

### 5.2.2 Additional Environmental Law Problem Areas

In addition to the three named basic areas of law, this chapter looks at principal ensuing law-problem areas that seriously affected surface mining, particularly in the U.S., as a result of NEPA and its various offspring environmental regulations. An increased effect on open pit mining in the U.S. is no doubt due to the greater pervasiveness of applied environmental law in the U.S., thus having more far-reaching consequences on all industry, particularly in view of its “command and control” policy. Ensuing problems for surface mining from environmental law regulations were principally found to be: (1) regulatory takings of mineral properties; (2) wetland limitations; (3) planning law or zoning regulations placing limitations on mining property and pit expansions; (4) limitations of “grandfathering” acts for active mining operations that existed before the environmental regulation; (5) intensified reclamation requirements of mining properties; and (6) legislative responses to the public’s clamour for massive conservation of large and numerous land areas to be set aside and preserved in parks, forests, wildlife habitats and other areas of pristine, natural and scenic beauty which had the effect of severely limiting the land areas for mineral prospecting and exploitation of mineral deposits.

Case examples for these six problem areas are given under each country, when available, later in this chapter. However, for the U.S., an abundant number of cases in each area were available. This is thought to be due to the greater litigiousness prevailing in the U.S. Americans in the U.S. are far more litigious and prone to litigate than their American cousins in Canada who reflect the tendency for greater tolerance, for out-of-court settlements, and a lesser bickering quality of the mother country. In addition, is the fact that environmental laws of the U.S. are more subject to litigation since they are of the “command and control” type, thereby inviting more challenges to their legality.

Evidence for the truth of the statement that “Americans are far more litigious” is offered in the Findings and Purposes statement of the U.S. Common Sense Product Liability and Legal Reform Act of 1995 which stated, “our Nation is overly litigious, the civil justice system is overcrowded, sluggish, and excessively costly, and the cost of lawsuits, both direct and indirect, are inflicting serious and unnecessary injury on the national economy; \*\*\* “[104th Congress, 1st Session, H.R. 956 (1995)].

### 5.2.3 Land Use - Planning and Zoning Law

With regard to the third area of law discussed, planning and land use, urban development planning also had ancient to early beginnings. The desire for a blending of town and country scenery has long been thought and sought to be the ultimate in a planned urban environment and is evidenced by the so-called interspersed “green areas” in current suburban planning development. However, planning law made its first effectual appearance in England as an enactment in 1909 under the Housing, Town Planning, & Act.



This was followed by one of the same name in 1919 in which planning schemes were made compulsory. Again, the Act was reinforced with more planning powers in 1932. In the U.S., similar concerns for planning in urban areas, more commonly called zoning, were appearing after World War I.

After World War II, when world populations were settling down and developed nations were returning to peacetime comforts and endeavours, and while the fervor of a post-war economic boom was prolonged, a general migration from the metropolitan areas surged to nearby areas of less density -- the move to suburbia. As an example, between 1950 and 1969 in the U.S. the population of American suburbs had almost doubled, while the inner city populations had barely increased. By 1970, metropolitan areas had become the home for two-thirds of Americans. As Grad notes on the environmental damage that occurs with the development in suburbia in his chapter on Land Use Planning, "Building and construction practices, together with the quickened pace of development and complementary zoning, often end in severe abuse of the land and are ultimately costly to the public. The popular practice of stripping subdivisions of all cover before commencing construction destroys tree and plant cover and can trigger heavy soil runoff. Sedimentation from this runoff \*\*\* loads nearby streambeds and ultimately river channels. This can cause costly downstream dredging and upstream flood control and destruction of the esthetic quality of lakes and rivers. Public pressure for flood control projects is often spurred by suburban development along flood plains, which usually contain fertile soil supporting an abundant variety of native plant and animal life. Construction over aquifer recharge areas, where groundwater is normally replenished, accelerates rapid runoff, increasing flooding and contributes to water shortages." (Grad, 1978, §9.01). Thus, public concern for patterns of land use and zoning gathered momentum. Land use law, planning and zoning regulation began to take a larger part and concern, particularly for the future locations of industrial developments, including surface mining, that might have a hazardous effect on the environment and the general welfare of the public.

In general, extended powers for controlling and restricting land use by planning authorities were granted under the nominal "police powers" of the sovereign in controlling all land of the domain. Those powers have been passed down to the sovereign's minion local governments. Powers for planning/zoning authorities normally includes the right to refuse or allow certain development activities on private lands, and if approved, a permitting or licencing procedure follows for the permitted use. However, a problem with environmental land use regulations is that they are generally employed for preservation purposes, e.g. open space, wetlands, etc. They also often downgrade zoning classification thereby making it more difficult for a landowner to recover compensation, and conversely strengthening justification for the good of the general public.

As an example of downgrading of zoning, or "downzoning" property, see *Agins v. City of Tiburon*, 447 U.S. 255 (1980) - where a city government modified existing



zoning after a landowner bought five acres of vacant land. The re-zoning placed the property in a residential planned development and open space zone. The purpose of the zoning was preservationist. The planning ordinance stated, "It is in the public interest to avoid unnecessary conversion of open space land to strictly urban uses, thereby protecting against the resultant impacts, such as \*\*\* pollution, \*\*\* destruction of scenic beauty, disturbance of the ecology and the environment \*\*\* and other demonstrated consequences of urban sprawl." The land owner had lost the value of his contemplated investment as the five acres could not be developed or built upon. Hearing the case, the U.S. Supreme Court stated " . . . the zoning ordinances substantially advance legitimate government goals. . . . The specific zoning regulations at issue are exercises of the city's police power to protect the residents of Tiburon from the ill-effects of urbanization. Such government purposes have long been recognised as legitimate."

Exceptions for existing businesses, which were extant before the land use plan was adopted, may be made. One type of zoning exception is called a variance or conditional use. The general procedures in all three Anglo countries for land use consideration and pre-permitting call for public hearings where the local community is encouraged to participate and voice their opinions as to the acceptability or objections to any specifically announced land use proposal. Permitting, or licencing, of mines and quarries by local authorities, boards and commissions made the greatest early in-roads for environmental controls over mining. Cases included are intended to illustrate this point of increased control by planning and zoning of land over surface mining. (See particularly *Goldblatt v Hempstead* and *Cioffoletti v. Planning & Zoning Commission*, *infra*.)

Planning for orderly land use, while beneficial to the general public, carries with it burdens to some and injuries to other individual land owners, and to certain industries, conspicuously amongst them being surface mining and waste disposal operations. Restricted uses from zoning and planning may create loss of possible values to some properties. Such injuries commonly occur in the form of depriving the owner of the intended use of his land for which it was purchased. This is particularly true for intended surface mining properties. Minerals may be mined only where they occur and are found. The need is for mining to be permitted where the minerals are located. A mining operation cannot move to just any area already zoned for mining as could some other manufacturing plant or heavy industry. Valuable minerals can be lost "forever" to an area zoned residential or for light business.

At this point, areas of law doctrines, as eminent domain, expropriation of land or property takings, are brought to the forefront to rectify wrongs done to individuals by denial of certain uses of their land. Environmental controls over wetlands and coastal lands in the U.S. have been an especially litigious area for alleged regulatory takings of property and rights from landowners where residential and resort development were the intended land use. Examples of litigated cases are given where zoning or environmental regulations



have prevented surface mining from occurring, or limited the expansion of an active surface mine, thereby reducing the life of the expected operation to the detriment of the miner or mineral owner.

The exercise of eminent domain affecting mineral properties has not been one of any major note in Britain, but has been a more conspicuous result of environmental regulations in the U.S, and to a lesser degree in Canada.

### **5.3 United Kingdom**

#### **5.3.1 Derelict Lands**

With regard to mineral extraction in the UK in the mid-1970's, David Hughes, referring to G. Moss's 1981 work, *Britain's Wasting Acres*, states that up until the 1970's, some 150,000 acres of derelict land from various uses had accumulated in the UK, and that "the principal extractive industries took 12,445 to 12,595 acres per annum, with very little being restored after use." (Hughes 1986, p. 240). In his later edition, Hughes noted that there was a 6% rise in the total of derelict land in the U.K. between 1974 and 1982. Nevertheless, reclamation efforts have apparently been effective, for according to the Department of Environment's 1988 Survey of Derelict Land, the total U.K. derelict acreage had been reduced to some 100,000 acres. However, 47%, or 46,700-acres, of that was attributed to mining and related activities. (Hughes, 1992, p. 245). Examples of U.K. reclamation projects of derelict land, derived from former mineral workings and subsequent refuse tipping, is treated in detail in Appendix A-1 §7.

In addition, Moss reported that in 1974, 8,016 acres in National Parks and Areas of Outstanding Natural Beauty were affected by extraction pits and ancillary plant structures and settlement ponds. (Hughes, op.cit).

#### **5.3.2 Statutory Regulation of Mines and Quarries**

General control of mining for health, safety and welfare at mines and quarries has been regulated by the Health and Safety at Work Act 1974. The main statutes in force for regulating mines and quarries are the Mines and Quarries Act 1954 to 1971. This latter Act from 1954 to 1971 is comprised of several different statutes that have had their controls amended from time to time and consist of: the Mines and Quarries Act 1954; the Mines and Quarries (Tips) Act 1969, Part I, §§ 1-10, and § 38(2); Mines and Management Act 1971, §4 (1). Along with subordinate legislation, the group of statutory controls regulate safety, health and welfare for employees, employment of women and youths, and the security of tips associated with mines and quarries. The Mines and Quarries (Tips) Act 1969 is particularly concerned with the prevention of public danger from disused tips. (Halsbury, 1980)



### 5.3.3 Nuisance claims

Referring again to nuisance claims, both public and private, despite the presence of environmental regulations, the charge of nuisance still plays a part in the Anglo nations' legal schemes. Current U.K. law provides for statutory nuisances. The principal legislation dealing with nuisances and offensive trades is the Public Health Act 1936, Part III. Section 92(1)(f) authorised miscellaneous offensive sources to be declared statutory nuisances. In the area of mining, unfenced shafts of discontinued or abandoned mines and unfenced quarries have been declared statutory nuisances under both Public Health Act and The Mines and Quarries Act 1954.

The usual remedy for dealing with a public nuisance is by an indictment or information. It is also possible for the Attorney General to bring a relator action for an injunction to order cessation of the nuisance. A local authority may bring an action for a public nuisance under the Local Government Act 1972, §222, if it is thought expedient to protect the health and interests of the local inhabitants. Although the majority of statutory nuisances are dealt with by local authorities, an individual may proceed on his own under §99 of the 1936 Health Act, which provides:

“ Complaint of the existence of a statutory nuisance under this Act may be made to a justice of the peace by any person aggrieved by the nuisance, and thereupon the like proceedings shall be had, with the like incidents and consequences as to the making of orders and otherwise, as in the case of a complaint by the local authority, but any such order made in such proceedings may, if the court after giving the local authority an opportunity of being heard thinks fit, direct the authority to abate the nuisance.”

It should be noted that an individual employing §99, is able to 'short-circuit' the normal procedure and is able to initiate proceedings under §94 without first issuing an abatement notice under § 93. Complainants successfully using §99 are entitled to reasonable expenses, and magistrates have discretion to make a compensation up to £1,000 against a convicted person.

Nuisance claims remain the principal legal remedy for an individual against environmental pollution, hazards and damages.

Nuisance actions by local authorities are restricted in certain respects for surface mines by § 18(2) of the Clean Air Act 1956 where §92 of the Public Health Act 1936 does not apply, e.g., to quarries and mines where smoke, grit and dust emanates from the combustion of refuse deposited in them. However, such offensive air nuisances may be prosecuted under §18(1) of the Clean Air Act 1956.

### 5.3.4 Planning - Change of Development and Use

There is no national or regional development plan. All counties and districts in England have planning functions which are outlined in the Local Government and Planning Land Act 1980. Under that Act, counties are primarily concerned with the preparation of structure planning to control developments for the winning of minerals and aggregates,



i.e., the open pits and ancillary processing plants, for waste disposal sites, et al. However, no single legal code treats mineral extraction and infill.

A more flexible approach to “development” plans was introduced with “structure” plans and replacement of development plans with structure plans has been scheduled to take place every five years as former development plans expire. The structural plans are statutorily mandated and provide for inclusion of environmental concerns as well as for economic and social policies. §6 of the Town and Country Planning Act 1971 (TCPA) required a survey amounting to an environmental impact assessment as a pre-requisite to any structure plan.

District planning authorities are involved at a lower level in formulating the local plan. These fall into three types, viz., local plans, subject plans, action plans. Subject plans are concerned with mineral extraction operations. The County authorities have certification rights for a proposed district structure plan. Further, under TCPA 1971, § 13 requires that a local public hearing on the structure plan be held before a person appointed by the Secretary of State. Under the TCPA 1971, §22 (1) states: “ \*\*\* development means the carrying out of building, engineering, mining, or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land \*\*\* ”.

Sub§ (3) “\*\*\* (b) the deposit of refuse or waste materials on land involves a material change in the use thereof, notwithstanding that the land is comprised in a site already used for that purpose, if the superficial area of the deposit is thereby extended, or the height of the deposit is thereby extended and exceeds the level of the land adjoining the site \*\*\* ”.

Part III of the TCPA 1971 defines the meaning of ‘development’, and requires planning permission for it to take place. ‘Development’ may refer to ‘operational’ development, or to an activity ‘making a material change of use’. Courts generally define ‘operational’ acts as those making physical alteration to the land with some degree of permanence. In *Parkes v. Sec of State for the Environment* [1979] 1 WLR 1308, the court considered the size of the operation, its permanence, and whether it was physically attached to the land.

As Professor Hughes comments, ‘material change of use’ is “more difficult to define and is generally decided as a matter of fact and degree. It is not always necessary for a change to be one of kind for it to be ‘material’. Changes of degree made by a marked intensification of use can be sufficient changes of character to constitute development.” He gives an illustration where the annual production increase of concrete blocks rose from 300,000 to 1,200,000 as a sufficient change of character to constitute development ( *Brooks and Barton Ltd v. Sec. State for the Environment* [1978] 1 All E.R. 1294 ). For a comparable U.S. case and change of use, see *Re. Barlow*, *infra*. “ The practical problem for planning authorities in such cases lies in detecting changes constituted by intensification, and in determining a point at which a creeping intensification reaches such



a point as to be reasonably recognizable as a change of character. “ (Hughes, 1986, p.141-142)

A criticism made here, and similarly made in the American case of *Re: Barlow*, is that this characterisation of a change of use, or intensified use, by increased production serves as a deterrent to growth for business. Proprietors and private enterprise in most all nations desire growth of their business and economies, consequently, why penalise them for accomplishing that end ? That intensification of use can be carried to extremes is illustrated by Hughes’ example cited in *Hilliard v. Sec. of State for the Environment* [1978] 37 P & CR 129, where intensification of use was considered for “a particular ancillary use of one farm building” as an increase in activity worthy of being labelled ‘intensification’. Fortunately, the court found one additional farm building to be insufficient to qualify for intensified land use.

Hughes continues, “ Whether change is ‘material’ must be assessed by reference to its effect on an appropriate area of land, known as the ‘planning unit’. Generally, this will be the whole area in a landholder’s ownership or occupation ( for a relative U.S. case where the entire property was not permitted for quarrying, see *Wolverhampton*, infra.) \*\*\* there are three ways of dealing with the issue: (a) where an occupier has a single main purpose (with or without ancillary uses) the whole of his unit of occupation is the planning unit; (b) if there is a variety of uses, or ‘composite use’ where activities may vary and fluctuate, the whole unit is the planning unit; and (c) where, however, within a holding physically separate and distinct areas are occupied for different and unrelated purposes, each separate are is the planning unit. The test is whether physically and functionally there are separate uses. A unit having varying fluctuating uses may experience change without ‘development’, but particular marked changes, for example major intensification of individual uses, may amount to material change of use. “ (id. 142).

### 5.3.5 Recent United Kingdom Cases

More recent litigation in tipping cases where open pits were being used for waste disposal have been brought under the Mines and Quarries (Tips) Act 1969 and the Control of Pollution Act 1974.

i) In *Alexandra Transport v. Sec. of State for Scotland*, [1973] 27 P & CR 352 (Property & Compensation Reports), the Court of Session-Second Division, on appeal by the quarry owner, upheld an assessment of a betterment levy affirmed by the Land Tribunal on the quarry property owner after quarrying permission had expired. Continued backfilling of quarry waste was allowed and tipping of external waste for infilling had been approved by the Glasgow Corporation. Under § 10(2) of the Town and Country Planning (Scotland) Act 1947 and § 99(2) of the Land Commission Act 1967, the court found that a material change of use had taken place from a quarrying operation to tipping and constituted “development” as specified in the statutes. The levy was upheld.



Criticism is made here for laws levying a tax against a quarrying operation proceeding with reclamation of the quarry site. Reclamation of the site was stipulated as a condition precedent by the initial use approval given by the Glasgow Corporation in 1950 when the quarrying operation was started, and tipping was to be considered in the reclamation process at the proper time, although requiring prior permission by Glasgow Corporation. Reclamation of quarry and mining pit sites is desirable and to be encouraged from an environmental standpoint. Utilisation of worked-out quarries and mine pit sites for tipping as part of the reclamation process, obviously, serves two important environmental purposes, viz., (1) a most probable safe depository for accumulated refuse and wastes, and (2) serves as infill material to complete volumetric filling of the mined hole thereby allowing restoration of the ground surface to its original condition, as well as allowing for the land eventually to serve another utilitarian purpose, as building upon it.

Without refuse and waste as infill, there would be insufficient quarry waste rock and soil left over from the mining operation to back-fill the mined-out hole, and restoration of the surface to original condition and surface levels would not be possible. A body of water at the surface would be the only result, which certainly is not amenable for future building. Its only use would be for possible recreational purposes. To disallow the mined-out quarry hole for tipping would be to defeat environmentalism's goal of restoration of the land surface to its original condition and levels. Thus, while reclamation of mined out land is betterment in itself, it is only restorative development, not a net improvement of the original land. Complete reclamation of mined-out land is desirable, thus it must be encouraged. A betterment levy serves as discouragement to fully restore the mined-out land to its original condition and lending itself to future further use. Levying a sum on the operator for "betterment" of the land, which is in reality only reclamation after mining, is harmful and a deterrent to full restoration and complete reclamation. It also discourages and defeats utilisation of man-made depositories for waste disposal. It would be less costly for the former quarry site owner to minimally comply with reclamation regulations by removing surface equipment, "tidying up the surface", and let the pit fill up with water. However, best restoration would be defeated.

(ii) In *Roberts and Another v. Vale Royal District Council and Another* [1977] 39 P & CR 514, the Roberts, owners of the Manley Quarry at Manley in Cheshire, had been given permission in 1960 under the Town and Country Planning Act 1971 for tipping of industrial and builders' waste materials into the quarry. The type of tipping material had been so limited to "prevent nuisance arising from the tipping operations" according to the controlling authority, the Vale Royal District Council.

In 1974, the Vale Council issued an enforcement notice challenging the Roberts' tipping operations and alleging that "materials have been tipped into this quarry that are of a kind other than those approved by the local planning authority" which constituted a "material change of use" in violation of the planning act. The Queen's Bench Division -



Divisional Court upheld the enforcement order requiring "restoration to the position as it was before the unauthorized development."

(iii) The case of *Regina v. Derbyshire County Council, ex parte North East Derbyshire District Council* [1979], 77 L.G.R. 389 (Local Government Reports) concerned a jurisdictional squabble between the Crown and two authorized licencing entities for tipping in a worked-out surface mine, viz., the Derbyshire County Council and the Northeast Derbyshire District Council. Although the licencing procedures are of interest, greater interest in the case for the purposes herein lies in the requirements for infill of the open pit under the two granting authorities.

The plaintiffs/applicants, the North East Derbyshire District Council, applied for an order of certiorari to quash a waste disposal licence issued under § 5 of the Control of Pollution Act 1974 in 1978 by the Derbyshire County Council to Cambro Contractors Ltd. and Cambro Waste Products Ltd. (hereafter for either, Cambro) giving them permission to deposit waste materials in a worked-out mine pit at Stretton in Derbyshire. The ground of the application was that the issue of a licence was *ultra vires* the county council because no planning permission for the use in question was in force as required by § 5(2) of the Act of 1974.

Section 3 of the Control of Pollution Act 1974 provides:

"(1) Except in prescribed cases, a person shall not -  
(a) deposit controlled waste\* on any land... unless the land on which the waste is deposited ... is occupied by the holder of a licence issued in pursuance of §5 of this Act (in this Part of the Act referred to as a disposal licence) ... which authorises the deposit ... in question and the deposit... is in accordance with the conditions, if any, specified in the licence."

[author's note: \* controlled waste is defined in §30 for the purposes of Part I as being "household, industrial and commercial waste or any such waste."]

In 1969 the county council granted a company planning permission to win and work fire clays, shales and associated coal measures by open cast means over a site of 130 acres. Condition 4 of the planning permission required the site to be backfilled after completion of the mining with stored overburden, adding "such quantity of fill as may be necessary to make good former levels". By Condition 8, the working of the site was to be carried out in successive phases of six acres each, the restoration of each phase being completed and the land concerned being restored to agricultural use when the next phase began. Condition 8 was never observed, although some backfilling had taken place. When the mining had stopped, 21 acres remained unfilled.

In 1978, Cambro purchased the land and was granted a disposal licence under § 5 of the Control of Pollution Act 1974 by the County Council, under which they could deposit waste products, including sewer sludge, on the 21 acres. Condition 3 of that licence called for the construction of an access road to the site before the depositing began. Condition 7



and 8 stipulated that walls and floor of the void (pit) shall be protected with a compact band of selected impervious material. The object of Conditions 7 and 8 was to ensure that any toxic wastes which may be deposited would not escape through the pit's walls and cause pollution to the surrounding water courses.

(iv) Another case that concerned authorised and unauthorised tipping materials deposited in a worked-out quarry occurred in *Bilboe v. Sec. of State for Environment* [1978] 39 P.& C.R. 495, Q.B. Division-Divisional Court, July 1978; Court of Appeal decision, February 1980.

Case Facts: In 1938, an agreement was entered into between the owner of the worked-out Sandfield Quarry located at Aughton, Lancashire, and the local council, or planning authority, whereby the owner was permitted to tip "approved" materials in two parts of the quarry. No "approved" materials were specified by the Council's surveyor. Before those two areas were filled up, ownership changed hands and in June 1948, it was agreed that tipping should cease on March 1, 1950, contemplating that the two designated areas of the quarry would be filled by that date. Over subsequent years, various applications were made for further tipping of builders' rubble, i.e., inert, non-noxious brick, mortar, putty, glass, "undiseased" wood and metal. However, the local authority issued the same conditions for tipping over the subsequent years, viz., requiring the surveyor's approval for tipped materials; and, "no materials of a noxious nature, or materials likely to give rise to overheating or noxious fumes or smell shall be deposited" adding that only sand, soil, rock and clay could be tipped. Apparently, after 1950, intermittent tipping occurred until about 1975 when the Bilboes became interested in the quarry as a continued tipping site. For the record, the Bilboes sought clarification by the authority of "approved" materials for tipping. The specified materials of "sand, soil, rock and clay" were repeated. Bilboes continued tipping builders' rubble until July 1976, about the time that stop and enforcement notices were served on them by the Council.

Bilboes sought relief from the enforcement notice by appealing to the Secretary of State, principally on the ground of § 88(1) (c) of the Town and Country Planning Act 1971. The pertinent section provided that such cessation and enforcement notice "may be served only within the period of four years from the date of the breach of planning control to which the notice relates". Since that period had elapsed at the date of service, the notice could not be enforced.

Comment A recurring issue in U.K. cases during the reviewed period of the 1970's to 1980's involving use of worked-out mining pits as tips appears to be in the agonising approval process as to "development" and whether there has been a change in "use" or "operations" in compliance with the Town and Country Planning Act 1971. Regardless of the correct nomenclature to be applied under the Act, such semantic trivia for litigation only serves to fog the essential issues and bog-down and delay the critical need for permitting approval and getting on with the use of pits as a depositories for waste.



Prior to passage of the Britain's Environmental Protection Act 1990, there was no over-all, well-defined national environmental policy within the U.K. No central body existed, having entire responsibility for development, oversight and operational implementation for the loose assemblage of environmental regulations in force. Various governmental bodies, authorities and agencies shared the duties and supervision of implementing environmental directives and regulations authorised under an assortment of Acts. The lack of a central environmental organization frequently led to duplication of supervision and control, which in turn led to confusion, less effective environmental control, and certainly greater administrative costs.

#### 5.3.6 Mineral and Mining Land Use

As previously stated, there is no single legal code in the U.K. for mineral extraction and reclamation. Hughes calls attention that "Centrally oversight of minerals policy is divided between the Department of Energy, concerned with fossil fuels, the Department of Trade and Industry, interested in industrial minerals, and the Department of the Environment, concerned with land use issues. . . . Counties outside London and, for sites in former metropolitan areas and in London, local planning authorities, following the Local Government Act 1985, are mineral planning authorities; also, see the TCPA 1971, §1(2B), having jurisdiction over plan making and development control. " However, mining of a mineral deposit is a county matter under the TCP (Minerals) A 1981.

Mining is generally classified as an act of development under the TCPA 1971, §22. Still under the same 1971 Regulations, it is stated that generally 'use' in relation to development of land does not include use of land by carrying out mining operations. The hodge-podge of controls over mining, with various exceptions and assorted delegation of responsibility to several authorities for controls is confusing, even mind-boggling.

Every mining permission granted after 22 February 1982 is subject to a sixty-year limitation from its date of permission. However, granting authorities may specify various time-limit periods for the mining of a mineral deposit on an *ad hoc* (for this time) basis.

#### Mineral Land and Mining Right Expropriations

As previously stated, expropriation of mining lands or mineral deposits by the power of eminent domain, has not been one of note in Britain. However, the Town and Country Planning Act in the United Kingdom, and as enacted by several of the British Commonwealth nations, bears a slight resemblance to a regulatory taking in the U.S. in that provision is made to recompense the injured land owner where injustice has been done by the government's act. The power of eminent domain, however, is common to all Anglo countries, and referred to in the U.K. and Canada as 'just compensation'.

(i) Although it is not a case occurring in England, a claim for expropriation of mineral interests occurred under the TCPA in a British Commonwealth nation. It is of interest for comparison with several of the U.S. property takings cases cited further on.



In *Lopinot Limestone Ltd v. Atty-Gen of Trinidad & Tobago*, (P.C.) [1987] 3 WLR 797, Lopinot Limestone applied for a permit to develop twenty-two acres of its 200-acre tract as a limestone quarry under the Town and Country Planning Act 1980. The Minister refused.

Section 26(1) of the Act provides for payment of compensation if planning permission is refused. Upon refusal, Lopinot sought the compensation under §26(1) of the Act from the Minister of Finance, but was denied any. Lopinot brought an action against the Attorney-general in the High Court of Trinidad & Tobago.

On final appeal, the court found that Lopinot's application related to development of the land by carrying out mining operations; that by §2 mining was outside the statutory definition of 'use' in relation to land, and so the proposed development would cause no material change in the use of the land. Accordingly, the exemption from payment of compensation afforded by §27(1)(a) would be inapplicable to the refusal of permission for that development; that compensation would be payable to the plaintiff in respect of refusal of permission under § 26(1). The Privy Council held that compensation would be payable to Lopinot in the amount equivalent to the difference in the land's value with permission for quarrying limestone (subject to limitations) and its value without permission. Lopinot's application for quarrying permission was remanded to the Minister, and if refused again, Lopinot would be entitled to compensation subject to the provisions.

(ii) Kirklees Metropolitan Borough Council vs. Calder Gravel Ltd.

The Kirklees Metropolitan Borough Council tried to rescind (under the Town & Country Planning Act 1932, as amended, §2(3) of the TCP (Interim Development) Act 1943), a forty-year old permission for a local mining operation. In *Calder Gravel Ltd v. Kirklees Metropolitan Borough Council*, [1989] 60 P. & C.R. 322, the Council's challenge to stop the mining in 1984 was unsuccessful.

In 1946, Calder's predecessor had its mining application approved by the Borough's resolution. Apparently, it was done without a written record, at least, none that could be found. For forty years, all concerned had proceeded on the basis that a valid permission existed. In 1984, the Council contended that since there was no actual document granting permission for the operation, and under the TCPA, as amended, no valid permission could have been granted. In response, Calder then submitted formal application which was denied by the Council.

The Chancery Division heard the matter and ruled in favour of Calder to continue mining. The Court held that "a presumption of regularity arose in favour of Calder from the long treatment of the case as being one in which there was permission." The Council was estopped by its forty-year conduct of permission from denying the existence of such a planning permission.

(iii) Mining Pit Resumption Denial Reversed- unaffected by a change of use



The Durham County Council (England) appealed an unfavorable decision to them under the Town & Country Planning Act (1971), which allowed Tarmac Roadstone Holdings Ltd. to resume excavation at its former sand and gravel pits at Ferryhill. (*Durham County Council v. Sec. State for Environment and Tarmac Roadstone Holdings Ltd.*, [1989] T. & C.P. [1990] C.O.D. 209).

The Council had alleged a breach of planning control under the Act by unauthorized mining of sand and sought enforcement for reclamation of mined land to its former condition.

Tarmac had mined sand and gravel on its Ferryhill property until 1956 and then stopped mining. In 1957, upon discontinuance of mining, a change of use was granted by the Council for the disused sand pits for household refuse burial. This change was unknown to Tarmac. In 1982, Tarmac applied for renewal of its Ferryhill sand and gravel operation on an area which included the refuse disposal. Its application was denied, but Tarmac, relying on its former 1947 permission, resumed operations. The Council then served its enforcement notice of unauthorized mining.

The Secretary of State, on review, stated that the change of use granted by the Council in 1957 had not extinguished Tarmac's 1947 permission to mine sand and gravel. The Council appealed that decision.

The Court of Appeal agreed finding that former rights are only extinguished when they are inconsistent with the new use. Since further **mining of sand and gravel was compatible with refuse burial in the mined out pits**, the Council's appeal was dismissed. (emphasis added)

(iv) English Quarrier's "Existing Rights" Claim Fails For Permitting.

East Midlands Quarries Ltd and the owners of a limestone property at Banbury, Oxfordshire County, England, applied to the County Council for permission to quarry stone on an 82-acre tract. The basis for their claim to 'existing rights' to mining was a grant of permission by the former Banbury Rural District Council in October 1947 to quarry the limestone. The permission had several conditions attached, one of which stipulated that: (i) access to the site would be by a designated road, and (ii) that road was to be improved to the reasonable satisfaction of the County Surveyor. It should be noted that the designated access road and the land needed for its widening were neither within the application, nor owned by the applicant. In 1949 the Oxfordshire County Council granted further permission for buildings, plant and equipment for the quarry operation. The access road was never widened, nor was any quarrying done pursuant to the Council's permission (with the exception of one day in 1979 when 20 cu.yds. were removed).

In 1987, the owners wishing to lease to East Midlands, claimed that the permission granted in 1947 "was a valid subsisting permission (existing right) that continued to inure to the benefit of the land." The Council rejected the claim. The Court in *Mouchell Superannuated Fund Trustees and East Midlands Quarries Ltd. v. Oxfordshire County*



*Council*, CA[1991] 1 PLR 97, upheld the Council, but on the ground that the first part of the condition designating an access road was unenforceable, and the second part was unreasonable, *ultra vires*, and void. The court found that "since without access the quarry could not function at all, the condition, . . . was not excisable from the permission " was also void.

## 5.4 United States - In General

The U.S. Congress responded to the 'green' movement of the sixties by passage of the National Environmental Policy Act of 1969 (NEPA), effective January 1, 1970, along with the subsequent plethora of environmental laws created for industry, including mining. NEPA gave birth and impetus to a flood of federal acts in the subsequent two decades. The more important ones that affect mining are those dealing with dust, air quality, water quality, pollution, stormwater runoff, safe drinking water, noise abatement, solid and hazardous wastes and their disposal, wetlands preservation, mined land reclamation, mine and mill site and tailings clean up, protection and preservation of fish and wildlife, endangered species, wildlife habitats, increased restrictions on mineral prospecting and mining on national forests and other public lands, mine safety and occupational health, and penalties for violations.

### 5.4.1 The National Environmental Protection Act 1969

The heart of NEPA are Sections 101 and 102, called the procedural duties of NEPA, outline and govern its application. It is noted that NEPA's objective is "...to create and maintain conditions under which man and nature can exist in productive harmony ".

NEPA, §101, states the environmental policies, and charges the federal government with the responsibility of the environmental concerns; and states the purposes, viz. :

- (1) act as trustee of the environment and resources for future generations;
- (2) assurance of safe, healthful, productive, aesthetic surroundings;
- (3) attain the greatest beneficial use of nature without degradation or risk to health or safety;
- (4) preserve cultural and natural aspects;
- (5) achieve a balance between people and resource use permitting a high standard of living; and
- (6) maintain renewable resources and maximize recycling of depletable resources.

NEPA, § 102 authorizes the policy-making and promulgation of rules and regulations laws by federal agencies to carry out the purposes of the Act; and charges the executive branch's agencies with certain specified duties to carry out the purposes and objectives of the environmental act. Some of the specifics are:

- (1) Coordination or interdisciplinary action of agencies for all federal projects, plans, etc ;
- (2) authorization of the Council of Environmental Quality (CEQ) to coordinate and approve all federal development projects;



- (3) establishing the procedure for all federal planning by considering and reporting:
- (i) an environmental impact statement (EIS);
  - (ii) any unavoidable adverse environmental effects, if project is implemented;
  - (iii) alternative proposals;
  - (iv) short term use vs. long term impact on environment;
  - (v) any irreversible and irretrievable detriment to the environment in case of implementation.

40 C.F.R. §1502.1 et seq. are the CEQ's regulations for the EIS and include, purpose, format, and alternatives to the proposed action (§ 1502.14, which has been called the heart of the EIS).

§102 further outlines utopian ideals for international and world wide concern and coordination and cooperation; advisements and cooperation with the states for environmental quality; collection and use of ecological information in planning and development of natural resources; and to assist and coordinate actions with the CEQ.

Through NEPA, all federal agencies are required to take into consideration the adverse environmental effects of their policies, plans, programs and projects, sometimes referred to as "the four p's." Any of those 'p's' may require an EIS. The NEPA process requires environmental considerations be integrated into planning.

Agency actions can be divided into three categories, viz., (1) "categorical exclusions" which are those that clearly do not have any significant effects on the environment, and do not require an EIS; (2) planning that clearly will have a significant effect on the environment and will require an EIS; (3) planning that is unclear whether there will be any significant impact on the environment. For this category, the proper procedure is to first undertake an Environmental Assessment (EA).

The result of the EA will be whether an EIS is required for further agency action or whether it may issue a finding of no significant impact ( a FONSI). Once an agency determines through an EA that a proposal will significantly affect the environment, it must prepare an EIS. The next step is called "scoping", which determines the scope of issues to be addressed. Scoping includes : (1) determination of issues; (2) notification of involved agencies, et al; (3) in depth , or significant, issues; and (4) elimination of insignificant issues . The EIS preparation is designed to be: (1) a tool for decision making; (2) analytical and concise; (3) 150 pages for "ordinary", and 200 pages for "complex" studies. The lead agency, or most involved one, prepares the EIS.

#### 5.4.2 Other Environmental Regulations Affecting Mining

The NEPA subsequently produced a series of regulations for all areas of the ecology. However, all federal statutes and acts dealing with minerals and mining are effected by NEPA through rules and regulations. The more pertinent ones to mining, to name a few, were: (1) the Surface Mining Control and Reclamation Act (SMCRA) ; (2) amendments and rules to the General Mining Law 1872; (3) Resource Conservation and Recovery Act (1988) (RCRA); (4) Materials Act 1947; (5) Multiple Use Mining Act of



1955; (6) The Indian Mineral Development Act of 1982; (7) the Clean Air Act; (8) the Clean Water Act; (9) the Strategic and Critical Minerals Act of 1990; (10) the National Pollutant Discharge Elimination System (NPDES); and, (11) the Mine Safety and Health Act, and (12) The Endangered Species Act.

Innumerable other federal acts and agency rules are effected in lesser ways for minerals, e.g., amendments to the Stock Raising Homestead Act (1916/1988) to prohibit any person, other than the surface owner, from entering stock raising homestead lands patented under the Act to prospect for minerals or to locate a claim under the Mining Law of 1872 without first filing a notice of intent to locate a claim and providing notice to the surface owner; require payment of fees to the surface owner, posting of a bond, and filing a surface reclamation plan; protection for damage to crops and other surface features.

#### 5.4.3 Problem Areas for Surface Mining

Environmental regulation particularly affecting surface mining are presented in the following order: (1) mineral land takings by environmental regulation; (2) wetland limitations; (3) planning law or zoning that placed limitations of mining property expansions; (4) limitations of “grandfathering” acts for active mining operations that existed before zoning; and (5) intensified reclamation of mining properties.

#### 5.4.4 Mineral Land Takings By Environmental Regulation

After 1970, with the rapid production of environmental laws, regulations and controls, industry in the US found that such laws involved a “command and control” system which encroached on previously held areas of private ownership and self-control of individual property rights. The new system proscribed environmentally harmful acts and effects requiring specific control measures to produce governmentally-desired, environmentally beneficial results for the general welfare. Where environmental regulations ran afoul of individual property rights, the U.S. courts have, at times, upheld the regulations under the “police powers” reserved to all levels of government in the name of the public welfare and best interests. In the alternative in upholding the law, courts have at times held that an injustice had been worked on the property owner by the environmental or zoning regulation. Such an injustice has been held to be ‘a taking’ of private property, that is, an exercise of the governmental prerogative of eminent domain for which the property owner must receive just compensation.

In the past, on occasion, where a charge of government expropriation (a taking) was made by a property owner, or by the owner of a business operation, just compensation from the government was demanded for the value of the property and/or land. If the government could prove that the property or operation upon it was a nuisance, it was well-established in law that no compensation need be paid. Such public nuisance case law precedent was found in *Mugler v. Kansas*, 123 U.S. 623 (1887), for a brewery that had been outlawed by a prohibition act making the manufacture of beer a public nuisance. Public nuisances went uncompensated when taken by regulation. This doctrine



was strengthened in the later case of *Hadacheck v. Sebastian*, 260 U.S. 393 (1922) where the U.S. Supreme Court upheld a city (Los Angeles) ordinance that prohibited the manufacturing of bricks and causing smoke and fumes in a residential neighbourhood. (Note: *Hadacheck* established that he purchased his land for brick-making when it was well outside the city limits and not near any residential area; that he had no knowledge that his land would ever be annexed by the city.)

The review of a few prominent and landmark 'takings' cases in the U.S. courts is made because they were caused by environmental regulations controlling and seriously encroaching on the rights for surface mining.

The power of the federal government to take private land for public use, known as the power of *eminent domain*, is derived from the Fifth Amendment of the United States Constitution, which states in pertinent part, "...nor shall private property be taken for public use without just compensation." This is not an implied power to take, provided it pays, but rather, it is a restriction which applies only if, through some other constitutional provision, the substantive power to take is independently granted. The Fifth Amendment restraint on taking private property applies to the states through the Fourteenth Amendment's Due Process clause.

As stated by Thomas J. Schoenbaum, "Environmental land use regulations are particularly subject to attack as a taking." (op.cit.) Since its inception and codification, the National Environmental Policy Act of 1969 (NEPA) has charged federal administrative agencies with the duty of taking into account any adverse environmental effects of their programs and decision-making. As a consequence of agencies' duties to comply with NEPA, their rules occasionally conflict with or prevent mineral landowners from certain formerly allowed uses that now are thought to adversely effect the environmental quality for the overall welfare and development of man. Environmental regulatory preclusion of private mineral land uses may serve as grounds for the landowner to allege a taking of his property. One of the more sensitive areas of environmental regulation affecting surface mining has been in the area of protecting wetlands. This area has produced a number of takings cases brought by mining companies against the government.

A taking has occurred when the entity clothed with the power of eminent domain substantially deprives the owner of the use and enjoyment of his property and, "Property is deemed taken ... when it is totally destroyed or rendered valueless, or when it is damaged by a public use in connection with an actual taking by the exercise of *eminent domain*, or when there is interference with the use of the property to the owner's prejudice with resulting diminution in value thereof." (Black, op.cit.) The "taking" is without the owner's consent and may be for a "public use" only. A use is held to be "public" if it furthers health, welfare, safety, moral, social, economic, political or aesthetic ends, and thought to be in the public interest. The meaning of 'public use' is flexible and there has been much disagreement as to its meaning by the courts. [26 Am Jur 2d, 1965.] Government action



that does not physically invade a property, but otherwise deprives the owner of all economically viable use may also be a taking. When a taking is alleged by the land owner through litigation, the crucial issue for the courts is whether the government action is a 'taking' requiring just compensation, or merely a regulation under the police power not requiring compensation. Environmental regulatory takings do not physically invade or possess a landowner's property, but may severely deprive the owner of its intended use, thus limiting its value to the owner. As Chief Justice Holmes said in *Pennsylvania Coal v. Mahon*, 260 U.S. 393, 415-416 (1922) "...if a regulation goes too far it will be recognized as a taking." The judicial system may review challenged agency final actions to assure that the claimed compliance with NEPA is authorized and reasonable, and also determine whether a taking has occurred. (Aston, 1992a).

(i) Protectable Property Interests

A threshold matter in a taking claim is whether the claimant has a protectable property interest in the allegedly taken property. The U.S. Supreme Court stated in *Keystone Bituminous Coal Association v. DeBenedictis*, 107 S.Ct. 1232 (1987) at 1242, that two factors have become an integral part of their takings analysis: "We have held that land use regulation can effect a taking if it 'does not substantially advance legitimate state interests, ... or denies an owner economically viable use of his land.'" The Supreme Court quoting from its decision in *Kaiser Aetna v. U.S.*, 444 U.S. 164, 175 (1979), "... this court has generally 'been unable to develop any "set formula" for determining when 'justice and fairness' require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons." Rather, it examined the "taking question by engaging in essentially ad hoc, factual inquiries that have identified several factors such as the economic impact of the regulation, its interference with reasonable investment backed expectation, and the character of the government action- that have particular significance." Thus, there is no established formula for determining whether a taking has occurred. More recently, precedential case guidelines have been established for the courts' fact finding in *Whitney Benefits, Inc. and Peter Kiewit Son's Co. v. U.S.*, 18 Cl. Ct. 394 (1989): (1) the character of the government action and whether it substantially advances legitimate public interests; (2) the economic impact on the landowner; and (3) the extent to which the regulation has interfered with the reasonably investment-backed expectations. It is noted that the same guidelines were used to establish values for takings of mineral property in *Florida Rock Inds. v. U.S.*, 21 Cl.Ct. 161 (1990) and for development property in *Loveladies Harbor, Inc. v. U.S.*, 15 Cl.Ct. 391 (1990).

(ii) Although the well-known *Keystone Bituminous Coal* case applied to underground coal mining, neither of which are a subject of this work, the legal principles involved in an alleged taking of minerals are important to this study. Environmental regulation for the safety and welfare of the general public lay at the heart of the *Keystone* case. The statute at issue and complained of as taking was the Pennsylvania Subsidence Act, Penn. Stat.



Ann., Tit. 52, § 1406.1 et seq. (Purdon Supp. 1986) The final case decision resulted in an unstated finding that mining in that instance constituted a public nuisance to the detriment of the public welfare, health and safety, and the environmental regulations were upheld. The mining company's allegation that a taking of private property, i.e., mineable coal reserves in-place, was unjustified and therefore, uncompensable. The government exercise of a taking of private property was justified on the basis of the police power and not eminent domain.

A prime case example of exercise of state police power justifying environmental mining regulation is *Keystone Bituminous Coal Association v. De Benedictis*, 107 S.Ct. 1232 (1987).

During, and prior to, the era of *Pennsylvania Coal Co. v. Mahon* (1922), the legal doctrine of *caveat emptor* (let the doer beware) was much in force. Along with that caveat the related doctrine "of coming to the nuisance" served to some degree to protect mining against claims that now find ready disfavor with the public and environmental regulations. Although a pre-existing activity creating a nuisance was not a defense, prior knowledge of the protested nuisance before coming to it was mitigating if the activity or use was reasonable. A minority of courts denied recovery altogether when plaintiff came to the nuisance with knowledge; see *East St. John's Shingle Co. v. Portland*, 246 P.2d 554 (Or. 1952); and, where the use offended no one until plaintiff moved in, the use was reasonable; see *Spur Inds. v. Del E. Webb Development Co.*, 494 P.2d 700 (1972).

Those doctrines have gradually fallen in strength and use and are no longer recognized in argument against public nuisances and the growth of environmental concerns. The Kohler Act of 1921 P.L. 1198, 52 Penn. Stat. Ann. 661 at issue in *Pennsylvania Coal* and the Subsidence Act (op. cit.) of *Keystone Bituminous Coal* were essentially the same law in purpose and coverage. In 1921, no liability for the coal miners for subsidence of, or damage to, surface structures was found by the U.S. Supreme Court. The decision was based essentially on contract law where the mining companies held waivers for liability of damages from the surface property owners. The contracts were upheld by the court.

The time element of a half-century between the two cases involving essentially the same law and same liability and contract issues, coupled with recent intensive growth of environmental concerns, made the difference in reversing the decision of the earlier *Pennsylvania Coal*. Although the same waiver of liability contracts were in force for *Keystone* as in the earlier case, the court would no longer honor them as valid as they were found to be contrary to the best interests of the public's welfare and safety. Subsidence by mining was a nuisance. Nuisance claims against the mining industry are now far reaching, effective and prevailing.

In *Keystone*, the coal companies alleged a taking of coal under Pennsylvania's Subsidence Act that required the operators to leave in place some 27 million tons (24.489M



metric tons) of mineable coal to prevent subsidence of the surface. The coal companies argued that they were relieved of a duty to support the surface in that they had obtained waivers for damage to the surface estates' structures and land.

Analysis of noxious and public nuisance uses of coal mining land

Where the alleged taking involves mineral land use, or its intended use by the owner is to mine, that adversely effects, or would effect, the environment, the government may possibly show that it is a public nuisance or noxious use, and therefore, it is detrimental to the public health and welfare. As such, there is no taking and consequently, no compensation is due the landowner.

The government argued that the Subsidence Act was a bona fide exercise of state powers and the Act was "a legitimate means of 'protecting the environment of the Commonwealth, its economic future, and its well-being.' " (*Keystone* at 1239). The *Keystone* Court noted, too, that § 2 of the Subsidence Act stated it was an exercise as a police power for the protection and general welfare of the public, and for conservation of surface land areas. ( *id.* at 1242.)

The noxious use argument for mining was used by the government. A 'noxious use' has been defined as "that which causes, or tends to cause, injury, especially to health or morals.: [28A, Words and Phrases at 639 citing *Moubray v. G & M Improvement Co.*, 178 A.D.737; 165 N.Y.S.842, 843 (1917)]. Noxious use as applied in *Keystone* to the coal mining methods employed in the area which caused subsidence damage to the surface, was succinctly stated by Justice Harlan in *Mugler v. Kansas*, 123 U.S. 623, 668-669 (1887) :

“ \*\*\* a prohibition simply upon the use of property for purposes that are declared by valid legislation, to be injurious to the health, morals, or safety of the community cannot, in any just sense, be deemed a taking or appropriation of property... . The power which the States have of prohibiting such use by individuals of their property as will be prejudicial to the health, morals, or safety of the public, is not- and, consistently with the existence and safety of organized society cannot be--burdened with the condition that the State must compensate such individual owners for pecuniary losses they may sustain, by reason of their not being permitted, by noxious use of their property, to inflict injury upon the community. “

The *Keystone* Court strengthened the noxious use of land by the coal companies throughout their findings and determination , e.g.:

(1)"The court's hesitance to find a taking when the state merely restrains uses of property that are tantamount to public nuisance..." ; *Keystone* at 1245

(2)"Under our system of government, one of the state's primary ways of preserving the public weal is restricting the uses individuals can make of their property."; *id* at 1245

(3)"Long ago it was recognized that 'all property in this country is held under the implied obligation that the owner's use of it shall not be injurious to the community' ", (*id* at 1246 quoting *Mugler v. Kansas*, at 655);

(4) "The Takings Clause did not transform that principle to one that requires compensation whenever the State asserts it power to enforce it. *id.* at 1245, quoting *Mugler* at 664 ;

(5) "As the cases above demonstrate, the public interest in preventing activities similar to public nuisances is a substantial one, which in many instances has not required



compensation." id. p. 1246; also the Court in footnote. 22, p.1246 noted: Courts have consistently held that a State need not provide compensation when it diminishes or destroys the value of property by stopping illegal activity or abating a public nuisance.

(6)"The use to which the mine operators wish to put the support estate is forbidden. *Mugler* at 716." id. at 1240.

Though the *Keystone* Court did not label the coal mining operations as a nuisance or noxious use of land, per se, in its announced decision holdings, such a finding was evident as the actual basis for its determination that (1) there was public purpose for the Subsidence Act; (2) public interests in the legislation were adequate to justify the impact of the Act on the coal companies' contracts with the surface owners; and (3) the Act did not work an unconstitutional taking on its face.

#### Keystone Property Value Considerations

In *Keystone* the U.S. Supreme Court, referring to its decision in *Agin v. City of Tiburon*, 447 U.S. 255 (1980), stated " \*\*\* the determination that the government action constitutes a taking, is, in essence, a determination that the public at large, rather than the single owner, must bear the burden of an exercise of state power in the public interest" and we recognized that this question "necessarily requires a weighing of private and public interests."

If the benefit to the public of the regulation is small and the detriment to the landowner large, the regulation will not be upheld. Contra, if the regulation benefits the public, then a value must be placed on the land taken to compensate the owner.

The courts have determined that it is insufficient for the claimant to show that there has been merely a diminution in value of the property by reason of the alleged taking. (*Loveladies Harbor*, id. at 392.) The claimant bears the burden of proving that he has been denied of all viable use of the property and that it is virtually worthless. Property value determination tests have been developed by the courts as to whether the landowner can still derive a reasonable return on his investment.

The Court in *Keystone* did not have to fix a value on the coal left in place since no taking was found. However, the Court found the record lacked evidence that the coal companies could not continue mining the remaining coal, leaving the required coal support, so as to interfere with their investment-backed expectations.

(iii) Another prime example of a taking of mineral land by environmental regulation is *Whitney Benefits, Inc. and P. Kiewit Sons' Co. v. United States*, 18 Cl.Ct. 394 (1989).

In another post-*Keystone* mineral land taking case, *Whitney Benefits*, a regulatory taking of an unmined mineral deposit was found by virtue of a subsequent Congressional enactment and denial of a surface mining permit. Environmental restrictions in the legislative act were the basis for the prohibition of mining.

In 1983 property owner and lessor, Whitney, and mine operator-lessee Kiewit, jointly filed an action seeking just compensation for a taking of their coal-bearing property in the Powder River Basin of Wyoming as a result of the Surface Mining Control and



Reclamation Act's (SMCRA) prohibition of surface mining on the alluvial floor of the Basin. The Claims Court dismissed the claim because SMCRA provided for an exchange mechanism as a "method for ascertaining and paying just compensation, thus, no taking had occurred or accrued until such mechanism had failed to provide just compensation." (*Whitney Benefits*, op. cit. at 398). The Court of Appeal stated that, "...the mere existence of an exchange provision, a remedy available at plaintiffs' option, did not determine whether or not the statute had effected a taking." (id. at 398). The decision was reversed on appeal and remanded for trial. In the interim, Whitney and Kiewit (PKS) had attempted an "exchange" with the Bureau of Land Management (BLM). Before the appeal decision, Whitney had filed an action to compel an "exchange" and the federal District Court of Wyoming found that there had been unreasonable delay and issued an order compelling BLM to offer properties for an "exchange" of equal value. On further appeal, the Court stated that the exchange mechanism is one which may be negotiated, or may be rejected by the claimants and pursue a money award under the Tucker Act. (id. at 399). On the remanded trial, the facts of the case concerned Whitney Benefits' land of 1327 acres which were irrigated and subirrigated by the Tongue River alluvial valley floor. The land was leased to PKS in 1974, and advanced royalties were paid to Whitney. PKS expended exploration costs of \$1 million in 1976, and PKS filed a permit application with the Wyoming Department of Environmental Quality (DEQ).

A year later, SMCRA was enacted. Part of the SMCRA guidelines provided that no permit or application shall be approved if it should "interrupt, discontinue or preclude farming on alluvial valley floors that are irrigated or subirrigated ..." Thus, Whitney's right to mine the coal on its property was invalidated by the enacted legislation of SMCRA and was the basis for the alleged taking in 1983.

In 1981, PKS had requested an exchange for federal lands to the BLM. BLM offered a coal tract, Ash Creek, and PKS spent \$130,000 on exploration costs on it. The BLM also offered the Hidden Water tract, which PKS refused as it had mined it in the late 40's to early 50's and was not interested in the remaining coal. PKS and Whitney proceeded with their 1983 claim under the Tucker Act for a 5th Amendment regulatory taking.

The Court's process for determining if a regulatory restriction resulted in a taking, was to consider three factors: (1) the economic impact of the restriction on the claimants' property; (2) the restriction's interference with investment-backed expectations; and (3) the character of the government's action. With regard to the first factor, the Court found that there was a market for Whitney coal; that Whitney coal was economically and technologically mineable, and that it was valuable; and that the enactment of SMCRA had a "devastating economic impact on the property." As to second factor, the Court found that investors could reasonably expect the returns on investments as projected. In place assigned reserves were valued at \$1.01/ton, and residual reserves at \$.20/ton. The Court



found for the third factor that there were no economically viable alternative uses for the property.

The government argued that an exercise of police power, in carrying out government regulations for the health and welfare of the public can never result in a taking. The Court responded that in relying on modern Supreme Court cases, "taking law" had progressed much, and quoting from the trial court in *Florida Rock* that "it is no longer asserted that a regulation, just by its nature of being a regulation, cannot be an exercise of eminent domain." The Court further stated that, "...the substantial public interest at stake does not outweigh the private interest so that plaintiffs must bear the full burden imposed by the government action." Upon finding that the enactment of SMCRA took Whitney's property, the Court had to establish the date of the taking, and the value for just compensation. The Court held that the effective date of the taking was the effective date of SMCRA, (August 3, 1977). The value of the property was not to be the value to the owner for his particular purposes; i.e., not for opportunities the owner loses (lost profits).

After extensive market and mining cost investigations, the Court established a final sum of \$60,296,000 for the total 1977 value of recoverable Whitney Coal for an assumed annual production rate of 2.5 million tons and a cost of \$2 million for backfilling. Interest was payable to Whitney from Aug. 3, 1977 to date of payment. The taking sum was established as what a willing purchaser would have paid Whitney as a willing seller, to mine the Whitney Coal after calculating all mining related costs.

On remand of *Whitney Benefits*, the U.S. Claims Court held that: (1) the enactment of SMCRA totally eliminated economic value of plaintiffs' coal and constituted a taking under the Fifth Amendment; (2) the taking occurred at the time SMCRA became effective; (3) the valuation method incorporating discounted cash flow approach offered reliable method for determining the fair market value of the coal on the date of the taking; and (4) the plaintiffs were entitled to pre-judgment interest.

The *Whitney Benefits* decision was later upheld on appeal.

#### 5.4.5 Wetlands Limitations

Following are litigated cases in which wetlands and zoning regulations came into consideration for mineral related and surface mining properties.

##### 5.4.5.1 Florida Rock Inds. v. U.S., 21 Cl. Ct. 161 (1990) - Mining Not a Nuisance

In *Florida Rock*, the U.S. Army Corps of Engineers (Corps) denied a Section 404 permit to Florida Rock to operate a limestone quarry for crushed stone in Dade County, Florida. Florida Rock had purchased its 1560-acre tract in 1972 solely for mining the limestone to supply the building construction boom of the area. It began a dragline operation in 1978 during an upsurge in the market. In December 1977, just prior to start of its operations in 1978, the Clean Water Act (CWA) had been amended to include "wetlands" giving the Corps jurisdiction in addition to its regular "navigable waters". Public Law 95-217, 91 Stat.1567 (Dec. 27, 1977) amended the Clean Water Act, 33 USC



§1251(a) (1988) and expanded the jurisdiction of the Corps to regulate activity affecting navigable waters. By the same law, §404 established a mechanism for applying for permits to discharge dredged or fill material into waters covered by the CWA, 33 USC 1344 (1988).

The Corps issued a cease and desist order to Florida Rock and the operator complied, restoring the surface to its pre-existing condition. The Corps advised that a § 404 permit was required before operations could resume. The Corps also advised that a permit would only cover a 3-year period and the whole tract could not be permitted at once. Florida Rock applied for the maximum area allowed, 98-acres.

The §404 permit regulated discharged dredge and fill material into waters controlled under the CWA. Florida Rock applied for the permit. After two years of waiting, the Corps denied the application. Florida Rock filed a suit against the United States seeking compensation for a regulatory taking of their land. The 1985 Claims Court decision in favour of Florida Rock was appealed to the U.S. Federal Circuit Court, which affirmed that only the 98-acre tract could be considered as a taking, not the entire acreage, and remanded the case to the U.S. Claims Court to re-examine.

The issues for the Claims Court on re-examination were: (1) did Plaintiff / Florida Rock have a legitimate entitlement to the proposed use of its property ?, and (2) if so, whether the Corps' denial of a § 404 permit denied the Plaintiff the economically viable use of its land so as to constitute a taking under the 5th Amendment; and (3) if so, the amount of compensation to which the plaintiff is entitled. (op.cit. at 165)

If a taking was found, the proper amount of compensation as damages would have to be measured by the difference in the fair market values before and after the alleged taking; whether there had been economic impact on Florida Rock, and the severity of it, would be considered in the damage determination.

#### Analysis of noxious and public nuisance use of limestone mining land

The government argued that even if Florida Rock successfully proved that the permit denied resulted in a loss of all economic value of its property, the denial could not be viewed as a "taking" because the Plaintiff was not legitimately entitled to use the land for quarrying. This argument was based on former court decisions that quarrying in the present case was a "noxious use" and a "public nuisance" (58, : "Nuisances" Sect. 7. "Public nuisance" has been defined as the doing of or failure to do something that injuriously affects safety, health, or morals of the public \*\*\*." Whatever tends to endanger life or generate disease, and affects the health of the community, etc. \*\*\* is a public nuisance. [State v. Turner, 198 SC 487 (1942), 18 S.E.2d 372] and that " \*\*\* the government need not compensate individual owners for pecuniary losses they may sustain, by reason of their not being permitted, by a noxious use of their property, to inflict injury upon the community.' ") (Florida Rock, id. at 166, quoting Keystone, id. at 1244, relying on Mugler, id. 668-669).



The Claims Court stated that the government's position on the law was accurate, but added that it did not apply in this case. Florida Rock had been characterized as a moderate polluter, but certainly not to the extent of placing toxic wastes in the drinking water. The Court noted that although the government's contention that the proposed activities of Florida Rock posed a risk of contamination of the sole aquifer furnishing drinking water for Dade County/Miami, it did not contend that the limestone mining would actually contaminate the aquifer, and it had produced no evidence to quantify that risk. The Court had observed that there were many operational limestone quarries and pits in the area close to the Plaintiff's property. The Claims Court stated that, "Rock mining of the type planned for the property never has been considered a nuisance"; and such a fact "belies any claim that a nuisance is involved here." (id. at 167). In addition it noted, "If the Plaintiff had begun mining before the CWA amendments, it would have been 'grandfathered in' and no federal permit would have been required." It was clear to the Court that the "nuisance exception", which required no compensation for a taking where a noxious use or nuisance is involved, did not apply in this case. In fact, the Court observed that desirable reclamation uses had been made of the mined-out land in that area. Some former pits were turned into small lakes and overburden that had been removed had been placed to raise the ground level above the high-water level affording building sites for residential development. It was further noted that a zone of development followed depleted mining operations of former years in the same area. The Court further stated that, "here, it is clear that the nuisance exception to the Fifth Amendment's requirement of just compensation is inappropriate. Rock mining of the type at issue here has never been considered a nuisance in this area. ...If the government's use of this argument were upheld, the concept of a regulatory taking would be virtually meaningless and severely limit the protection of the 5th Amendment." (id. at 167).

#### Value Determination For The Property Taking

The measure of economic impact on the claimant was determined by the 'before and after permit denial' fair markets values of the property, and whether there existed any other uses for the property.

After examining the appraisals of both parties and hearing their property value arguments and evidence, the Court was convinced that knowledge of the regulatory wetlands restrictions and controls on the property severely limited its marketability among knowledgeable investors and buyers, and the Court accepted the Plaintiff's evaluation of \$500/acre. The pre-denial fair market value of the land was established at \$10,500/acre, and limestone mining was found to be the highest and best use for the property.

In concluding its opinion, the Court stated that for a Plaintiff to prevail in a regulatory takings claim, the comparison of the before and after fair market values must indicate more than a diminution of value of the property. Otherwise, the government could not continue to pay for every property that was diminished to some extent whenever



affected by a law. However, in this case, the diminution of value was not slight, but substantial, being diminished by 95% of its pre-permit denial value. Still, that was insufficient, as even "more than a substantial reduction of value is required for concluding that a 'taking' has occurred. The owner's opportunity to recoup its investment, subject to the regulation, cannot be ignored." (id. at 176). The fact that Florida Rock had to purchase other property to meet its mining needs illustrated the extent of the economic impact on the company.

In summation, the Court quoted the US Supreme Court, "When a regulation goes too far, the Fifth Amendment requires compensation." (*Pennsylvania Coal*, 260 U.S. at 413). The Court's decision in *Florida Rock* was: (1) the proposed use of the property for limestone mining would not have constituted a nuisance; and (2) the Government failed to establish that the investment market for property following a denial of permit was comprised of investors with knowledge of restrictions on land; and (3) denial of permit constituted a taking for which landowner was entitled to damages in amount of full fair market value of property at the time of taking. The amount of damages was fixed at \$1,029,000 plus interest from the date of the taking. The permit denial date was the date of taking.

(ii) U.S. Army Corps of Engineers' § 404 Permit

In *Borough of Ridgefield v. U.S. Army C.O.E.*, No. 89-3180, slip op. (D.N.J. July 2, 1990): The Corps considered local zoning regulations in its denial. The court held that the Corps may properly do so in determining whether practicable non-wetland alternatives were available.

(iii) Wetland -Zoning Permittal Denial-Alleged Taking

In *Cioffoletti v. Planning & Zoning Commission*, 552 A.2d 796 (Ct. 1989), Cioffoletti owned and operated a 23-acre sand and gravel pit in Ridgefield, Conn. and applied for pit expansion within and adjacent to existing wetlands. The Planning Commission referred the operator's application to the local soil and water conservation district, the US Department of Agriculture's Soil Conservation Service and the State EPA, all of which approved it. However, at public hearings, an opponent expert testified to adverse impact on the wetlands and postulated the inevitable, ubiquitous clincher question that successfully defeats a mining permit, a point that the government agencies had failed to address: the possibility of damage to the groundwater supply in event of a fuel spill.

The operator was granted a special use permit with restrictions and a \$100,000 bond. Cioffoletti sued Ridgefield attempting to show that the detrimental economic effect of the restrictions effected a "taking" of his property without just compensation. The trial court rejected his arguments. On appeal, the Supreme Court of Connecticut found: (1) the exclusion of the operator's economic effect evidence limited the court's ability to rule on the property-taking issue, and ordered that the taking-claim be heard; (2) the Commission's right to regulate mining and excavation in areas adjacent to wetlands under the Inland



Wetlands Act was proper; (3) due process was met as claimant was given a fair hearing before the Commission; and (4) the Commission had a right to require a performance bond.

(iv) Wetlands Mining Permit Denial

In *Florida Dept. of Environmental Regulation (DER) v. Goldring*, 477 So.2d 532 (1985), Goldring appealed an order of DER denying his application for a permit to mine limestone on a site in Dade County, Florida. Goldring challenged DER's jurisdiction.

At the DER permit hearing, mining permission approval hinged on whether the presence of saw grass, a fresh water aquatic plant on Goldring's property, could establish his land as being within DER's jurisdiction within the landward or upland extent of saltwater Florida Bay. DER claimed jurisdiction on the presence of the saw grass, coupled with the flow of fresh water across his property to the state waters of Florida Bay. The Court of Appeals found that the presence of aquatic vegetation, alone, cannot establish an exchange of waters. However, the Florida Supreme Court disagreed.

The Florida Supreme Court upheld DER holding that DER's dredge and fill jurisdiction depended on the predominance of listed aquatic vegetation on the property along with an exchange of waters, either one-way or two-way. Thus, the permit for mining limestone was denied on the basis of harm to aquatic vegetation.

#### 5.4.6 Planning Law or Zoning Regulation Limitations

Placing Limitations on Mining Property and Pit Expansions - Land use planning for mineral properties - zoning regulation

Mineral land use in most localities, other than some federal/public lands, is dependent, as in England too, upon local planning or zoning. Where true, mine permitting by the appropriate agency cannot be obtained until local zoning approval for a mining operation has been obtained (as in *Barrett Paving*, infra at p.135). While preparing for public hearings on local zoning, it is advisable to proceed with mining plans under tentative approval by the mine permitting agency. Environmental concerns are treated in the agency process which should alleviate many of the concerns of the local citizens at the public zoning hearing. The ubiquitous NIMBY syndrome (Not In My Backyard) will be encountered at the zoning hearing. Well-prepared plans to cope with environmental issues are essential in assuring the citizenry that their backyard will not deteriorate because of the presence of a new mining operation, and that, on the contrary, benefits will be reaped. (See 5.4.5.1, Analysis of noxious and public nuisance use of limestone mining land, *Florida Rock*, supra, for support).

Oft-times, in spite of well-prepared information and environmentally-safe assurances for the public hearing of permitting approval of a surface mining operation, local hysteria of water pollution, et al, overcomes the public reaction leading to the denial of a mining permit. For a typical, but outstanding, case in point reviewed in *Pit & Quarry*,



the 1994 Ohio appeal of *Fulton Farms, Inc.* to obtain a conditional use permit for mining sand and gravel on its privately-owned lands is given in support.

NIMBY SYNDROME CONTINUES FOR OHIO S & G OPERATOR



Aston University

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its decision of denial was “arbitrary, capricious, unreasonable and unsupported by the preponderance of substantial, reliable and probative evidence on the whole record.”; (2) allowing hearsay (unsupported) evidence which was arbitrarily considered ; (3) the Elizabeth Township Zoning Resolution [21.08(4)(c)] was vague and unconstitutional ; and (4) the BZA usurped legislative power in zoning.

The Common Pleas Court of Miami County, Ohio, (General Division), affirmed the BZA’s denial of a conditional use on all charges. Fulton Farms appealed the trial court’s decision. Again, the decisions of the BZA and the trial court denying the conditional use of Fulton Farms’ land were upheld in September 1994 by the Court of Appeals for Miami County. The Court found the Board’s decision had not been arbitrary and that the regulation was not unconstitutionally vague.

“Not in my Backyard” for unjustified fears still prevails. (Aston, 1995 a, Pit & Quarry, April 1995)

Until very recently in the U.K., mining operations and mineral lands have very much been neglected as a planned land use category. Most often, no forethought has been given to it by planning authorities. As stated, minerals have to be mined where they are located. Valuable minerals have been lost where the surface had already been established and used for another use, as residential , or business. In the cases of minerals that can be won by a pumping process, e.g. hydrocarbons, sulphur, salt brines, et al, they may be recovered with proper caution against surface damage and subsidence. Simultaneously with pumping extraction, the surface area required is minimal and the surface may be used for other purposes.

For a supporting argument of minimising damage to the surface estate, a review of the Texas *Plainsman* case from the *Engineering & Mining Journal*, February 1995, follows. The main issue in *Plainsman* was whether the minerals found at a relatively shallow depth belonged to the surface or the mineral estate. However, prospective damage to the surface estate came to light and the mining method proposed was recovery by *in situ* solution of the uranium mineral deposit with recovery by pumping.

## **ASSAYS FROM THE LEGAL VEIN**

### **TEXAS SURFACE-DESTRUCTION TEST RE-SURFACES**

by R. Lee Aston, Attorney, Mining Engineer

“Consideration of the surface-destruction test in determining the ownership of shallow-occurring mineral deposits in Texas surfaced again in the appellate review of *Plainsman Trading Co. v. Crews*, 875 S.W.2d 416 (Tex.App.-San Antonio 1994). (See *Assays from the Legal Vein*, June 1993, E & MJ.)

In *Plainsman Trading I* (1992) a uranium deposit at a depth between 150 and 190-feet was decided to belong to the surface estate owner (Crews) and not the mineral estate owner. The decision was based under the maverick Texas case law of the “surface destruction” test. In that court-test, where ownership of the minerals “in and under the surface” have been severed from the surface estate and granted by deed to the mineral estate owner, any shallow-occurring mineral deposit that is exploitable by surface mining methods which would totally consume, deplete or destroy the surface, must belong to the surface estate owner and not the mineral estate owner. Thus, by Texas case law, the mineral estate had been lowered



#### 5.4.7 Mineral Land Planning

Virtually no forethought or foresight with regard to land use planning has been given in the past for the mining of minerals, that is, to set aside and reserve land areas that are known to contain certain valuable and unmined minerals. Great Britain gave notable early recognition to the subject when the Government published a memorandum entitled “Control of Mineral Workings in England and Wales (the “Green Book”) in 1951. The publication served as a guide to the planning control of mineral working and to indicate the broad lines of policy on the planning problems raised by mineral working. A revised edition was published in 1960. Since then, several Mineral Planning Guidance (MPG) papers have been published, each treating planning in more detail, and each increasingly recognising the need for giving more emphasis to reserving mineral bearing lands. (for further discussion on MPG’s see Ch.9 §3.2). Even with the advent of more strict land regulations, mining operations, whether existing before regulation or new, are still dealt with by the majority of local planning authorities on an *ad hoc* basis as they have been in the past. Forethought to reserving land areas for the mining, particularly of construction materials, e.g., sand and gravel or rock types suitable for aggregate manufacturing, should especially be given greater consideration in more densely populated areas to avoid future conflicts with other types of zoning, e.g. residential, recreational.

As an illustration, a survey by the Chief Planning Officers’ Society in November 1990 found that (on a 70% return) there exist 980 largely unworked, ‘ideal sites’ with consents for the extraction of a whole range of minerals (Hughes, 1992, p.256).

Mineral planning for construction minerals is necessary to a growing and expanding community and is given a proper place by the top British planning authorities. After all, it is the establishment of new businesses and industry that creates economic growth for a community to a greater degree than recreational facilities alone. “Although the whole world be a scenic park for enjoyment of nature and sport, it would only be a habitat for our animal friends without the income from industry for humans to enjoy the environmental beauty.” (Aston, 1992a)



So often recreational areas and parks are planned or located where construction and other minerals are found. Recreational areas can be located elsewhere, but minerals must be mined where they are found. Some resolution of the running conflict between park planning and mining interests has been made in British Columbia. (See Ch.7§4.3, British Columbia, *infra*). Further support is noted in the British Report, *Environmental Effects of Surface Mineral Workings* (HMSO, 1991, p.13) that “As good planners, the Planning Authorities should consider what they could do to protect the surface workings (of mines) from encroachment by sensitive land uses during its life”, i.e., to keep them apart..

The future planning of land use for mining of construction minerals in the U.S. was given an early start in 1981 in Sonoma County, California, by its Board of Supervisors. That county had the foresight in its planning to reserve some known terrace land along a local river for future mining of sand and gravel, thus enabling a future source for construction aggregates for the local area.

A case arising out of Sonoma County's planning for mining of construction materials occurred in *Sierra Club v. County of Sonoma*, 8 Cal. Rptr. 2d 473 (Cal. App. 1 Dist. 1992).

In 1981, Sonoma County adopted an Aggregate Resources Management Plan (ARMP), a long term plan for future gravel and hardrock mining within the county. Under the plan, managed resource lands available for future supplies of aggregate materials were specified. Lands designated for agriculture included those overlying designated mineral resource lands, and were to be preserved for their agricultural value and as groundwater recharge zones. An area of about 2,000 acres (809.9 ha) in the Russian River flood plain was designated as eligible for mining permits. The loss of agriculture lands in the area was accepted as an unavoidable impact from mining alluvial sand and gravel to depths up to 75 feet. Reclamation of the worked out pits was given priority. The reclamation plan directed stream diversion be made through the pits allowing refilling of the pits by river-borne sediments. A county ordinance required each terrace mining applicant to submit his own reclamation plan, and upon which permit approval was contingent.

After ARMP was in effect, the Basalt Rock Company was permitted to mine a 50-acre tract. Syar acquired Basalt Rock's 50-acre (20.23 ha) permitted tract in 1986. In 1989, Syar applied for an amendment to trade 145-acres (58.68 ha) of their designated mineral resource land for a 145-acre agricultural tract along the river not designated for mining. Syar then applied for other amendments of ARMP to permit 50-acres of the tract for mining and to allow reclamation by refilling the pits with processing sediments and other earth materials rather than by the river diversion process.

The Board held public hearings and considered pro and con arguments. Except for Syar's proposed use of non-native earth fill material for reclamation, the Board concluded that all of the environmental impacts that might result from the proposed change had already been considered in the ARMP's EIR. Consequently, it felt that a FONSI was



appropriate and the Board approved Syar's application to mine subject to an aggregate land designation decrease from 145 to 30 acres (12.14 ha), and rejection of the non-native fill material in the reclamation plan.

When the County of Sonoma, California, approved the application of Syar Industries, Inc., (Syar) to start sand and gravel mining along the terrace of the Russian River, environmentalist organizations, the Sierra Club and the Russian River Task Force, petitioned the court for an order denying the approval, alleging that the County's Board of Supervisors (Board) had violated the State's Environmental Quality Act (CEQA) by certifying a negative declaration (i.e., a FONSI, or "finding of no significant impact") and not requiring a new environmental impact report (EIR) for a traded property made by Syar. The Sierra Club then filed its action against the Board. The Sonoma County Superior Court granted the petition ordering the Board to set aside approval of the mining project and requiring further preparation of an EIR. Syar appealed.

In *Sierra Club v. County of Sonoma*, the Appeals Court found that the mining company's proposal to mine along the river was a "separate" project, as opposed to being part of, or even a minor modification of, the single large project already studied in the ARM Plan. Therefore, the County was obligated to consider whether a new project might cause significant environmental effects that were not examined in the prior program report (Author's note: The Board claimed to have already considered this point), and if there was substantial evidence that the project might arguably have such effects, the Board should have required another EIR. In view of the fact that substantial evidence supported fair argument that the proposed project might cause significant impacts that were not previously examined, the setting aside of the permit was proper pending submission of an EIR.

It is understandable why forethought to reserving land for mining has not been given. Such planning would have required costly geological studies and maps to be made for the political subdivision in order to understand what areas might be zoned differently, or protected for future mining. Many political subdivisions do not have the funds for such a luxury in planning. However, in Canada and the U.S., all provinces and states do have geological surveys who could provide or prepare local governments and planning boards with generalized geological maps for use in their responsible geographic area. Where such geological assistance is not available, frequently local knowledge of large outcroppings of rock, prolific boulder exposures, and sand and gravel bars on rivers, which obviously are not suitable for residential building, or surface structure development, could be zoned for future mining of construction aggregates. Such advanced planning would serve as notice to future home builders that they proceed to build at risk in an area reserved for mining. However, such advance warning notice, in view of being related to the older legal doctrine of "coming to the nuisance" and now of no legal consequence, would be of little use unless the judiciary reverted to its use, at least in this area.



In the cases of existing mining operations which were located and operating prior to restrictive zoning regulations, exception provisions with conditions were often made to allow them to continue operation. These conditional use exceptions have been an area of much problem for the mining industry. Often, too many constraints, some reasonable and others not, have been placed in the conditions for the mining to continue after restrictive zoning.

Along with this conditional use problem area, the enactment of “grandfathering” statutes were made throughout most of the U.S. to allow existing mining operations to continue in areas where zoning came into effect afterward. These grandfathering acts have also been a legal problem area for mining operations that were pre-existing to zoning regulations. Mining operations under grandfathering acts frequently come into conflict with simultaneous conditional use permits and restrictions placed upon them by zoning regulations. This separate problem area under grandfathering acts is reviewed in Chapter 5 § 4.9, *infra*.

Following are examples of litigation of zoning problems for surface mineral lands and mining.

(i) An older example of a city ordinance (1958) regulating surface mining depth of excavation below the water table is *Goldblatt v. Hempstead*, 369 U.S. 590 (1961). Goldblatt had mined sand and gravel within the town limits for many years. The excavation resulted in a 20-acre (8.09 ha) lake with an average depth of 25 feet (7.76 m).

The city’s ordinance prohibited further sand and gravel mining. The mine owner argued that the town of Hempstead could not take the property by regulation, but could only take his property by the process of eminent domain for which he should receive just compensation.

The Supreme Court upheld the reasonableness of the ordinance stating that although government action in the form of regulation can be found in some instances to require compensation, but here, there was no evidence to show that the value of the property will be reduced by the town’s prohibition of further mining. The Court found that the effect of the town ordinance was a valid police regulation.

(ii) Zoning and environmental regulations in conflict for mine permitting

In an unreported Ohio case (*Barrett*), a sand and gravel operator was issued a conditional use permit in 1974 by the local zoning board. The owner did not attempt to operate the property until 1987. The board had never revoked the conditional use permit in the intervening years. In 1988, the board then falsified their records in attempt to subvert their former decision by claiming a lapse of the permit and speculating that the pit might contaminate their water supply. In adding to their position, the board argued that the owner had never obtained approval of the Ohio EPA as a condition of the use permit. The issue became whether the granted conditional use was void for failure of the owner to first obtain EPA approval.



In *Barrett Paving Materials, Inc. v. Board of Zoning Appeals of Union Township*, 1991 WL 116344 (Ohio App. Dist. 2), the Miami County Court of Appeals made a significant statement regarding the relationship and "purposes of local zoning and environmental regulations (which) are inherently different \*\*\* are complementary but wholly independent of one another. The EPA is solely concerned with the environmental protection and protection of human health from pollution and improper waste disposal. A local zoning board \*\*\* is primarily interested in land usage \*\*\* affecting the development of the community. "

The court found that although EPA approval was a condition to the use permit, it was a condition subsequent, that is, to be fulfilled at a later and proper time. The EPA will not approve an application for until an actual proposed plan for the operation of a gravel processing plan has been submitted. Therefore, the approval of a zoning certificate is not made contingent on the approval of an EPA permit... ." The Court added, "that it could find nothing in the Township's Resolution which indicates an applicant seeking a zoning certificate must obtain prior approval of the Ohio EPA." The Appeals Court reversed the lower court finding that Barrett held a valid conditional use permit to mine gravel.

(iii) Denial of Variance of Non-conforming Use for Quarrier to Recover Stone

*Appeal of Eureka Stone Quarry, Inc.*, 539 A.2d 1375 (Pa. Cmwlth. 1988): A Pennsylvania aggregate stone quarrier applied for a variance to a non-conforming use to recover stone reserves from an area it had quarried in prior years. The area was now regulated by a county ordinance proscribing a 400-foot (121.92 m.) setback area from physical structures as public roads and a railroad. Eureka was denied the variance to a non-conforming use. Eureka then challenged the local zoning ordinance that prohibited expansion into the 400-foot setback area where the quarrier had mined in prior years.

The court found that the quarry did not have a non-conforming use in the non-conforming area since its activity there had ceased before the enactment. Because of that cessation of activity, it only had a non-conformity which could not be expanded.

The court upheld the permit denial unless the quarrier could show that : (1) there were unique physical circumstances peculiar to that property; (2) the property could not be developed in strict conformity with the provisions of the ordinance; (3) the ordinance created unnecessary hardship; and (4) that any variance would not be detrimental to the public.

Eureka had argued that a variance to reduce the setback would increase the quarry reserves by 13% and increase its life by 14 years. However, their argument for undue hardship resulting from the ordinance failed. The court said that the mere fact of making an operation more profitable was insufficient to support a variance grant.

(iv) Zoning Ordinance Limits Quarry Expansion Rights

In *Kibblehouse v. Marlborough Twnshp.*, 630 A.2d 937 (Pa. Cmwlth. 1993), a crushed stone quarry, in continuous operation since 1916, was limited in 1990 for its



expansion plans under a 1970 township zoning act. The property is divided into two parts, the northside, containing the quarry operation. The other, southside part, was across a road.

In 1970, only part of the northside tract containing the quarry was zoned "Limited Industrial" (LI), where quarrying was a permitted use. The remainder of the northside tract was zoned "Residential-Agricultural" (RA-1) and encircled the LI zone. The southside tract fell entirely within the RA-1 zone.

In 1990, Kibblehouse requested that the Township declare the quarry operation on the northside as a valid non-conforming use and permit its expansion over the entire property, including the southside. It was determined that as a non-conforming use, the quarry-use could not expand over 25% of its 1970 limits. Kibblehouse appealed the determination to the Zoning Appeal Board.

The Board decided that a non-conforming use had not been established in 1970 as the quarry operation had been placed within the LI zone where quarrying was a permitted use. The Board also declared that under a non-conforming use, an expansion of land activities was not permitted by the ordinance. Kibblehouse's application was denied.

Kibblehouse appealed the Board's decision to the Court of Common Pleas arguing primarily that its decision was contrary to law, and an abuse of discretion. On April 8, 1992, the trial court's order reversed the Board holding that "Kibblehouse's quarry-use was a non-conforming use, and that since the ordinance 'contains no restrictions on the extension of the non-conforming use of the land', Kibblehouse could use its entire property for a quarry."

The trial court partially rescinded its first order stating that the quarry may be expanded on the northside, but sustained the Board that no expansion could take place on the southside. Appeal by both parties followed.

In *Kibblehouse v. Marlborough Twnshp.*, the two important industry issues were: (1) "whether quarrying was an established non-conforming use on the northside; and (2) whether the owner of a non-conforming extractive-use is entitled to expand the use throughout the landowner's entire property where the zoning ordinance is silent on the right to expand non-conforming uses of land."

Kibblehouse was able to establish the existence in 1970 of a non-conforming use for that portion of the northside that had not been included in the 1970 LI zoning portion with the quarry. The review record showed that the quarrying operation had not been entirely confined to the LI zone in 1970. Therefore, quarrying activity had been occurring on land that was zoned RA-1 by the ordinance. The Appeal Court agreed that expansion should be allowed on the entire northside because of activity prior to zoning.

The Appeal Court considered Kibblehouse's argument that the established non-conforming use may be expanded throughout the entire property, specifically with regard to the southside. The Court first supported Kibblehouse's right to expand on his own land by stating that it recognized "that the right to expand a non-conforming use is a constitutional



one which may not be prohibited by a local zoning ordinance.” However, it then followed with another statement that withdrew strength from the above stated protection for a quarryman’s right to expand its operation on its quarry-reserve lands. Citing a 1969 Pennsylvania case, the Court noted that “a zoning ordinance may not impose an absolute prohibition on a necessary right of expansion although the municipality may enact ‘reasonable restrictions’ on the right of expansion”.

Kibblehouse further argued the legal doctrine of a “diminishing asset” for the right of expansion as a non-conforming use. The Court noted that such argument was “only accepted by a small number of states in the Midwest and West \*\*\*. Under that theory the quarrying enterprise is ‘using’ all of the land owned for the extraction purpose, not withstanding the fact that a particular portion of the property may not yet be under actual excavation.” Kibblehouse further cited the pertinent Pennsylvania case of *Cheswick Borough (1945)*, in which the Pennsylvania Supreme Court stated that “ \*\*\* it was not essential that the use, as exercised at the time the zoning ordinance was enacted, should have utilized the entire tract.” This Appeals Court then stated that the Pennsylvania “courts have recognized the right to expand a non-conforming use to provide for the natural expansion and accommodation of increased trade ‘ is a constitutional right protected by the due process clause.’ [*Silver v. Zoning Hrg. Bd. (1969)*]”.

But again, seemingly intent to encroach on the landowner’s constitutional right to expand which it just supported with a case cited, the Appeal Court added, “However, the natural right of expansion is not unlimited. A municipality has the right to impose reasonable restrictions on the extension of a non-conforming use.”

Kibblehouse argued that because the rock on the southside tract is of excellent quality, the natural growth of the business would logically expand to the southside; and, he maintained, that the southside was always devoted to the future expansion of the quarry. In response, the Appeal Court stated that the review of the record shows that nothing beyond mere intention to use the southside was ever established. The Court found that “mere intent” to quarry in the future was “insufficient” . Thus, the Pennsylvania Appeal Court upheld the Zoning Board’s decision to deny expansion of the quarry on to the southside of the owner’s property.

(v) Zoning Regulations Denying Quarrying Found Unconstitutional

*Davidson Mineral Properties v. Monroe County (Ga.)*, 257 Ga. 215 (1987): An aggregate stone quarrier was denied a permit for development of a new quarrying site. At the time Davidson applied for its permit, no land use plan was in effect, and there were no restrictions on the intended quarry property. However, the County Commissioners Board had enacted a "Moratorium on Commercial Development" until a land use plan and zoning ordinance could be adopted. In the interim period, so that commercial development would not be halted, the Board approved permit applications on an ad hoc basis. Out of 24 building/development permit applicants prior to the quarrier’s, all but one were approved.



The Zoning Board denied the quarrying permit following a public hearing where a number of people voiced opposition to the quarry.

Davidson challenged the Board's actions alleging that there were no objective criteria or standards provided in the Commissioners' resolution, or elsewhere in the record for issuance of a building permit. The Moratorium was found by the Georgia Supreme Court to lack sufficient standards to meet due process requirements; lacked objective criteria for permit approval; and gave Board uncontrolled discretion. Zoning was subsequently approved for a quarry.

(vi) Local planning ordinance upheld for quarrying controls

The following case illustrates the non-conformity and lack of control by state mining agencies amongst the states in the U.S. for controls over surface mining and related environmental regulations.

In a more recent state case, the New Jersey Supreme Court in *Bernardsville Quarry v. Bernardsville Borough*, 608 A.2d 1377 (N.J. 1992), gave full support to local authorities over mining control, licensing and quarry regulation. In *Bernardsville Quarry*, the quarry owner brought an action challenging a local municipal ordinance which imposed a licensing requirement for quarrying operations limiting the depth below which the property could not be mined. The quarry owner sued contending that the ordinance effectively prohibited their property's use as a quarry and, therefore, constituted a governmental regulatory taking of its property.

The property had been operated continuously as a quarry from 1931 until 1985 when it closed on filing for bankruptcy by the former operator. The Borough adopted its first land-use ordinance in 1949, and in 1963 the quarry was declared a non-conforming use. The present owner (BQI) obtained the property at foreclosure sale in 1987, at which time the owner applied to the Borough for a Continued Certificate of Occupancy (CCO) stating that it intended to continue using the property as a quarry and to process stone as had its previous owner. The Borough promptly denied the application stating that the only current permissible use of the property was as a bituminous concrete plant and not as a quarry. The Borough stated BQI had failed to submit a site plan under the Land Use Ordinance, and that there were a number of serious environmental concerns, mainly, the potential for pollution of subsurface aquifers which served as a source of local drinking water.

The Borough's fear of water pollution was based on its finding that parts of the property had been illegally used for asphalt production, as a transfer station for consolidating garbage, and as a landfill containing machine parts which were leaking contaminants. [Comment: Such reason given as "illegal use as a garbage transfer station" is not justifiable reason to prohibit a legitimate and properly operated mine from operation. Whether such allegations were true or not, investigation, enforcement and controlling of environmental issues for mining operations should be vested exclusively under a state



agency where uniform regulations may be applied state-wide, not as each local community governing body feels proper.]

The Borough council reviewed BQI's application several times and finally issued a Temporary Certificate of Occupancy (TCO) in June 1987 allowing for operation of a concrete plant only. Upon additional information from BQI, the Borough issued a second TCO permitting BQI to crush "loose" stone and a limited amount of blasting. However, nullifying its seeming permission, the Borough at the same time adopted a new Quarrying Licensing Ordinance which limited the depth of quarrying, restricted the hours of operation, required buffer zones, and imposed a license requirement. The second TOC was made contingent upon BQI's filing another application in compliance with the new ordinance. In August 1987, the Borough ordered suspension of all blasting at the quarry based on the Borough's engineers report that asbestos had been disposed of on the property at some time in the past.

In February 1988, BQI filed a detailed application for a quarry license. It sought approval for quarrying below the ordinance-allowed depth and in areas of the property which had been prohibited by limitations in the 1963 nonconforming use agreement. BQI's submitted quarry plan would expand the quarry area over 45-acres (18.21 ha) over a 20-year period resulting in a 45-acre lake with an average depth of 200 feet (60.96 m). The height of the surface above the lake's surface would be 175-feet (53.34 m). The Borough denied BQI's application in April 1988. Denial was based on: violation of the 1963 non-conforming use limitations; the asbestos contamination; unacceptable surface water discharge; unacceptable number and depth of monitor wells; failure to guarantee compliance with the N.J. Pollution Discharge Elimination System; failure to provide sufficient rock mass information; failure to evaluate groundwater flow; and, failure to provide hydrogeologic characterization for the development of a database for groundwater monitoring wells.

In May 1988, BQI filed a complaint against the Borough charging that the Quarry Licensing Ordinance was unreasonable, particularly in its depth restrictions, and constituted an unconstitutional taking of private property without just compensation. In addition, BQI charged that the Borough could not validly require licenses for quarrying, that the license denial had been improper, and its civil rights had been violated under federal law.

#### 5.4.8 State Control of Mining versus Local Control

Upon trial, the lower court ruled against BQI on its challenge to the quarrying depth limitation and that no unconstitutional taking of private property had occurred as a result of the ordinance. The court held that licensing of the quarry was within the scope of a municipality's authority and the license denial was valid. Only the ordinance's limitation on the quarry's hours of operation was found invalid. However, the denial of BQI's application was found to be arbitrary and capricious, based on an inadequate record, and remanded to the Borough's council for reconsideration. The Borough appealed and the



Court of Appeals affirmed the lower court's decision. Both parties filed for review by the New Jersey Supreme Court.

With regard to the licensing of a quarrying operation, BQI had argued that registration of the quarry operation under New Jersey's Mine Safety Act pre-empted licensing by the Borough. The Supreme Court found that the Mine Safety Act was mainly concerned with the safety of mine and quarry workers. The State legislature had given no clear indication in its passage of the act that it intended to prohibit municipalities from regulating and licensing quarries for health, safety and welfare of the community. There was no statutory basis from which to infer that the State had pre-empted the field of quarry regulating. The N.J. Supreme Court therefore found that a municipality may regulate a business under its general police power and require a license to defray the costs of such control.

#### An issue of a Fifth Amendment (regulatory) Taking of Private Property

The Court noted that "under our constitutions, federal and state, government cannot take private property without paying just compensation." Both the U.S. and New Jersey constitutions afford coextensive protection for a taking. "Without question private property can be effectively taken through regulatory measures that do not amount to physical occupation or appropriation. \*\*\* However, there is no precise formula that courts use to determine whether a compensable 'non-invasive' (*regulatory*) taking has occurred." As determined by the U.S. Supreme Court, such type of cases must be determined on an individual basis (*ad hoc*), i.e. case by case.

To aid in the determination of whether a compensable, non-invasive or regulatory taking has occurred, the U.S. Supreme Court has formulated three factors of "particular significance" : "(1) the economic impact of the regulation on the claimant; (2) the extent to which the regulations has interfered with distinct investment-backed expectations; and (3) the character of the government action." [*Connolly v. Pension Benefit Guaranty Corp.*, 475 U.S. 211, 224, 225 (1986)]. In essence, the public's interest in the regulation must be weighed against the private property interests affected by it.

In general, the N.J. Supreme Court stated that in zoning schemes, " a regulation must substantially advance legitimate state interests, and it cannot deny an owner all economically viable use of the land." [*Agins v. Tiburon*, op.cit.] Neither can it excessively interfere with property rights and interests. The N.J. court cited several examples of regulatory takings cases in which laws were upheld under the "police power" and correspondingly denying compensation for a taking of private property by disallowing its intended use as being injurious to the public good, safety and welfare. The leading case cited was *Keystone*, in which a Pennsylvania law was upheld which required subsurface coal mine operators to leave certain amounts of coal in the ground as pillars to prevent surface subsidence without which substantial damage to buildings above the mines might occur, and posed environmental hazards and physical conditions that rendered surface



development impossible. [Comment: It should be noted that the coal operators had contractual waiver agreements from the surface owners relieving them of liability for damages to the surface and structures. The validity of the waiver contracts was also litigated in *Keystone*. Under the U.S. Const., Art. I, Sect. 10, "No State shall pass any ex post facto Law or Law impairing the Obligation of Contracts;" . The contracts were found invalid.) That law had been enacted pursuant to the state's police powers for the protection, safety and general welfare of the people. In *Keystone*, the U.S. Supreme Court denied compensation to the coal operators for an alleged taking of 27 million tons (24.48 M metric tons) of coal required to be left in underground pillars for surface support.

Similarly, the Court noted that in *Bernardsville*, the Borough's ordinance was passed to meet environmental, safety and public health concerns. The ordinance declared its purpose was "to protect the environment by minimizing air pollution and prevent surface and subsurface water pollution." The limitations as to depth of quarrying were designed "for the protection of persons and property and for the preservation of the public health, safety and welfare of the Borough."

[Comment: The reason for depth limitation would appear "impermissably vague" and therefore, invalid.] The Supreme Court upheld the trial court's finding that there was sufficient evidence to justify a compelling need to limit quarrying in depth. The New Jersey courts accepted as the gravest threat "the potential of surface pollution through careless deposits of oil or other pollutants during quarry operations." The Borough's evidence established for the court a connection between water in the quarry and water in subterranean aquifers, and a substantial risk of exposure of those aquifers to potential pollutants that could exist in the proposed lake.

The New Jersey Supreme Court held that under the Borough's police powers it had enacted a valid ordinance to limit quarry operations in the interests of public health, safety and welfare, and that the ordinance advanced a substantial, genuine and legitimate public purpose. As such, it concluded that the ordinance did not effect an unconstitutional taking of private property without due process of law.

#### Conclusion:

It is not advocated that the local community should have no voice in environmental protection to their locality after giving zoning approval to a mining use. However, it is advocated that after initially approving, or zoning an area for surface mining, public participation should end and the environmental protection and regulation of the surface mining area should be left to the state's mining and environmental engineering professionals. British procedure for land use development would appear to be a preferable, less contentious and a more orderly method for licencing permission in land development. As noted by Hughes, in England "Planning law has not historically been generally over-concerned with giving third-parties rights at the development control stage. Nevertheless, there are publicity and notification requirements in the TCPA 1990." (op.cit. 1992, p.126)



Public involvement in the planning and permission approval process for land development is limited. Hearings may be held at the discretion of the Secretary of State for the particular ministry, but may limit those participating in the hearings. The Secretary of State has wide discretion in the hearings and may, or may not hold them. The ultimate decision for planning permission, whether contentious, or not, is placed in the discretion of the Secretary.

The British procedure for land use permission approval may be removed from the contentiousness of the general public which makes for less friction in hearing an application for a development. This procedure is advocated for more orderly and smoother processing of land development in the U.S.

The British procedure for challenging a Planning Council's decision is also recommended for use in the U.S. Under §78 of the TCPA 1990, "a disappointed developer may appeal to the Secretary of State, who has wide powers to allow or dismiss appeals, and to vary or reverse any part of the original decision, and may deal with the application as if it had been made to him in the first instance." As an alternative to an inquiry or hearing for review by the Secretary of a land development application, the appealing party may "opt for the matter to be settled by way of written representations, a procedure used in the majority (75%) of all cases." (op.cit., 1992, p.143.) The discretion allowed the Secretary under §35A of the Act is an interesting procedure which may circumscribe public involvement. "Section 35A further empowers the Secretary of State to 'call in' proposals before adoption. He then has a wide discretion as to the fate of the proposals, though he must consider any objections made in due form together with any other matters he considers relevant, and in this connection a wide power of consultation is given. \*\*\* Section 35B further requires that before adopting proposals the authority must, unless the Secretary of State otherwise directs, cause 'an examination in public' to be held of such matters concerning the proposals as they consider should be examined. Similarly, where the Secretary of State calls in proposals, he may hold an examination in public of any specified matter. An examination is held by persons specifically appointed by the Secretary of State, but it is not a public inquiry in the full sense, even though §1(1)(c) of the Tribunal and Inquiries Act 1971 applies, no person has a right to be heard, \*\*\* ." (emphasis added) (Hughes, 1992, p. 112).

In *Bernardsville*, the issue of quarrying depth and its consequential affect on a local aquifer is a question to be determined by state professional engineers who understand mining and hydrogeology. In trial, experts for hire are too likely to testify as to what their environmentally-fearful employers want to hear. In *Bernardsville*, the Court noted the "divergence of opinion by so many experts, \*\*\* demonstrates the inability of a governing body (the Borough) to predict with certainty the effect of the removal of so much stone." [Comment: undoubtedly "much stone" had already been quarried over 54 years from the



Bernardsville quarry, and apparently with no previous dire effect or contamination of the Borough's water supplying aquifer.)

As to the issue of quarry expansion, in the New Hampshire case of *The Town of Wolfeboro v. Smith* (1989), (see Ch.5 §4.9.1, infra) local authorities allowed only vertical expansion and prohibited lateral expansion of a grandfathered operation on quarry-owned property held since 1950. "Grandfathering" for quarries was stated to be meaningless if expansion is limited. However, contra, in *Fletcher Gravel Co. v. Jorling (DEC)*, 179 A. 2d 286 (N.Y.1992), the New York Court of Appeal stated, "The expansion of mining activity into different areas is consistent with the nature of mining activity and does not constitute a significant change in permit conditions." The California Supreme Court agreed with the New York court in its 1995 decision in *Hanson Brothers Enterprises v. Nevada Co. Bd. of Supervisors* (No. S044011) approving an extension of a grandfathered right to mine after the local board had denied the right.

In *Bernardsville*, the Borough's expert noted the "potential of surface pollution through careless deposits of oil or other pollutants during quarry operations." The public, legislators, and the judiciary have yet to realize that if such groundless propositions and assumptions as that 'expert' made in *Bernardsville*, one could argue that if "What if - accidental spills of oil at quarrying operations occurred" are given universal credence, all quarrying operations in the nation could be shut down under state police powers for the general public's good, welfare, health and safety. To carry the logic of the argument further, "What if" oil and petrol spills are made at service stations? Shall the building of new stations be prohibited? And, because of the Valdez, Alaska, oil spill, shall all ocean transporting of petroleum be prohibited?

If quarrying is to be denied on such fantasy, imaginary and remote supposition, there will be no crushed stone operations in the U.S. in existence. We are indeed "in serious danger", as Justice Dooley of the Vermont Supreme Court said, "of expanding 'not-in-my-backyard' into 'not anywhere' "

(vii) Former Sand & Gravel Operator Compelled To Reclaim Illinois Pit Under County Rule: McHenry County, Illinois, local landowners near a former, unreclaimed sand and gravel pit, brought suit against the County, the landowner on which the pit was located, and the former pit operator, successfully winning an order to enforce the County's zoning ordinance requiring its reclamation.

The pit operator, FRAMS, began its operation over six years before 1979 when McHenry County adopted a zoning ordinance, (§ 508) requiring "all operators extracting and/or processing earth materials" to apply for a conditional use permit. The applicant was required, jointly with the landowner, to submit a reclamation plan to the county and to post a reclamation bond to guarantee reclamation according to the approved plan.

In *Lily Lake Road Defenders, et al v. The County of McHenry, et al*, 619 N.E.2d 137 (Ill. 1993), the plaintiffs charged that FRAMS had enlarged its surface mining area by



25 acres (9.71 ha) after 1979 without submitting a reclamation plan or bond to the County. The pit ceased operation in 1988 without restoring the property. Plaintiffs sought a writ of mandamus ordering the County to enforce its 1979 ordinance for surface reclamation.

The trial court found that the county ordinance, enacted after the IEPA, was void *ab initio* (from the beginning). The ordinance was unenforceable. On appeal, the issue before the Supreme Court was "whether , and if so, to what extent the ordinance was affected by the state legislature's enactment of the Illinois Environmental Protections Act (IPEA) and the Illinois Surface-Mined Land Conservation and Reclamation Act of 1971 (ISMCRA).

The Supreme Court of Illinois reversed the lower court's decision finding that the County's zoning ordinance requiring reclamation had not been repealed by implication and passage of the IEPA 1970. The Supreme Court went on to say that, prior to the enactment of IEPA 1970, counties were empowered under the 1935 County Zoning Act to restrict the use of land for surface mining. Although the County ordinance had been enacted in 1979, after the IEPA of 1970, the doctrine of repeal by implication did not apply here.

The Court said the IEPA "presupposes that counties will continue to exercise such zoning powers \*\*\* . A county which exercises its statutory authority to regulate and restrict the use of land pursuant to the Zoning Act does not necessarily violate the terms of the IEPA. Both statutes may be given effect without thwarting the legislature's intent."

The Supreme Court gave further consideration to the argument that the county's ordinance had been repealed by the doctrine of preemption by the IEPA, 1970. In 1981, ISMCRA and EPA were amended and provided: " The issuance under this Act of a permit to engage in the surface mining of any resources other than fossil fuels shall not relieve the permittee from its duty to comply with any applicable local law regulating the commencement, location, or operation of surface mining facilities." Therefore, after 1981, the McHenry County reclamation ordinance became enforceable. Since FRAMS' operations did not cease until 1988, it was subject to the county's reclamation requirements. The operator will have to reclaim the 25-acres of the worked out pit.

(viii) Permitting for Continued Mining and Expansion-"Grandfathering" Act Introduced

*Atlantic Cement Co. v. N.Y.*, 516 NYS. 2d 523(AD3 DEPT. 1987): Atlantic operated a limestone pit and cement manufacturing facility on approximately 2,000 acres of land since 1961. The New York Mined Land Reclamation Law became effective in 1975. In that year, Atlantic was required to obtain a mining permit from the NY Department of Environmental Conservation (DEC). In order to continue mining, Atlantic had to submit, *inter alia*, property maps, mining and reclamation plans, and reclamation bond. Atlantic received permit renewals in 1978 and 1981 with only minimal paperwork. In 1984, DEC rejected Atlantic's normal application and required a State Environmental Quality Review (SEQR) and additional information for DEC's Life of the Mine Review Policy.



Following Atlantic's refusal to provide the information, DEC issued notice in April 1985 for a draft EIS, and if not received by May 1, 1985, their permit renewal would be denied. Atlantic began Article 78 proceedings challenging the authority of DEC for its added requirements for permit renewal. DEC denied the permit renewal. The decision of the lower court was: (1) DEC had taken longer than the required 15 days to notify Atlantic of insufficiency of application information; (2) Atlantic's mining activities were grandfathered under the SEQR Act and Atlantic was not required to file an EIS; and (3) DEC had already determined in previous years Atlantic's operation would have no significant environmental impact (FONSI). The Court of Appeals affirmed the finding that DEC's permit denial was illegal, arbitrary and capricious.

#### 5.4.9 Limitations of "grandfathering" acts for active mining operations

In the mid-1970's, after NEPA had been enacted, and the tide of environmental regulations was beginning to filter down to state levels and flow, permitting regulations were enacted by many of the states for control of surface mining operations. Promulgating of regulations and rules for new mining sites yet to develop were easier to enact. The miners-to-be had little choice other than to conform to the new rules in force when starting up a new quarrying operation.

Regulating existing surface mines, often which had been in business decades before, was another matter. It would be more difficult to make them conform all at once to the same stringent controls by virtue of their pre-rule existence. This would be more true for their locations, which, at times, were becoming troublesome, if not nuisances, to burgeoning communities in which they might be located. This was particularly true if the quarries had been situated long before the communities began to grow and remained still operative, still serving a vital need by supplying construction materials for the local growth. Thus, to deal with them and yet extract some effective degree of compliance with the new environmental and site permitting requirements, most states either enacted Grandfathering acts, or appended them as clauses to their mining acts for new surface mining operations. In some cases, under the acts or clauses, they were not required to obtain mining permits for their present operation. However, if they grew beyond their limit at the date of enactment, they were required to obtain mining permits for the new growth or expansion. This frequently became a point of contention and litigated. The decisions in various states depended on the court's interpretation of the particular state's grandfathering act.

Local planning authorities, when finding a pre-existing or operating surface mine as undesirable or problematic in their zoning schemes, could either give the mining property the required industrial zoning, or alternatively, grant the mine a non-conforming use licence to continue. Non-conforming use permits are a way of avoiding giving a mining property the zoning it needs for long-term growth. A non-conforming use permit is properly thought of by some authorities as a "phasing out" permission to continue in



business. As the term implies, the surface mine is expected to phase out, and expansion of that business is generally prohibited as it does not conform to the general land use plan. Nevertheless, mining operations are businesses that like to grow for profit as do all other businesses, and, in that era of the 1970's, growth was still booming and requiring minerals. Logically, quarries desired to grow along with the rest of industry, and mineral products are needed for construction and growth of the community and nation.

Some of the contentious problems brought about by grandfathering acts for surface mining are illustrated in the following examples.

#### 5.4.9.1 Grandfather Act -

##### New Hampshire's Test for Permitting of Expansion of Operations

In *Town of Wolfeboro (Planning Bd.) v. Smith*, 556 A.2d 755 (N.H. 1989), Smith owned a sand and gravel pit on 35-acres (14.16 ha) that had been in continuous operation since 1950. By 1989 only ten (4.05 ha) acres remained to be mined. The Town of Wolfeboro filed a petition for a cease and desist order to prevent further pit expansion on Smith's land without a permit. At trial, Smith claimed he was not required to obtain a mining permit as he was "grandfathered" in when New Hampshire's law (RSA Chapter 155-E:2 Laws 1979, 481:3) took effect on August 24, 1979. The statute allows the owner of an "existing excavation to continue such existing excavation without a permit." At the time of effectiveness of the law, only eight (3.24 ha) of the 35-acres (14.16 ha) had been mined. Additional excavation had continued from 1979 to 1989 without a mine permit until only ten acres remained to be mined. At trial there was no dispute between the parties that Smith was entitled to continue mining the existing pit. The sole issue was whether the statute's clause entitled Smith to excavate the remaining ten acres without a mining permit. The town argued "that by its very language, the provision exempts only the 'land area' which is being used, as of August 24, 1979, and, therefore, exempts only the land already excavated as of the effective date of the chapter." Thus, according to the Town, the operator could only continue mining in depth and not laterally because no enlargement of the "exempt" area was allowed. The trial court disagreed and ruled that Smith was entitled under the grandfather clause to mine his entire parcel without a permit. On appeal, the Supreme Court of New Hampshire also found difficulty in accepting the Town's interpretation, stating "If the phrase 'continue such existing excavation' as found in the grandfather clause were understood to allow only vertical and not lateral expansion, such an interpretation would lead many owners... to find that they could not continue their existing operations very long, if at all. Only by allowing the continued excavation of land previously appropriated for that use would the owner truly be able to continue an excavation which he had begun." The Court further stated that the lateral expansion of an existing pit " \*\*\* will be considered a continuation of a previous excavation" if the land was appropriated for excavation prior to the effective date of the law.



What seemingly was shaping to be a decision in favor of grandfathered surface mining operations was quickly reversed by the Court's subsequent condition: that the operator had to "objectively" show appropriation of the land for mining before the law's passage. "Intent alone is not enough." The Court believed that the phrase "continue such existing excavations " contained some limitation on increases in area or intensity of mining. It stated that "An increase in the intensity which serves to change the character of purpose of the non-conforming use will be considered to have changed the use." It added that a great increase in the size or scope of a mining operation could end its exemption from the law as a grandfathered use.

In its conclusion and holding, the New Hampshire Supreme Court established a three-pronged test for operators wishing to continue mining without a permit in New Hampshire:

- (1) The operator must prove the activities were actively being pursued when the law became effective;
- (2) He must prove the area he wishes to excavate was clearly intended to be excavated, as measured by objective actions, not by subjective intent; and
- (3) He must prove continued operations do not and will not have a substantially different and adverse impact on the neighborhood.

#### Question and Comment on *Wolfeboro* Decision

Under the rationale and final test of the N.H. Supreme Court, how was the operator able to expand mining from the 8 acres (3.24 ha) already mined at the date of the effectiveness of the law, for ten more years without a mining permit to the date that *Wolfeboro* demand no further mining of the last ten acres, without a mining permit ? It would appear that the mining of the 17-acres (6.88 ha) in between the two dates would imply that it was more than "subjective intent" to mine the whole 35-acres ; and the act of having mined 17-acres after August 24, 1979, shows "by objective actions" that the whole 35-acres (14.16 ha) was "clearly intended to be excavated." (For further argument on permitting of surface mining, see "A Quarryman's Reply" to the *Wolfeboro* decision, Ch. 8 §5, *United States - Weaknesses of Surface Mine Permitting Procedures*, *infra*.)

#### 5.4.9.2 Mining Permit Required for Removal of 24-year Old Stockpiles

*Crowell Constructors v. State*, 393 S.E. 2d 312 (N.C. App. 1990): In 1984, the North Carolina Department of Environmental Health and Natural Resources (DEHNR) required ,with a Notice of Violation (NOV) an asphalt manufacturer to apply for a mining permit to remove 24-year old stockpiles of sand from a property purchased to acquire the old stockpiles. The former sand mining operation had ceased in 1960 and were left in place.

Crowell contended that such short term removal was not mining. DEHNR, reviewed and found that the situation lent itself better to regulation under N.C.'s Sedimentation Pollution Control Act. Crowell was required to submit a soil erosion and sedimentation control plan. With the plan approved, Crowell continued removal of the sand. In February 1986, DEHNR notified Crowell with another NOV that it was in



violation of the Mining Act for mining without a mining permit., and assessed a penalty of \$5,000 per day for each day of illegal operation. Crowell continued removal until March 21, 1986. On March 27, DEHNR fined Crowell \$10,000 stating that off-site sedimentation had occurred and that his restoration efforts were ineffective. The Mining Commission upheld the violation and fine. The N.C. Court of Appeals held that "mining" had occurred under three different definitions of in the Mining Act and a mining permit was required.

#### 5.4.9.3 Mining Permit-Attempted Revocation by Citizens Group

*Concerned Citizens v. Rhodes*, 394 S.E.2d 462 (N.C.App. 1990): A citizens' action group filed an action seeking to have a permit granting a mining company the right to operate a crushed stone quarry declared void (revoked). The Superior Court declared the mining permit void. Appeal was made. North Carolina's DEHNR is not among the agencies specifically exempt from provisions of the Administrative Procedure Act (APA) , so that anyone challenging decisions of DEHNR must follow APA procedures and exhaust administrative appeals before seeking judicial review. The Mining Act provides that any affected person may contest a decision of the DEHNR to deny, suspend, modify or revoke a permit or reclamation plan. The Citizens' actions group had failed to make an administrative appeal, therefore, the Superior Court had no jurisdiction to void the mining permit. The Court of Appeals reversed the permit voiding and remanded the claim for proper procedure.

#### 5.4.9.4 Intensified Reclamation of Mining Properties

##### Mined Land Reclamation- Surface Mining Control and Reclamation Act (SMCRA)

The federal SMCRA 1977 regulates only surface coal mining. There is no comparable federal act that regulates non-coal surface mining operations. However, a majority of states have enacted their own version of state SMCRA's for non-coal surface mining and the regulations apply to all surface mining operations within a state's boundaries, whether federal or state lands. Federal pre-emption may apply to BLM lands within a state. Litigated case examples follow.

##### i) Reclamation-Environmental Impact Statement (EIS) not Required:

*City of Ukia v. County of Mendocino & Ford Gravel Co.*, 238 Cal.. Rptr. 139 (Cal.App.1987): In a California case, Ukia brought an action to compel the county to set aside approval of a gravel operator's reclamation plan and compel an EIS. The court ruled that the operator's reclamation plan provided sufficient substantive description of natural streambed restoration and did not require an EIS.

(ii) *Grove v. Winter*, 554 N.E. 2d 722 (Ill.App. 5 Dist. 1990): An Illinois court held that a lessor of a limestone quarrying property could assert a breach of contract against the quarrier for failure to comply with Illinois SMCRA, which states in part, " All grading... shall proceed in conjunction with surface mining and shall be carried to completion by the operator prior to the expiration of eleven months after June 30 of the fiscal year in which the mining occurred." [Ill. Rev. Stat. 1985, ch. 96-1/2, para. 4501, *et seq.*, 4507(k)].



(iii) *Morgan V. Ga. Vitrified Brick & Clay Co.*, 397 S.E.2d 49 (Ga.App. 1990): Where the surface owner sued the mineral estate owner for failure to restore the surface, the court found that mining did not require the surface to be left in such a rough state rendering the surface estate useless.

(iv) *Barton v. Gifford-Hill & Co., Inc.*, 760 F.Supp. 98 (W.D. La. 1991): Lessor of a sand and gravel property sued the operator for breach of contract for failure to restore the surface. The Louisiana court held that the miner had a duty under the Louisiana Mineral Code to partially restore the land after its operations were finished by sloping the sides of the gravel pit, even if the leasing agreement did not contain any provision for surface restoration.

(v) SMCRA-New Performance Standards:

Several federal SMCRA reclamation procedures and performance standards for post-mining lands were litigated in the 1990 case of *National Wildlife Federation v. Lujan*, 733 F.Supp.419 (D.D.C. 1990), which has been appealed. Those procedural changes in federal law were largely reflected later in state regulations for non-coal mining.

Revegetation : [30 CFR 816.116 (c)(4)/817.116(c)(4)]: The court upheld the rule that rill and gully repair can be considered normal practice that will not restart extended responsibility period for operator. 31 ERC 1617, 1621-15 (June 8, 1990).

Reforestation : [30 CFR 816.116(b)(3)/817.116(b)(3)]: The court upheld the requirement that both state and federal regulatory authority approval for reforestry and wildlife programs. The success standard that 80% of trees be in place for 60% of the applicable period of responsibility (*i.e.*-five years in the East and ten years in the West) 31ERC at 1625-31.

Reclamation Period of Success for Post-Mining Land: The court upheld the precipitation requirements, viz., for areas (grazing, pasture and crop lands) with more than 26-inches of precipitation, two years will meet the success standard of responsibility; for areas with less than 26-inches of precipitation the success standard period shall be met in the last two successive years of responsibility. OSM shall have discretion in accounting for weather variability during the periods. ERC at 1631-33.

Water Impoundments: [30 CFR 816.79, 817.49]: The court upheld rules for class (b) and (c) dams (those that failure would cause loss of life or serious property damage). Temporary impoundments and spillways were not ruled on while re-evaluation by the Secretary is being made. 31 ERC 2034, 2059-61 ( August 1990).

Recharge Capacity of Water for Underground Mining: 30 CFR 817.41(b)(2): The court upheld deletion of the requirement that underground mines be required to recharge capacity of disturbed area and that enforcement was legally "debatable". ERC 1617, 1633-36 (June 30, 1990).

Reclamation Roads: The court upheld the rule requiring any road used to meet reclamation performance standards be retained as a primary road regardless of frequency and nature of



traffic. Operators are also responsible for prevention of mitigation of lands within the boundaries of reclamation as listed in Sect. 522(e)(1) that may result from roads into the area.

(vi) Surface Mine Site Buildings Must Be Demolished In Reclamation

The Wyoming Department of Environmental Quality (WDEQ) ordered the present owner of the former U.S. Steel Corporation's Atlantic City open pit iron mine to post an additional performance bond to ensure reclamation of its mine-site buildings and facilities.

U.S. Steel owned and operated the iron pit in Fremont County, Wyoming, for many years pursuant to a permit issued under the Open Cut Land Reclamation Act of 1969 until 1974 when permitting authority was placed under the Wyoming Environmental Quality Act (WEQA). Mine operation continued until 1983 when the pit was closed. Instead of reclaiming the mine property itself, U.S. Steel sold the mine and transferred its mining permit to Universal Equipment Company (Universal) in January 1985. Universal obtained the salvage rights to the mining equipment, materials and buildings. In accepting the transfer, Universal assumed responsibility for reclaiming the mine-site and was required to post a reclamation performance bond of \$1.8 million.

Universal contracted with various companies to carry out different reclamation phases between 1985 and 1989 when a dispute arose between it and one of the contractors (ARIX) over payment for its services. The contractor sued Universal and DEQ, and won a judgement against Universal. ARIX attempted to garnish Universal's performance bond held by DEQ. In a separate suit, the court found that funds held by DEQ were not subject to garnishment. During the period, DEQ had reduced Universal's bond amount from the \$1.8 million to \$300,000 in recognition of partial reclamation of the site. Under the Court's supervision, Universal was able to convert its bond to cash by substituting an irrevocable Letter of Credit for its performance bond. The Court ordered payment to ARIX for its services.

During a 1990 hearing on DEQ's petition, DEQ required an additional bond of \$4 million for Universal's remaining obligations, Universal challenged DEQ's authority to require an additional bond amount to insure costs of demolishing and removing the mine buildings and structures built before enactment of the WEQA. The court ordered Universal to make the \$4 million bond, or, in the alternative, to submit a detailed plan in 60 days which buildings were intended to be demolished and/or the proposed use for those left. Universal failed to submit a plan and challenged the bonding.

In *Universal Equipment v. Wyoming*, 839 P.2d 967 (Wyo. 1992), the Wyoming Supreme Court found WEQA's reclamation and bonding requirements applied retroactively to mine facilities and structures built prior to WEQA's enactment; and, DEQ could require a permitted claimant to post additional bonding for demolition of buildings on a site.



## 5.5 Canada

### 5.5.1 Mineral Land Takings By Environmental Regulation and Expropriation

(i) *The Queen in Right of British Columbia v. Tener* [1985] 1 S.C.R. 533 (B.C.) : Teners' predecessor in title had obtained Crown-granted mineral claims in 1937 on land which subsequently, in 1939, was included in a new provincial park, Wells Gray, in British Columbia. There were no restrictions on mining in the newly formed park until 1965 when restrictions began with the issuance of park use permits for natural resources. Teners received a use permit in 1973 but were denied permits thereafter and informed in 1978 that no new mineral work would be permitted. The Teners sued the government claiming that the permit denial was an expropriation of an interest in land under the Park Act. The Supreme Court of Canada held that to refuse a permit to a grantee of mineral rights to exercise rights under the grant is the equivalent in law of a compulsory taking or expropriation. The Court stated, "This acquisition by the Crown constitutes a taking from which compensation must flow." (*Tener*, ibid at 563.)

(ii) A Canadian mineral company owning mining claims since 1938 in a provincial park on Vancouver Island, British Columbia., had its rights over the decades gradually limited by subsequent legislation, culminating in the requirement of a resource use permit. Finally, in 1988, an Order in Council prohibited the issuance of any park resource use mining permits amounting to an expropriation of the property. The mineral company successfully brought an action for compensation for the taking of their mineral property.

In *Casamiro Resources Corp. v. British Columbia*, [1991] B.C.L.R.(2d) 346; 80 D.L.R. (4th), Casamiro held title on 19 Crown-granted mineral claims in Strathcona Park. Strathcona Park had been established in 1911 by an Act of British Columbia. By later changes in the law, it became lawful to locate mineral claims in the park. These claims were located in 1938-39 by Casamiro's predecessor in title pursuant to the Mineral Act, R.S.B.C. 1936. In 1946-47, the claim locator received Crown grants for the claims which allowed the owner, his heirs and assigns to "have and to hold the said minerals. ... forever." An added proviso stated that the "said minerals shall be subject to the laws for the time being in force respecting mineral lands held in fee simple:" Under the Mineral Acts of 1936 and 1948, full surface rights were granted to the mineral claim owner for the purpose of winning the minerals therein and for conducting the business of mining.

By 1957, the Strathcona Park Act had been repealed and the new Department of Recreation and Conservation Act, S.B.C. 1957, enacted. By this new act, Strathcona was designated a Class "A" park and the mineral claims fell within a reclassified "recreation area". Under its provisions, "All mineral claims within the park, ... and all records and grants in respect of such claims, shall, in addition to the Mineral Act be subject to further terms and conditions and restrictions,...as the Lieutenant-Governor may " prescribe. In 1971, the legislature enacted the Environment and Land Use Act, and a subsequent revision



(R.S.B.C. 1979, c.110) empowered an advisory committee to make environmental recommendations to the Lieutenant-Governor.

The Minister for Parks was empowered under the Park Act, 1979, to issue resource use permits in parks. Casamiro, having acquired its predecessor's title rights, applied for a permit in 1987. However, by an Order in Council on November 25, 1988, the Minister for Parks was ordered to not issue a resource use permit for the recreation area of Strathcona Park. The Court found that the Park Act further empowered the Minister responsible for parks to purchase, acquire or otherwise take possession of land, and to expropriate "the rights of a recorded holder of a mineral title in or on a recreation area."

Additionally, the Court found that Section 17 of the current Mineral Tenure Act, S.B.C. 1988, c.5 was determinative stating, "Notwithstanding any Act, agreement, free miner certificate or mineral title, no person shall locate a mineral title", explore, develop or produce minerals "in a park created by an Act... unless authorized by the Lieutenant-Governor \*\*\*."

The Court noted that a prior case, *The Queen v. Tener* (1985) 17 D.L.R. (4th), established precedent. The holding in *Tener* was "to refuse a permit to a grantee of mineral rights to exercise rights under the grant within a park established after the date of the grant is the equivalent in law of a compulsory taking or expropriation." In keeping with "Tener rights", the court concluded that the Crown rights granted under the Mineral Act were not affected by its repeal, and assuming the Order in Council to refuse a permit was made under proper authority, it had the same effect as a refusal to grant a permit. Consequently, it amounted to an expropriation. Since the legislature did not authorize the taking without compensation, Casamiro was entitled to payment for the taking of its mineral claims.

(iii) *Cream Silver Mines Ltd v. British Columbia (B.C.C.A.)* [1993], B.C.J. No.304: In a sequel to the *Casamiro Resource Corp. v. B.C.* suit, under a very similar set of circumstances in the same provincial park, another mining company was not so fortunate as to win compensation for the taking of its mining claims. Cream Silver Mines' rights to mine its claims located in the provincial park had likewise been gradually eroded and finally deprived. Cream Silver Mines brought a claim action against the British Columbia government seeking compensation for the taking of its undeveloped mineral claims. The trial court agreed that the precedent of compensating for a regulatory taking had been followed in *Casamiro*, and as set in the original taking case of *Tener v. The Queen* in 1985. The trial court found that Cream Silver should be compensated for the regulatory taking of its mineral claims. However, on appeal by British Columbia, the Court of Appeals reversed the decision and denied compensation.

In *Cream Silver Mines*, the B.C. Court of Appeals found a distinguishing legal difference between Cream Silver's claim and Casamiro's sufficient to deny any monetary award to Cream Silver. Casamiro's mining claims were Crown grants where Cream Silver's



mining claims were mere located mineral claims located under an authorizing statute. The court held that Crown grants are an interest in the land, while located claims are not and are incapable of registration under the B.C. land registry. Cream Silver's claims having been made under a statutory right of location, their interests died with statutory amendments denying mining rights and no statutory provisions had been made for compensation with their loss. Cream Silver was denied compensation for the loss of its mineral claims.

#### 5.5.2. Canadian Wetlands

A search of past and current litigation involving wetlands and mining in Canada offered no cases. There probably have been none, nor will there be any until Canada has some regulation in place for wetland protection. There is very little constitutional authority permitting federal government enactment of legislation that would directly affect wetlands under §91 the Constitution Act, 1867. "Only through the seldom exercised 'peace, order and good government' clause in the preamble to §91 could the federal government develop legislation for express purposes relating to wetlands. Wetlands are, however, often incidentally affected when the federal government exercises legislative jurisdiction over fisheries, navigable waters, migratory birds, transportation, or most often, over agriculture." (Tkachuk, 1993, p.9.)

#### 5.5.3 Planning Law or Zoning Limitations

Each of the provinces have their own statutes and regulation governing every aspect of law. Following are various cases from the Provinces.

(i) Province of Ontario : The Pits and Quarries Control Act, 1971 (Stats. Ontario, c.96) : The purpose for enactment ostensibly was to provide certain protections to nearby residents, to require rehabilitation of exhausted lands and to correct proven problems of conflicting land uses. (See *Millar v. Min. of Nat. Resources and Preston Sand and Gravel, Ltd.*, [1978], 7 CELR 156, *infra* ; also, see *Re: Allied Chemical of Canada Ltd. and Township of Anderdon*, [1979] *infra*).

(ii) The Environmental Protection Act, 1971, S.O. 1971 (for a case, see *Steetley Inds. Ltd. v. A-G Ontario* [1978] 7 CELR 2 (re: air pollution by quarry)

(iii). Surface Mining on lands zoned "agricultural

In *Millar v. Minister of Natural Resources & Preston Sand and Gravel*, the Supreme Court of Ontario (Divisional Ct.), [1978] 7 CELR 156, Preston S & G operated a sand and gravel pit on lands zoned 'gravel pit'. The pits were licenced pursuant to the Pits and Quarries Control Act, 1971, (Ont.) c.96, by the Minister/NR. The subject lands were designated 'agricultural' in the local Official Plan. The Ontario Municipal Board had twice before recommended that no license be issued and the Minister/NR once previously had refused to grant the same licence.

On application for an order that the licence granted by the Minister/NR was null and void, the court held that the application be dismissed. It found that the Minister/NR had not



exceeded his authority in granting the licence as the pit's location did not contravene the local official plan and zoning by-law. Lands designated 'agriculture' are not required to meet the present and future development needs. Pits and quarries are not prohibited from such designated areas.

(iv) In *Re: Jackson and East Gwillimbury Official Plan, Amendment #8*, (Ontario Municipal Board), [1978], 7 CELR 131, an application for an amendment to the Official Plan to change the designated use from 'rural' to 'extractive' for mining gravel was denied for insufficient evidence and the application denied.

The application "was opposed by virtually all the residents" and by a local fishing club. Detailed evidence with regard to the social, economic and physical environment impact that the gravel pit would have was presented. The Board held that the evidence was not sufficiently conclusive, particularly with regard to the geology and hydrology to support the application. A further concern by the Board was expressed concerning the traffic problem that might exist caused by gravel trucks. The Board noted, too, that the need for gravel from this site was not established. The application was denied.

#### 5.5.4 Mining- Environmental Regulation Problems - Water and Pollution

(i) Ontario: In *Re Allied Chemical of Canada Ltd. and Township of Anderdon* (Ontario Municipal Board) [1979], 8 CELR 48, Allied Chemical applied to Township for approval to permit an extension of its quarrying operations beyond its lands already used.

The Board noted that a licence had been issued to Allied without a hearing pursuant to the Pits and Quarries Control Act, 1971, after operations had begun and that no objections were filed prior to its issuance. The Ontario Water Resources Commission had given approval for Allied to take water for its operation. Under the Board's zoning of restricted land use, which would thus have been in conformity with the Official Plan, an extension onto restricted lands would require approval.

The Board found that Allied had been unresponsive to complaints from members of the community regarding the lowering of the water table due to its quarrying operations, though some settlements had been reached with regard to structural damage to their properties. Consequently, the Board gave approved for only a part of the land expansion applied for by Allied.

In its reasoning, the Board found that because of the lowering of the water table by the quarrying operation, that it was incompatible with the surrounding farm and residential uses. The Board also noted that although meeting the extensive regulations of quarrying by several agencies was requisite, a responsibility to neighbours and to the community must also be met.

(ii) Nova Scotia: -A defence to a strict liability offence of stream pollution-

In *Regina v. Aberdeen Paving Ltd.* [1981] 11 CELR 25, violation by a stone and gravel operator of discharging suspended solids into a water course that may cause



pollution or impair the quality of the water for beneficial use contrary to § 16 of the Water Act, R.S.N.S. 1967, c.335, amended, was the charge.

Water used in the crushing plant for washing and cleaning the crushed stone was directed to a large settling pond surrounded by an earthen berm designed to prevent the escape of muddy water from the pond. Water was found to be leaking from the pond and the company took steps to patch the leakage. A few days later, a further discharge into the local stream was noted by Fisheries officers. The plant was shut down while repairs were made to the berm to stop the flow of muddy water. The defendant was acquitted on a charge of unlawfully causing or permitting a discharge of suspended solids into a watercourse under §16. On appeal, the case was dismissed.

Section 16 of the Nova Scotia Water Act 1967, amended by §9 of c.58 of the Acts of 1972 provides:

16. Unless approved by the Minister, no municipality or person shall discharge or deposit or cause or permit a discharge or deposit of any material of any kind into or in any well, aquifer, lake, river, stream, creek, pond, spring, lagoon, swamp, marsh, wetland, reservoir, or other water or water course or on any shore or bank thereof or into or in any place that may cause pollution or impair the quality of the water for beneficial use.

The provision is substantially the same as its counterpart in the Ontario Water Resources Act which was considered by the Supreme Court of Canada in *Regina v. City of Saulte Ste. Marie*, [1978], 7 CELR 53 with the court concluding that the offence is one of strict liability.

On appeal to the Supreme Court of Nova Scotia, the Court found that although the offence is one of strict liability, a defence is that of the exercise of reasonable care. Consideration was given as to whether proper procedures were used by the defendant to avoid the harm prohibited by the statute, and whether the defendant exercised all reasonable care to ensure that the procedures were carried out. The court affirmed the finding of the trial court that the defendant company officers had exercised all due diligence to prevent the offence. The company's employees, however, were found derelict in carrying out their duties, and the accused (company) was found not guilty of the offence.

(v) British Columbia: Discharging solids into stream from an open pit operation

The defence of reasonable care was again considered in *Regina v. Jack Crewe Ltd.* [1981], 10 CELR 120, where a sand and gravel operator allowed silt, sand and clays as a deleterious contaminant from its washing plant operation to enter a tributary, and also directly into the Coquitlam River, being harmful to a fish habitat. Samples taken at the point of discharge of the plant into the stream, above and below the discharge, pinpointed excessive suspended solids in the effluent from the Crewe settling pond as well as from the washing plant, circumventing the pond, and directly into the stream.



Suspended solids are defined as a deleterious substance under §§ 33(1) and 33. (2) of the Fisheries Act, R.S.C. 1970. Reputedly, from expert witness testimony, the range of suspended solids in streams affecting fish habitat have the following effect: 25 parts per million are ideal; 25-80 ppm is an acceptable level; 80-400 ppm would impact the productivity of a stream level; and, levels over 400 ppm result in very poor fish production.

Several samples of the defendant's plant discharge, submitted in evidence, were measured well above the 400 ppm, ranging from low four digits to five digits in ppm. The court found that the operator had a program of control, adequate in the past, but the settling ponds had not been properly and adequately maintained. Surface run-off from the pit was uncontrolled and without directed ditching. The defendant could have exercised more control, and consequently, the court was not satisfied that the violator had taken all reasonable care in discharging its duties.

The *Crewe* Court, referring to the defence of "due diligence" which may be shown by a defendant charged with an environmental crime, stated that it is not up to the Crown to prove *mens rea* (intent) or negligence on the part of the violator. To avoid absolute liability, the burden is on the defendant to demonstrate that reasonable care and due diligence was taken.

(vi) Yukon Territory: Discharging mine waste effluents into watercourses

In *Regina v. United Keno Hill Mines Ltd.* [1980], 10 CELR 43, the defendant company operated a combined open pit and underground mine and was charged with depositing waste into Yukon waters in excess of effluent contaminants discharge limits prescribed by an Industrial Water licence issued by the Yukon Territory Water Board contrary to §6(1) of the Northern Inland Waters Act, R.S.C. 1970, 1st Supp., c.28 § 6 (1).

The *United Keno Hill Mines* decision treats and analyses the attitudes and parameters that should be considered by a court in trying and sentencing for an environmental crime. Chief Judge Stuart's opinion is a classic analysis of environmental crime and enforcement attitude. It serves to illustrate the period attitude of the Canadian judicial system in hearing an environmental offence and in deciding the appropriate degree of penalty within statutorily defined limits. Its concern for appropriate justice for environmental crimes is a model to be regarded.

Case Facts:

United Keno Hill Mines Limited pled guilty to depositing waste in Yukon waters on May 1, 1979, in excess of the waste discharge limits prescribed by a water licence and thereby contravening section 6(1) of the *Northern Inland Waters Act*. United Keno Hill Mines Limited (hereinafter referred to as the accused) operates a combined open pit and underground mine at Elsa. During the period of the infraction the accused was operating under an Industrial Water licence issued by the Yukon Territory Water Board. The licence specifies a maximum allowable concentration of contaminants in the effluent discharged by



the accused into Flat Creek. The allowable limits of specific contaminants include copper - .03 milligrams per litre; cyanide - .05 milligrams per litre; lead - .2 milligram per litre; silver - .1 milligrams per litre; and zinc - .5 milligrams per litre. Further the licence requires that no discharge be toxic to fish. The licence was issued in April 1975. In January 1978, the accused applied for an amendment to the licence. In August 1978, the Water Board denied the application.

Throughout all monitoring periods in October 1978, the discharges in almost every instance exceeded the licence requirements. The accused maintained contact with the Department of Indian and Northern Affairs, co-operating and attempting to employ recommendations offered by DINA inspectors to rectify their inability to reduce discharge contaminants to licence standards,

On May 1, 1979, samples of effluent discharge were tested. On this day the discharge contained zinc contaminants in 1.5 times licence limits, cyanide in 17 times licence limits and the bio-assay proved toxic to the extent that in 32% concentrate of the sample discharge 9 of 10 test organisms were dead in 96 hours.

Since 1978, the accused invested approximately \$370,000 in attempting to resolve persisting effluent excesses, and diverted key equipment and personnel from the pit mine operation to complete construction of a third settling pond. Despite evidence of some progress in abating the excesses, as of May 1, 1979, the problem was not resolved. Throughout this period the company repeatedly asserted the licence limits were too high and not in keeping with the levels commonly established throughout North America.

Chief Judge Stuart, writing the decision for the Territorial Court of the Yukon succinctly stated that "Pollution is a crime.", adding that "each offence must be sentenced in accord with its specific facts, but pollution offences must be approached as crimes, not as morally blameless technical breaches of a technical standard."

The Court's attitude was that the severity of punishment should vary with the nature of the environment affected and the extent of the damage inflicted. In sentencing corporations for environmental offences, consideration and record review should be given to the following: (1) the criminality of the conduct, i.e., whether willful, negligent, or unintentional; (2) extent of attempts to comply with regulations; (3) genuine contribution, the size and wealth of the corporation, and profits or savings realized as a consequence of the offence; and (4) any prior criminal record of environmental offences.

In treating corporate environmental offences to control corporate activities in the public interest, Judge Stuart proposed that a variety of civil, administrative, educational and criminal devices be employed. Sanctions should be used to reaching the "guiding mind" of the corporation, for otherwise, the source of direction for the illegal activity will rarely be affected. Personal liability of the corporation's directors, officers and supervisors is necessary, otherwise, the *corporate veil*\* may afford a measure of protection for criminal conduct by diverting corporate criminal conduct into conciliatory processes or by



ignoring the criminality of responsible corporate officers. (\*Author's Note: a corporation is treated as a legal entity distinct from its shareholders where the rights and obligations of the corporation are normally separate from those of the shareholders. In many cases, particularly for medium and small-sized corporations, major shareholders are also officers and directors of the corporation, and the "guiding mind" for corporate activities. Consequently, when corporate liabilities arise, the corporate entity usually shields the shareholders from the obligations and liabilities of the corporation. This shield of protection for the stockholders is known in law as the *corporate veil*. In certain cases, the corporate veil may be "pierced" by a court in order to hold the shareholders personally liable for the corporation's actions and liabilities. "Piercing the corporate veil" is possible where it may be shown that the shareholders have been using the corporate entity as their "*alter ego*". *Alter ego* is a legal theory where the corporation's entity has been utilised by the shareholders such that, in reality, their individuality has been mixed, or no separate corporate entity has been maintained by the shareholders.) Thus, the imposition of personal responsibility necessitates an ability to identify culpable corporate officials for environmental crimes, and offers the courts the right to complete access to information related to the corporate internal allocations of responsibility and liability.

With reference to United Keno Hill Mines and its alleged water pollution, there were no prior relevant violations. No evidence was offered against Keno that it had profited through its activity of securing any competitive advantages or illegal gains, and there was no evidence of environmental damage or cause for a court supervisory order. The evidence showed that Keno was a large national corporation that had demonstrated a cooperative attitude with the governmental environmental agency to reduce its discharge levels. Keno had invested time and money in attempting to conform to discharge compliance. The government had been tolerant during a prolonged period of licence violation. The court noted a responsible demeanor of corporate officials appearing before it, having shown good faith and remorse for its acts, which the court accepted as having a positive impact on sentencing.

Taking into consideration the corporation's diligent behavior, and absent any flagrant condemnable violation activity, the court minimized sentencing of the corporation for the pollution violation, adding that "if the corporation chooses to operate, it must live within the effluent control imposed by the licence." The court set a fine of C\$1,500.

Of particular thesis interest and value in constructing a model law, where sanctions and penalties for environmental crimes are an integral part, Judge Stuart listed ten additional points for consideration by the courts in constructing appropriate sentencing to prevent future corporate environmental violations. The instructive directives are summarized as follows:



## Model Environmental Law Considerations for Sentencing of Corporate Officials for

### Environmental Crimes:

1. Statutory imposition of an affirmative duty upon senior echelon corporate officials to know and control all corporate activities;
2. A hierarchy of penalties dependent upon the degree of willfulness or recklessness attributable to actions of a corporate official;
3. Where the required degree of willfulness or recklessness cannot be established, utilize any strict liability offences as lesser included offences which pose a lesser degree of punishment;
4. Except in strict liability offences, the defence of due diligence may excuse liability;
5. Corporate officials required to report to shareholders details of convictions;
6. Courts be empowered to levy restitution orders against corporations and its officials;
7. Empower the courts to impose sanctions against professional business men to suspend their participation in corporate activities where they have used their position in the commission of a crime;
8. Where a corporation is a repeated violator, empower the courts to order reshaping of corporate decision-making, close down corporate activities, or impose court-sponsored supervision in order to remove the threat of further injury;
9. The use of continuing orders should be employed, where timely and appropriate, along with sentencing to avoid further infractions of regulations. The costs to the environment and of further prosecutions may be avoided by use of this coercive court power;
10. When the negotiating process is employed to correct and compensate victims of damaging environmental offences, participation by a public interest group or damaged individuals may make the corrective negotiations, along with the corporate offender, more effective.

The United Keno Hill Mines Court decision is unique in that the opinion written by Judge Stuart exhibited genuine concern for treating environmental offences, for finding judicially controlled sentencing methods to effectively reduce repetitive offences, and for seeking a judicially enforceable, structured, sentencing method with personally applied penalties and punishment for those persons within the corporate structure who can effectively control and bring about environmental compliance.

Such environmental offence sentencing would be made more effective than by the usual, and past employed, method of substantial fines against the corporation. Such fines are often absorbed by the corporation and passed on to the consumer through the pricing structure. Its maximum effect is where the fines may be so large as to effect its pricing in competition with non-violating and non-penalized competitors. Large fines do not so effectively mould law-abiding corporate behavior as would punishment directed and applied to the responsible corporate actors who personally determine environmental compliance for the corporation.



### 5.5.5 Planning Law, Land Use, and Mineral Properties

The “taking”, or expropriation of a shale pit for a park in Quebec in the case of *Landreville v. Ville de Boucherville*, [1978], 7CELR 128, was decided by the Supreme Court of Canada.

Landreville was the property owner. A permit for mining had been issued in December 1965 by the municipal council of Boucherville. A year later, the town adopted a resolution which resulted in a notice of expropriation. The town had decided to take the land for a park. The owner challenged the statutory right under the Cities and Towns Act, Section 605, to expropriate for municipal purposes. The owner alleged that the town was expropriating in bad faith by its alleging that the purpose was for a park, while in reality it “simply wished to acquire the land for the sole purpose of putting an end to quarrying activities.” The Quebec Superior Court found for the landowner and annulled the expropriation proceedings. The town appealed and the Quebec Court of Appeals reversed on the grounds that the landowner had not convinced the court of “blatant fraud and flagrant injustice”. The owner appealed. The Supreme Court of Canada held on review that “the municipal council had committed an abuse of power, a flagrant injustice equivalent to bad faith to the owner” and annulled the expropriation proceedings.

## 5.6 Conclusions and Comments

### Environmental Regulatory Property Takings:

A balance must be found between the nation's need for mineral production and environmental concerns. Minerals are essential to the public's health, welfare and well-being. Minerals are necessary for the public's daily living requirements; for concrete construction, road building, autos, housing, medicines, optics, energy, communications, and an infinite list that without, man would return to cave-dwelling life. The industry's slogan, “If it can't be grown, it must be mined.” sums the need perfectly. At present, from a mineral interest perspective, the pendulum may have swung far enough in favor of environmental precautions, i.e., too restrictive of mining. The environmental impact of construction minerals mining is assumed by the industry to be of little concern or consequence since the mined minerals are relatively inert (e.g., granites, limestones, sand and gravel) and contain no groundwater or surface water contaminants as found in metal mining. As stated by a Canadian consultant in *Mining Land Use & Reclamation*, in his 1977 report to Environment Canada, “Despite the controversies, debates, studies, and the resulting statutes and by-laws (not only in Ontario but throughout Canada), however, very little is presently known regarding the magnitude of the impact on the land resource base caused by mineral aggregate and industrial mineral production.” (Blakeman, 1977, p. 2).



Hence, the environmental justification for any possible over-regulation of the industrial minerals, even if true, has been one of "better safe than sorry."

*Keystone* was a fair decision. No mining entity should be allowed noxious-use activity of their property that harms another's property, or the public health and welfare in general. In addition, as to alleged values for compensation of losses for less than full use of its properties and recovery of the coal reserves required to be left in place to support the surface, the Court's analogy was right on point: that a statutory "requirement that a building occupy no more than a specified percentage of the lot on which it is located could be characterized as a taking of the vacant area as readily as the requirement that coal pillars be left in place. Similarly, \*\*\* one could always argue that a set-back ordinance requiring that no structure be built within a certain distance from the property line constitutes a taking because the footage represents a distinct segment of property for takings law purposes." (*Keystone*, id. at 1249).

Obviously, as stated by Kusler and Meyers (National Wetlands Newsletter, Nov./Dec. 1990,. p.7), " Not every square foot of private property can be used for its 'highest and best use'."



## **CHAPTER 6**

# **A REVIEW OF THE ENVIRONMENTAL ERA REGULATORY ACTIONS FOR LANDFILLING WITH LITIGATED INTERPRETATIONS**

## **6.1 Introduction**

A primary, important, related problem that accompanies landfilling is the danger of contaminating ground waters, and even surface waters, from leachate escaping from the landfill. Another prominent problem is the gas generated from landfills, primarily in the form of methane and carbon dioxide. The major areas of regulation concerning landfill and solid waste disposal are reviewed.

By reviewing landfill sites and operations that have taken place in the recent past along with ensuing allegations of environmental damage in court cases, it is hoped that insight may be obtained from former and recent practices. The past has value in serving to steer a truer course in the future. Therefore, a review of earlier areas of law which grew to form modern environmental law leads us into areas of, viz., public health law, torts of nuisance and trespass, and zoning or planning law.

## **6.2 United Kingdom**

Intervening amendments over the decades since the Public Health Act of 1875 resulted and yielded the more comprehensive Public Health Act 1936 which in turn was supplemented by the Public Health Act of 1961 and the Act of 1969 (Recurring Nuisances). Part III of the Public Health Act 1936 still deals with nuisances and offensive trades. The 1969 Act deals with refuse disposal, water and clean air, et al. In a country where 90% of the waste is tipped as landfill, the Public Health law reached major development with the enactment of the Control of Pollution Act 1974 in which basic environmental protection was established.

In England, waste disposal had long been a 'county matter' handled by the county councils, while in the metropolitan areas the districts are the authorities. In Wales, waste disposal was generally a function of the district councils. From 1974, operation of landfills was governed by the TCPA and COPA 1974 under §§ 3 -11 (1976). From 1976, waste disposal sites required licencing. Licencing conditions could be varied, e.g., duration, type and quantities of waste. Hughes (1992 op.cit.) reports that there was mounting criticism of the law of waste disposal throughout the 1980's under the Control of Pollution Act (COPA) 1974. New provisions were expected to correct former shortcomings of COPA with the coming in force of the Environmental Protection Act (EPA) 1990 by



November 1991, or shortly thereafter. For a period in 1991, as a result of *Leigh Land Reclamation Ltd. v. Walsall Metropolitan Borough Council* [1991] 3 JEL 281, controls and enforcement conditions for landfills were limited by that case law to situations where only a direct breach of a condition of waste deposit or treatment was involved. During the interim, from the *Leigh Land* decision and until the EPA 1990 was implemented in 1992, a number of waste disposal sites were reported as ineffectively controlled.

#### 6.2.1 Waste Disposal under the new EPA 1990

The new act was designed to make improvements for waste handling authorities and to tighten up on weaknesses in procedures under COPA 1974 for waste collection and disposal.

Starting with a revised definition of 'controlled waste', which had been defined under COPA 1974 as household, industrial and commercial waste, it was expanded to include scrap, effluents, unwanted surpluses from processes, broken or worn out items, spoiled or contaminated material (but not anything explosive) and anything discarded. It should be noted that under both the older and newer definitions of commercial waste, waste from mines and quarries are excluded. Although mining wastes are excluded under Part II of EPA 1990, the Secretary of State has power under §§ 63 and 75(8) to deal with this exclusion.

A new series of authorities has been provided for, e.g., Waste Regulation Authorities (WRAs), Waste Disposal Authorities (WDAs), Waste Collection Authorities (WCAs) and Waste Disposal Contractors (WDCs). The specific responsibilities of each of the authorities are given under the new act. The WRAs are the principal control agencies for waste treatment and disposal in their respective areas. It should be noted that the WRA must confer with the National Rivers Authority (NRA) in the preparation of plans for concern of water pollution before a disposal site can be approved.

Licensing of waste disposal sites, although not new, requires that an operator holding a Waste Management Licence (WML) and functions under a new requirement of a 'Duty of Care' (DOC). Failure to comply with the waste regulations is an offence. Where an offence is proven regarding controlled waste, the person found guilty may be, on summary trial, imprisoned up to six months or fined up to £20,000, or subject to both. Where special waste is involved, imprisonment may be increased up to 5 years.

The many new changes made in the EPA 1990 were designed not only to make for greater efficiency of waste disposal, but hopefully **to instill greater public confidence in landfill management.** (emphasis added).

#### Mandated recycling duty

A new feature of the EPA 1990 is §49 which imposes a duty on the WCAs to plan for recycling of household and commercial wastes collected. The plan must state the kinds and quantities of such anticipated waste to be purchased and prepared for recycling;



arrangements for waste disposal with contractors, plant and equipment to be used; and, the estimated costs, and/or savings attributable to the recycling under the plan.

Recycling of MSW is discussed further in Appendix A-1 § 2, Current Methods to Relieve Urgency for Landfill Space, and § 3, Current Landfill Information.

#### 6.2.2 Evidence that Sand and Gravel Pits Are Compatible for Landfilling

The compatibility of landfilling and sand and gravel mining in the U.K. was brought to light in *Durham County Council v. Sec. State for Environment and Tarmac Roadstone Holdings Ltd*, [1989] T. & C.P., discussed earlier in Ch. 5 § 3.6 (iii), where the worked-out sand and gravel pits were being used by the County for disposal of refuse and the County opposed further mining, the Court of Appeal stated in its finding of granting former mining rights, “\*\*\* mining sand and gravel are only extinguished when they are inconsistent with the new use.” Since further mining of sand and gravel was compatible with refuse burial in the mined-out pits, the Council's appeal was dismissed.

Further examples of the use of sand and gravel pits for MSW landfilling in the U.K. are entered into evidence are : Allerton Park Pit, *infra*, Appendix A-2, § 8.3 and Sutton Courtenay, pit, Oxfordshire, at A-2 § 8.4

In the U.S. and Canada, evidence of sand and gravel pits serving as landfill sites are mentioned at various parts of this thesis; in the U.S, e.g., a 125-acre (50.59 ha) sand and gravel pit in the San Gabriel Valley, California (*infra*, Ch 11 § 5.1), Lemons Gravel pit, Dexter, Missouri ; in Canada, e.g., Hale's sand and gravel pit located in the town of Newcastle, Regional Municipality of Durham , Ontario [*infra*, Ch. 6 §4(i)].

### 6.3 United States

In 1976, Congress enacted the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq., to deal with municipal solid waste and hazardous waste disposal. As a result, an office of Solid Waste was established within the EPA. Under the Code, federal financial and technical assistance is made available to state and local governments for the development and implementation of solid waste plans and programs that meet federal standards. The states must define boundaries for regional solid waste management and identify state regional and local agencies responsible for implementing the plan. The term “solid waste” is broadly defined and includes not only municipal and industrial waste, but includes mining waste.

The EPA issued regulations establishing federal criteria for sanitary landfills that are environmentally acceptable. EPA also published an inventory of all facilities or sites in the U.S. that do not meet the criteria. In order for states to be eligible for financial aid, they were required to adopt a compliance schedule for bringing those sites into compliance with



the criteria or closure within the first five years. This new area of regulation provided more environmental litigation to probe its parameters of control.

### 6.3.1 Cases Illustrating Landfilling Conflicts Under the EPA's More Stringent Regulations

#### i) A Case of Contested Landfill Expansion

The Illinois Environmental Protection Act provides for licensing of MSW sites under its § 39.2. The relevant part of the regulation for the following illustrative case provides as follows:

“(a) The county board \*\*\* shall approve or disapprove the request for local siting approval for each regional pollution control facility which is subject to such review. An applicant for local siting approval shall submit sufficient details describing the proposed facility to demonstrate compliance, and local siting approval shall be granted only if the proposed facility meets the following criteria:

(i) the facility is necessary to accommodate the waste needs of the area it is intended to serve;

(ii) the facility is so designed, located and proposed to be operated that the public health, safety and welfare will be protected;

(iii) the facility is located so as to minimize incompatibility with the character of surrounding area and to minimize the effect on the value of the surrounding property;

(iv) the facility is located outside the boundary of the 100-year flood plain or the site is flood-proofed;

(v) the plan of operation for the facility is designed to minimize the danger to the surrounding area from fire, spills, or other operational accidents;

(vi) the traffic patterns to or from the facility are so designed as to minimise the impact on existing traffic flows; \*\*\*“

The EPA further provides under its § 40.1(b) that any third party may petition the Illinois Pollution Control Board within 35 days to contest the approval of any action of the county board. [Ill. Rev Stat 1989, ch.111-1/2, para. 1040.1(b).]

In Bond County, Illinois, the Board of Supervisors granted an applicant's request for expansion of a regional pollution control facility site. A citizens' group of 35 persons opposed to the expanded landfill filed a petition with the Pollution Control Board for hearing. The Pollution Control Board affirmed the County Board's decision. The citizens' group appealed.

The case is illustrative of an encounter with the NIMBY syndrome tactics brought by a local citizens' group. The Concerned Citizens Group was less concerned with potential effects of pollution and groundwater contamination than with decreased values for their properties. They naturally mustered as much resistive argument as they could to affect a defeat of a much-needed waste disposal site for their own community. In addition to strongly protesting under §39.2 (iii) above, they argued increased traffic problems, under § 39.2 (vi) above. Additionally, to make the approval of the site's expansion more palatable, or more acceptable to the community, aesthetics were generously applied by the applicant in utilising only 38% of the new acreage for the actual purpose of waste burial. Such a low yield-use of land does not comport with land use conservation. However, it



appears that a better land-use percentage in keeping with conservation of land use would only incur more vehement protest by the concerned citizens thereby defeating the needed disposal space.

In *File et al v. D & L Landfill, Inc.*, 579 N.E.2d 1228 (Ill.App. 5 Dist. 1991) a civil engineer who had helped prepare the application testified for the applicant. 73 acres (29.54 ha) out of 193 (78.11 ha) would be used for trash placement. Planning included the usual landscape screening; 200-foot (60.96 m) setback between property line and trash placement; soil borings indicated the site was underlain by a glacial till with numerous sand lenses throughout associated with groundwater. Excavation of the sand lenses was planned down to hard till and replacement with clay, as well as a bottom liner of 10-feet (3.05 m) of clay at the bottom. Applicant hoped to use existing glacial till as its clay liner. A sheet of synthetic material was to be placed on top of the glacial till, covered by a foot of sand, which would act as the leachate collection system. Trash would be deposited in layers of four feet and compacted. A daily cover of dirt on the trash would be applied; ten to fifteen monitoring wells were to be placed, with 3 or 4 upgradient for a background analysis of the groundwater. An independent firm would sample and test the ground water from wells quarter-annually for contaminants.

A report from the Illinois Geological Survey found a moderate chance of contamination from the site expansion; that sand lenses were widespread in the area and served as a source of drinking water for people near the site; that native geological materials at the site offered only a moderate to low level of protection to the shallow sand and gravel aquifers. The applicant's engineer disagreed with the State's report and the court accepted his testimony as adequate refutation.

Further extensive testimony was reviewed, including anticipated depreciation of land values. The Court agreed with the Pollution Control Board that the findings were not against the manifest weight of the evidence that the applicant had made a reasonable effort to minimize the impact of the expanded landfill on the surrounding area and properties, and affirmed the decision allowing the site permitting. The Court noted that "a determination of whether a regional pollution control facility was designed, located and proposed to be operated so that public health, safety and welfare would be protected is purely a matter of assessing the creditability of expert witnesses."

With regard to the increased traffic charge, the court found that the applicant had made a reasonable effort to minimize impact of the expanded facility on existing traffic flow and would be impacted only slightly by an insubstantial increase in truck traffic since all trucks entering or leaving the expanded landfill would be using the existing entrance.

ii) Landfill Leachate Dumping Into Navigable Waters of the U.S. Challenged

This case is offered to demonstrate that where the local, or area, environmental authorities fail to implement regulations concerning a landfill's leachate contaminating surface waters by illegal disposal, a citizen's suit may be filed to enforce regulations.



In *New York Coastal Fishermen's Association v. New York City Department of Sanitation, N.Y.C. Dept. of Environmental Protection, et al* , 772 F. Supp. 162 (S.D.N.Y. 1991) , an association organized for the preservation for Long Island Sound commenced a citizens' suit under the Clean Water Act (CWA) against city and municipal agencies, challenging dumping of leachate collected from a landfill into the bay as a temporary measure in cleanup of leachate at the landfill which had been adopted pursuant to an agreement with the New York State Department of Environmental Conservation (DEC).

The Pelham Bay landfill, located in Bronx County, had been operated from 1963 to 1979 by the N.Y.C. Department of Sanitation. The landfill was then closed, but not effectively capped. Starting about 1982, complaints were lodged by local residents about leachate streams and puddling in the landfill area. After investigation, DEC declared the landfill an inactive hazardous waste site. DEC and DOS entered into an Order on Consent in 1985 requiring DOS to submit two leachate management plans to the State, one temporary and one permanent. Three years later after much delay, DOS submitted an interim proposal which was simply collection and recirculation of the leachate through the landfill. DEC rejected the plan. An alternate plan was approved and put into effect in September 1988 for leachate collection, passing it through a stormwater sewage system with discharge into Eastchester Bay, feeding into Long Island Sound. In April 1990, a second Order on Consent required completion of the permanent plan by 1995 for remediation of the landfill.

The N.Y. Coastal Fishermen's Association filed its complaint in July 1990, contending that the agencies were in violation of the CWA by dumping the leachate into the waters of the U.S., and further, that they did not have a permit for discharging the pollutants. The Association sought injunctive relief to stop further dumping of leachate and for civil penalties levied on the agencies.

The municipal agencies offered a defense against the citizen suit claiming that there had been diligent prosecution by the state to correct the pollution thereby precluding a citizen suit. However, the court rejected their argument noting that a claim of state involvement since 1983 without correction of the problem "flies in the face" of "diligent prosecution". The court stated that immediate injunctive relief would not be granted in the citizen suit under the CWA because it would be unworkable; a permanent injunction would be entered permitting the state and municipal defendants reasonable time to develop an alternative plan for the landfill cleanup.

### iii) Denial Of Permit for Landfill Expansion Based on Average Groundwater Levels

This case is offered to illustrate the point that protection of ground water is sought in landfill planning.

A permit to expand an existing Type I municipal solid waste disposal site near Rosenberg, Texas, by the State Health Department was challenged by local residents for



fear of ground water contamination and that the Health Department had “arbitrarily” established the ground water level for the liner design of the site’s extension.

The expert engineers that testified as to the ground water level in the permit-expansion hearings varied greatly in their conclusions derived from different sets of data. One expert established the seasonal high ground water table at a depth of sixty-feet (18.9 m). The other expert engineer set the level at sixteen-feet (4.88 m). As a result of the substantial variation of the experts’ water table levels, the Health Department set the level of the seasonal high ground water table for design purposes at thirty-three feet (10.06 m). On the face of the testimony and evidence, it appeared that the Health Department had averaged the two experts’ findings and allowed a safety margin of five-feet in arriving at the figure of 33-feet for the permit’s approval. The Health Department denied the residents request for a permit re-hearing and the residents filed for judicial review. The lower (trial) court affirmed the finding of the Health Department allowing the permit. Flores appealed.

In *Flores v. Texas Dept. of Health*, 835 S.W.2d 807 (Tex.App.-Austin 1992), Flores, the local residents, the Appeals Court found that the Health Department acted arbitrarily and failed to base its finding on substantial evidence. This was substantiated by an amended answer to the court by the Health Department admitting that it had acted “arbitrarily” in establishing the ground water level. The Court, in remanding the action to the Health Department for a new determination, noted that “if the data establishing the ground water level at 16-feet is accurate, ... a liner designed to accommodate a seasonal high ground water table of 33-feet would not be strong enough to prevent ground water contamination.”

#### 6.3.2 Interstate Commerce Movement of MSW

The arguments litigated in the following two cases are offered to illustrate that MSW is being transported great distances and across territorial jurisdictional lines to remote landfill sites. This point is to give support to the argument, in Appendix A-1, Current and Future Trends for Waste Disposal, that many of the large, remote, non-coal, metallic mineral, open surface mines that are not clustered near urban areas as are the construction mineral pits, should be seriously considered as landfill sites. Utilisation of these larger size, remote location pits would give space and volume relief to those smaller construction pits in the urban areas.

##### i) Out-Of-State Solid Waste Surcharge Fees Found Constitutional

An operator of an Oregon solid waste disposal facility, the County in which the facility was located, and a Washington solid-waste disposal company challenged the constitutionality of Oregon’s Department of Environmental Quality’s (DEQ) rules adopted by the EQ Commission which imposed a greater surcharge for disposal of out-of-state waste at the in-state sites than on disposal of in-state waste.

In *Gilliam County, Oregon, Oregon Waste Systems, Inc., and Columbia Resource Co. v. Dept. Of Env. Quality*, 837 P.2d 965 (Or.App.1992), the petitioners argued



correctly that under the federal commerce clause, that states cannot enact laws that discriminate against articles of interstate commerce unless there is some reason, apart from their origin, to treat them differently.

Petitioner Oregon Waste Systems (OWS) owns and operates a regional solid waste facility (Columbia Ridge Recycling Center and Landfill) in Gilliam County, Oregon. Both in-state and out-of-state generated solid wastes are disposed of at the site. Petitioner Columbia Resource Company (CRC), under a 20-year contract with Clark County, Washington, disposes of solid waste at the Finley Buttes Landfill in Morrow County, Oregon. Out-of-state solid waste is surcharged at \$2.25 per ton, while in-state waste is capped by law at \$.50/ton.

On review, the court found that the State appeared to have a reason apart from origin to treat out-of-state differently. "When state wastes reach the disposal site, it has already been subjected to state and local regulations and fees that are designed to reduce its volume and alter its character in order to limit the risks associated with dumping it on the ground." By contrast, "it first encounters out-of-state waste at the disposal site." It also found that "the legislature had made it abundantly clear that it intends only to make 'out-of-state generators pay their fair-share of the costs and no more' ". Furthermore, Oregon law had expressly forbidden EQC to impose fees on out-of-state waste that exceed the costs of management of that waste.

The higher fees for dumping of out-of-state solid waste were found to be "not excessive" and constitutional.

#### ii) Constitutionality Of Waste-Flow (Interstate) Control Ordinances

A Pennsylvania court looked at the constitutionality of a county and municipal ordinance regulating waste-flow control in Lehigh County and the included cities in *Empire Sanitary Landfill v. Comm. Dept. Environmental Resources*, 645 A.2d413 (Pa. Cmwlth. 1994). The landfill operator, Empire, and a trash hauler, Danella Environmental Technologies, Inc. (Danella) filed an action seeking declaratory and injunctive relief against Pennsylvania Department of Environmental Resources (DER), Lehigh County, the Lehigh County Department of Planning and Development, the Office of Solid Waste Management.

In addition to the Act's alleged unconstitutionality restricting interstate commerce under the Commerce Clause, Empire specifically sought a declaration that its Empire-Danella contract was protected under the Act; and, that contracts for the collection, transportation and disposal of waste entered into before the county sought to implement its plan through the adoption of its waste control ordinance, were pre-existing contracts protected by the Act as well as by the Constitution's Contract Clause to not impair private contracts.

The county's ordinance provided for ten-year contracts, stipulating a fixed initial price per ton (and a fixed annual escalator), with each of the disposal facility contractors.



The contracts were not “put or pay” in that the delivery of specified tonnage is not required. However, the contract provided that Lehigh County will use reasonable efforts to cause delivery to each contractor of the region’s generated waste. The plan did not seek to alter the County’s existing municipal waste collection and hauling system which, in large part, utilized private haulers.

#### Market Participant Doctrine Considered versus Market Regulator

As to its constitutionality, DER argued that the Commerce Clause should not be a constraint as long as the bidding process did not exclude out-of-state businesses. In its review of the County’s ordinances under the Commerce Clause, the Court was guided by the “market participant doctrine” as developed by the U.S. Supreme Court under which states and local governmental subdivisions may engage in activities without violating the Commerce Clause. Under that doctrine, when a governmental entity is a market participant (to a contract) rather than a market regulator, the Commerce Clause is not applicable. “A prime example is where governmental contracts are awarded which contain preferences for local businesses even though the successful bidder was not the low bidder.

Illustrative examples were noted in former federal case decisions. In *White v. Mass. Council Constr. Employers*, 460 U.S.204 (1983), the City of Boston was held to be a market participant in awarding contracts funded by the city, where the contracts were to be performed by a work-force consisting of at least 50% Boston residents.

By contrast, in *W.C.M. Window Co. v. Bernardi*, 730 F.2d 486 (7th Cir. 1984), it was held that an Illinois law requiring contractors on any public works project or improvement for a state or political subdivision employ only residents of the state, unless the contractor certified either that such workers are unavailable or incapable of performing the work, violated the Commerce Clause.

The Court distinguished *White* from *Window* because the Illinois law applied to all public construction contracts, not only to those which the state was a party.

Similar to *White*, in *Swin Resource Systems v. Lycoming County*, 883 F.2d 245 (3rd Cir. 1989), the county, as a landfill operator, was found to be a market participant, where its regulations gave county residents preference in the use of a county-operated landfill did not violate the Commerce Clause.

(iii) Lastly, in *Waste Recycling v. S.E. Alabama Solid Waste Disposal*, 814 F.Supp. 1566 (M.D. Ala.1993), a governmental authority had been established by 36 local municipalities seeking to build a solid waste disposal site. Under the provisions for the Authority, the cities were required to enact flow-control ordinances requiring that all waste collected by private or public haulers must be disposed of only at the Authority’s facility. The court noted that the ordinances were regulatory in nature and that the city- contracting parties could only implement the contractual provisions by their sovereign power. Private participants would not be able to implement the contractual provisions.



The Pennsylvania Court found the case at bar to be similar to *Waste Recycling*. Lehigh County did not engage in a bidding process that excluded out-of-state landfills, but it was unable to implement provisions of its contracts without adopting the county ordinances at issue. In so doing, Lehigh's ordinances subjected other non-contractual parties, e.g., haulers, other landfills and generators of solid waste to their contract. Lehigh was thus, acting as a market regulator, and the "market participant" doctrine did not apply.

(iv) Consideration of Waste Regulations' "Even-handed" Treatment with Incidental Effects versus obvious Facial or Practical Discriminatory Effects

Waste hauling and disposal have been recognized as articles and services in interstate commerce, thus involving Commerce Clause concerns [*City of Philadelphia v. New Jersey*, 437 U.S. 617 (1978) and *Hughes v. Oklahoma*, 441 U.S. 332 (1979)]. The U.S. Supreme Court in *Hughes* relied on a 1970 decision, *Pike v. Bruce Church, Inc.*, 397 U.S. 137 (1970) where it was stated that inquiry for the Commerce Clause must consider whether the regulation being questioned regulates "even-handedly" with only "incidental" effects on interstate commerce, or if it discriminates against interstate commerce either on its face or in practical effect. Additionally, it must question whether the regulation serves a legitimate local purpose, and if so, whether alternative means could promote this local purpose as well without discriminating against interstate commerce.

Where a regulation is found to have a local purpose that outweighs its discriminatory interstate effects and there are no non-discriminatory alternatives which accomplish the local purpose intended, it may be found valid. Conversely, where it discriminates against interstate commerce and serves no superior legitimate local purpose, it will be found invalid.

In *Empire*, the Pennsylvania Court found that the contractor Empire was "precluded from challenging the discriminatory landfill designation in the plan. The waste-flow ordinance the county adopted, by itself, does not discriminate against interstate commerce, however, the ordinance does have an incidental effect on interstate commerce by precluding, in application, the transportation of waste out-of-state."

The Pennsylvania court stated that "until recently, the U.S. Supreme Court has not squarely addressed a Commerce Clause challenge to flow-control ordinances such as" the Lehigh one at issue until it considered the case, *C & A Carbone v. Town of Clarkstown, N.Y.*, 114 S.Ct. 1677 (1994). In the *Carbone* case, Clarkstown adopted a waste flow control ordinance similar to that of Lehigh. "Clarkstown agreed to construct a solid waste transfer station to separate recyclable from non-recyclable waste and operate the station for 5 years. Under the agreement, the town would guarantee a minimum waste flow to the facility, and the contractor would charge haulers a tipping fee that exceeded the cost of disposal for non-sorted waste in the private market. The Court held that the ordinance violated the Commerce Clause.



“The (Supreme) Court stated “While the immediate effect of the ordinance is to direct local transport of solid waste to a designated site within the local jurisdiction, its economic effects are interstate in reach \*\*\* even as to waste originating in Clarkstown, the ordinance prevents everyone except the favored local operator from performing the initial processing step. The ordinance thus deprives out-of-state businesses of access to a local market.”

The Pennsylvania court concluded that although the Lehigh ordinance was not facially discriminatory, “the ordinance does have an incidental effect on interstate commerce because (1) it requires disposal of county-generated waste only at designated facilities, and (2) only facilities within the county have been designated. Thus, in application, the ordinance burdens commerce by precluding the transportation of county-generated waste to out-of-state facilities. \*\*\* Under the Pike decision, a court will strike down a regulation ‘only if the incidental burden on interstate commerce is clearly excessive in relation to the putative local benefits.’ The burden on interstate commerce in this case is significant - no county-generated waste may be transported to a non-designated landfill, hence, no out-of-state facility may compete for its article of commerce. Although one of the local benefits of having waste disposed at one of the designated sites is the certainty of available landfill space for the 10-year life of the county plan, that benefit does not outweigh the burden on interstate commerce.” Accordingly, the Pennsylvania court found the Lehigh ordinance constitutionally invalid.

#### The Impairment of Contract Issue - Protected Contracts

Two types of contracts were at issue in *Empire*, viz., that made between Empire and Danella before the adoption of the county ordinance and those made between Danella and its customers. The Court gave credence to the Constitution’s Contract Clause by stating that “a statute in force at the time of the making of a contract legally cannot impair the contract. \*\*\* and, statutes generally should not be applied retroactively to a contractual relationship where the application would alter existing obligations.”

Empire’s contract with Danella required it to keep a certain amount of landfill space available for Danella’s disposal. Danella’s contracts with its customers were made for set charges which were set in reliance of its agreement with Empire. Any retroactive application of the ordinance would affect and alter prior contractual obligation by those parties. Thus, the Court found that contracts entered into before the adoption of the Act are protected by the Contracts Clause. Conversely, those contracts entered into after the ordinance adoption date are unprotected. As a note of caution regarding the impairment of contracts, the Court added, “The Contracts Clause of the U.S. Constitution ‘does not operate to obliterate the police power of the States.’, and ‘The prohibition against impairing contracts is not to be read literally.’ “



## 6.4 Canada

The earlier form of an individual nuisance claim before the existence of environmental regulations for landfills is illustrated by a Manitoba case of 1925 against a municipality for piling garbage in the town.

In *Still v. Rural Municipality of St. Vital*, [1925] 2 W.W.R. 780 (Man. K.B.), the piling by a municipality of a large quantity of garbage on the bank of the Seine River at a place within a residential district was held to constitute an actionable private nuisance. The evidence presented to the court was that “this garbage heap gives forth an odour, and is also the breeding place for rodents and flies, and has become a nuisance “ and to be a health hazard in violation of the Public Health Act. The plaintiff, Still, was held to be entitled to nominal damages and to a mandatory injunction requiring the municipality to abate the nuisance “and keep it abated.”

The newer practice of sanitary land filling, requiring daily compaction of the refuse and daily placing of a soil or clay cover, had been proscribed in only a few Canadian provinces by the 1980's. Compliance was not universal, nor was it uniform throughout the provinces. For example, the dumping of waste and refuse in Manitoba Province did not come under control until 1970 with the enactment of its Clean Environment Act, R.S.M. 1970, the Municipal Act 1970 (Man.), The Public Health Act 1970 and the Planning Act, R.S.M. 1970. Waste disposal in Saskatchewan Province was unregulated prior to 1972. In 1972, the Saskatchewan Health Act was created to regulate the development and operation of landfills, which, incidentally, numbered 800 sites in the province by January 1994. Licencing of landfill operations in Ontario was not started until 1970.

The lack of enforcement of pollution control and contamination of public waters is illustrated in Ontario by the case of *Plater v. Town of Collingwood et al*, Ontario High Court of Justice [1968], 1 O.R. 81, wherein the plaintiff Plater brought a private claim in nuisance against the municipality for burning garbage and refuse on an adjoining property from his farm where the smoke and noxious, foul and penetrating odours interfered with the reasonable use and enjoyment of his property. It should be noted that the municipality opened this new site in 1965 after closing the former city dump for reason that it was “unsanitary and threatened to contaminate Black Ash Creek and the water supply to private wells.” Ontario MSW history was about to repeat itself.

The municipality hauled an average of 22 loads of garbage and refuse per day. Its volume was reduced by daily low heat burning. Covering with sand and gravel from the property was done at irregular intervals. Although evidence by an expert showed that winds brought the smoke across the plaintiff's property between 10 and 25% of the time, sufficient loss to plaintiff's tomato and cucumber crops convinced the court that damages were due plaintiff. In addition to a monetary award for diminution of crop value, the court issued a permanent injunction against the city to abate burning of refuse and an order to



employ sanitary land fill methods. The court noted that the property selected for the land fill was made under the Municipal Act, 1960, (S.O.c.249, s.379(1) para. 75) and that the site was well adapted for the purpose. "It does not constitute an eyesore, being sheltered from the highway by trees, and the soil contains the necessary sand and gravel conditions adaptable to the sanitary land fill process. It is not necessary to enjoin the use of the site itself. But, if in the process of operating the dump a nuisance is committed, it is not a defence to the municipality to say that the operation of the garbage dump is beneficial to its residents, or that the chosen site is the only suitable one in the municipality; nor can it be said that open air burning is a necessary and inevitable part of the garbage disposal process. \*\*\* the modern trend is away from open dump burning and towards incineration or sanitary land fill methods, \*\*\* I believe that the sanitary landfill method is quite reasonable and feasible. The only inconvenience or expense to the defendants (the city) of the sanitary land fill method is that, there being no reduction in volume by open air burning, the life of the dumping area is necessarily shortened by as much as 50%. There is no reason, however, why the defendants should gain an economic advantage by inflicting harm on a neighbour's property."

When considering that the 1925 *Still* case in Manitoba, supra, was in the pre-environmental regulation era, it would seem unnecessary after the advent of a provincial environmental and health act for an individual in 1979 in Manitoba to have to pursue a similar claim in nuisance. Nevertheless, MSW disposal history repeated itself in *Wiebe v. Rural Municipality of De Salaberry* [1979], 11 C.C.L.T. 82 (Man. Q.B.). Wiebe purchased an 80-acre tract of land prior to the municipality's purchase of a smaller tract for an intended garbage disposal dump, adjacent to and across the road from Wiebe's. Wiebe built a home on his land with the town's knowledge and intended to start an animal feed-lot. Shortly after, the town began its refuse disposal, without notice or hearing for the local residents and Wiebe to raise objections. Dumping of refuse was open, without cover and utilized open, or low heat burning for volume reduction. The town had proceeded under its power and authorization by the Municipal Act (Man.) which was permissive rather than mandatory. Under that Act, municipalities were directed to make provision for waste disposal, but without specific direction as to location or method used in operating such a disposal facility. Consequently, Wiebe suffered noxious odours, smoke and fumes, swarms of insects, and a proliferation of rodents, all of which diminished the quiet use and enjoyment of his home and property. In bringing his complaint against the municipality, Wiebe relied solely on the tort of nuisance, seeking only injunctive relief and damages. He had made no claims of violation of statutory duties by the town.

De Salaberry's defence was (1) that the plaintiff "came to the nuisance"; (2) it had acted under statutory authority, viz., the Municipal Act (Man.), the Clean Environment Act and the Public Health Act (Man.), all of which directed municipalities to make provision for



waste disposal; and (3) there was an overriding benefit to the public of such necessary facilities.

The Manitoba Court (QB) found that the old doctrine of “coming to the nuisance” was not supported by the facts and that Wiebe had come first; furthermore, that doctrine is now given little credence in law and does not prevent a plaintiff from obtaining a remedy.”

Such coming will only be significant to the extent that the character of a neighbourhood is relevant in determining liability.”

The Court found the town’s defence of an overriding public benefit to be equally ineffectual, stating that “ Private rights should not be subordinated to such considerations in the law of nuisance.”

The most plausible defence, according to the Court, was that of acting under statutory authority of the Municipal Act to pass by-laws with a view to acquiring and operating lands for waste disposal; and under regulations of the Clean Environment Act and the Public Health Act. As noted, the Acts were permissive rather than mandatory, allowing the municipalities to act without direction as to location or method of operating the waste disposal sites. Where statutory authorization is permissive, there is an accompanying obligation to have consideration for private rights; “ and, only if the nuisance could be shown to be an inevitable consequence of such facilities (wherever situated and however conducted) would the statute provide a defence.”

The Court allowed an injunction, and ordered the municipality to operate the dump through better management and supervision ; to cease burning; to use earth cover frequently, and all actions to be in compliance with the Clean Environment Act. The Court allowed an award of \$2,500 damages to Wiebe for a nuisance along with litigation costs.

With the passage of another six years, to 1985, in spite of the enactments of many more environmental regulations and controls over waste materials disposal, the claim of ‘nuisance’ for a land-fill, or even as an anticipated nuisance while in the planning stage, still lingered in the courts. For example, in *Manicom et al v. County of Oxford et al* [1985] (the High Court of Justice, Ontario, Divisional Court), 52 O.R.(2d) 137, Oxford County planned to build a land-fill site. A joint board appointed under the Consolidated Hearings Act, 1981 (Ont.). c.20, rejected the county’s application for approval of the land-fill site, but that decision was reversed by the Lieutenant-General in Council. The certificate was granted authorizing the site under the Environmental Protections Act, R.S.O. 1980, c. 141.

Local residents and property owners in the vicinity of the proposed site then brought an action for an injunction to restrain the county from building the land-fill based on claims of nuisance, negligence, breach of riparian rights, and for a declaration that the approval by the Lieutenant-General in Council was void under Section 7 of the Canadian Charter of Rights and Freedoms in that the proposed site threatened the life, liberty and



security of the local residents. The local citizens' claim under the Charter was dismissed and on appeal, the High Court of Justice allowed the dismissal. However, the High Court found the common law claims, particularly for an anticipated nuisance, to be meritorious. The Court only allowed the nuisance claim to be stayed, i.e., in the event conditions are not complied with by the landfill project during its operation, plaintiffs may re-instate the claim for nuisance.

Judge Potts, writing a dissenting opinion in *Manicom* stated that "It is important that the county consider the welfare of the community at large, but it is the duty of the court to protect individuals from unauthorized and serious encroachments on their rights. \*\*\* Not only does the county not have the statutory authority to cause the alleged nuisance, it is prohibited by statute from doing so, Section 16 (1) of the Ontario Water Resources Act, R.S.O. 1980, c.361, makes it an offence for a municipality or other person to: " \*\*\* deposit \*\*\* any material of any kind that may impair the quality of the water of any well, lake, river, pond, spring, spring, reservoir, or other water or water course \*\*\* ".

The *Manicom* opinion referred to an Ontario case of three decades earlier, *Stephens v. Village of Richmond Hill*, [1950] O.R. 806, 4 D.L.R. 572, in which the municipality's sewage disposal plant emptied its effluent and water from storm sewers into a local stream. The plaintiff's allegations, corroborated by witness testimony, of destruction of the fresh water, fish life and watercress growth, replacing it with foul odors, trash (toilet paper, etc.) caught on the vegetation, slimy, murky waters, that no longer allowed swimming, were awarded damages by the court for the nuisance claim. An injunction was allowed against further pollution, but the Village was allowed a period of time for abatement of the problem. Significant in the case was that the municipality had put forth an argument sounding in governmental immunity, claiming that when governmental acts are authorized, as the installation of a waste disposal site, there can be no claim of nuisance and damages made against it. The Ontario courts declined to support the immunity arguments made in both 1950 and 1985.

A series of similar claims in Ontario cases occurred in the period of the 1950's to 1960's where down stream water rights were invaded by public-owned treatment works (POTW's) discharging polluted waters or effluent, e.g., *Burgess v. City of Woodstock* [1955] O.R. 1955, 814 (where the sewage disposal plant of a 1922 vintage, built for a town of 9,000 had not been properly maintained or operated for a town that had grown to 16,000 persons by 1950); *B.C. Peagrowers Ltd. v. City of Portage La Prairie* [1963], 45 WWR 513, Man. 1963, [1965] affrmd. Supreme Court of Canada, 54 WWR 477 (where the city failed to properly maintain a sewage lagoon and seepage invaded private property and plaintiff succeeded in a claim of nuisance for damages).

Lest individual rights be not sacrificed and lost for the greater concern of environmentalism and a cleaner world, it is worthy to note Justice Stewart's admonition in his opinion in *Village of Richmond Hill*, concerning the importance of the welfare of the



public at large, stated that : “ I conceive that it is not for the judiciary to permit the doctrine of utilitarianism to be used as a make-weight in the scales of justice.”

Ontario individuals, as well as the general public, should have found statutory protection and relief of bringing private nuisance claims against governmental agencies under Section 13(1) of the Ontario Environmental Protection Act, R.S.O., 1980, c.141, amended, which provides:

“13(1) Notwithstanding any other provision of this Act or the regulations, no person shall deposit, add, emit or discharge a contaminant or cause or permit the deposit, addition, emission or discharge of a contaminant into the natural environment that,

- (a) causes or is likely to cause an impairment of the quality of the natural environment for any use that can be made of it;
- (b) causes or is likely to cause injury or damage to property or to plant or animal life;
- (c) causes or is likely to cause harm or material discomfort to any person;
- (d) adversely affects or is likely to affect the health of any person;
- (e) impairs or is likely to impair the safety of any person;
- (f) renders or is likely to render any property or plant or animal life unfit for use by man;
- (g) causes or is likely to cause loss of enjoyment of normal use of property; or
- (h) interferes or is likely to interfere with the normal conduct of business.”

The regulations affecting landfills are found primarily in Ontario Regulation 347. According to a personal communication with a Professional Engineer and Senior Policy Advisor with the Policy and Program Development Section, Ontario Ministry of Environment and Energy, “This regulation contains definitions of waste management terms, waste classification and general standards for the operation of landfills. The regulations do not specify minimum technology standards for the design of landfills nor do they specifically prohibit landfills from being located in pits or quarries. Landfills are designed and approved based on site specific hydrogeological studies and engineering designs submitted by the applicant. Attenuation landfills are permitted provided these studies demonstrate the natural attenuation or protection capabilities of the subsurface are adequate to protect the environment. To determine if the potential impacts are acceptable, the applicant must demonstrate compliance with the Ministry’s Reasonable Use Policy. This policy specifies stringent limits for impact on ground water quality which a landfill must meet to obtain approval. \*\*\* Presently, pits and quarries are being used as landfills in the province.” (Blakeman, pers comm, 1996).

i) Evidence of an Ontario Sand and Gravel Pit as a Landfill with Natural Attenuation

The following case is offered as evidence to prove that construction materials pits may provide convenient and large capacity disposal space for MSW with natural attenuation to protect groundwaters from landfill contamination. Sand and gravel deposits are commonly underlain by clay beds affording natural attenuation for protection of groundwater, thereby acting as a natural clay liner.



In *Ontario v. Hale/Hale Sand and Gravel*, [1983] 13 C.E.L.R.19, the Attorney General for Ontario sought an injunction restraining Hale Sand and Gravel from continuing “any use, operation, establishment, alteration, enlargement or extension of a waste disposal site \*\*\*.” in its sand and gravel pit located in the town of Newcastle, Regional Municipality of Durham.

Hale had operated the surface pit for sand and gravel for some years prior to the early 1950’s when he commenced using it as a landfill site. Until 1970, there was no licensing requirement for its operation. However, in 1970 Hale applied for and received a provisional certificate of approval for a 20-acre (8.09 ha) site with a disposal capacity of 457,000 tons (408,150 metric tons). In subsequent years, Hale’s licence was repeatedly renewed and the operation continued. In the interim years, the Ministry kept continuous sampling of a nearby creek’s flow of water and the monitoring of 7 wells dug to detect the escape of any harmful contaminants from the dump. To the date of the action herein, no harmful contaminants were detected.

No lining of the pit was ever undertaken or leachate collection system installed. The pit was obviously located in a place of natural attenuation. The reasons for the injunctive petition were not based on any claims of groundwater pollution by the landfill. The reasons given by the Ministry to shut the operation down were : (1) Phase 1 had exceeded the approved final elevation contours by approximately 28 to 35 feet in height.(8.5 to 10.67 m); (2) Phase 2 had exceeded the approved final elevation contours by approximately 5 to 10 feet (1.52 to 3.05 m) in height and by approximately 38,000 cubic metres in volume; and (3) Phase 2 has been “unlawfully extended” in a westerly direction from the approved western boundary or footprint for Phase 2.

In reviewing the Ministry’s permission to operate the landfill, the Court found that the permitted area had been wrongfully decreased at a later date by the Ministry, therefore, the landfill had not been over-extended. It also found that the exceeded elevation in Phase 1 was done at the direct instigation of, and under the supervision of, the Ministry. That in so directing, the defendant reasonably believed the same course of contouring was to be followed in Phase 2.

The court found that the landfill appeared to be meeting a public need in a satisfactory, safe manner and that an injunction to prevent further operation and extension was unnecessary. It also found that evidence submitted showed that the pit was not overfilled and substantial capacity remained.

ii) A case of excavating three pits to cover one landfill:

The following case is offered to show that landfilling is an earth-disturbing operation as is mining. It further demonstrates that in opening pits for the recovery of clay to be used as impermeable material in a landfill, it has in fact created another potential waste disposal site in the mined clay pits which have the ability of natural attenuation to prevent contamination of groundwaters.



In the 1989 Ontario Supreme Court case of *Joint Board v. Municipality of Metropolitan Toronto et al* , [1989] 4 C.E.L.R. 4 (N.S.), O.S.C. (Divisional Court), or simply, *Ontario (Joint Bd.) v. Metropolitan Toronto*, two other individual claims were combined with it under the Consolidated Hearings Act, 1981, S.O. 1981, C.2, §1, viz., *Rizmi Holdings Ltd. et al v. Metropolitan Toronto*, and *Corporation of Town of Vaughan v. Metropolitan Toronto*.

The point of interest in reviewing this landfill case is to demonstrate the unnecessary added expense and time of lengthy involvement of a municipality to obtain rights to excavate clay on a proximate property, along with transportation easements across intervening properties, in order to obtain liner and cover clay for an existing landfill; also, to refute the expressed New Brunswick's Department of the Environment's position that "mineral pits do not meet the stringent requirements for a MSW depository. "

Case facts: The municipality of Toronto (hereafter, Metro) operated the Keele Valley landfill located in an adjoining municipality, the Town of Vaughan. Under Metro's provisional operating Certificate of Approval (Waste Disposal Site), a clay liner was required to minimise groundwater contamination from any leachate produced by the landfill pursuant to the Environmental Protection Act , R.S.O. 1980, c.14. Hitherto litigation, Metro excavated clay from two borrow pits, known as the Southeast Borrow Area (liner and cover clay) and the Avondale Borrow Area (cover clay), both close to the landfill. The clay was hauled from the pit across the former Landfill of the Town of Vaughan , pursuant to an easement agreement. In 1989, Metro found that the remaining reserves of clay were insufficient to complete construction for the 1989-90 year of landfilling.

Metro sought to expropriate more clay-bearing land, the Lilford-Pronesti lands, owned by a private owner and lying beyond the nearby existing Avondale borrow area, and to obtain further easements across the Pronesti and the Town of Vaughan's properties to reach the Keele Valley landfill. The Vaughan property was adjacent to Metro's landfill and was a completed and closed former landfill of the Town of Vaughan.

Metro applied to the Joint Board, composed of a member of the Ontario Municipal Board and a member of the Environmental Assessment Board, to consider their applications and proposals to acquire the properties and easements by expropriation. The Joint Board stated a case to the Divisional Court and the two property owners brought applications for judicial review on the issues.

The Ontario Court held that Metro had the power to expropriate land for the extraction of clay for use in its landfill, and was unaffected by the existing easement agreement. It was questioned whether Metro could expropriate land for landfill but only use it for the extraction of clay for use at the landfill. Under the Municipal Act, R.S.O. 1980, c. 302, the court found implied power to expropriate land for clay liner and cover



material as part of the granted powers and process for receiving, dumping and disposing of waste, subject only to approval of the municipality or the Ontario Municipal Board.

There was also the issue of whether Part V of the Environmental Protection Act, R.S.O. 1980, applied to Metro's proposal. The Court supported the Ministry of Environment's position that the Environment Act did not apply because the clay lands were not to be used as a "waste disposal site" or "waste management system". The evidence showed that the sole purpose of expropriation was to obtain clay deposits, and as such was only an "alteration" of part of the waste management system, but the land was neither a waste disposal site, nor part of the waste disposal operation of the landfill.

It should be noted in reading *Metro Toronto* that low permeability clay is not only desirable for lining and cover material for their landfill, but required by regulation. Metro Toronto actually mines the clay for landfill use. They had already mined it from two borrow pits (Avondale and Southeast) and were preparing to open a third clay pit for more material.

iii) An unusual decision, where enforcement by the government failed, occurred in *Regina v. Enso Forest Products Ltd.* [1992], 70 B.C.L.R. (2d) 145 (S.C.). The Supreme Court of British Columbia found, under the Waste Management Act (WMA) of B.C., there is a difference between discharging pollutants into the environment and discharging in the "works", or plant site.

In *Enso*, 41,000 gallons (155,201 litres) of oil escaped from the defendant's pulp mill due to a pump failure. The oil flowed into a run-off ditch and pooled in an adjacent landfill site. None of it left the mill site. The company was convicted of violating section 3(1.1) of the WMA, allowing "waste to be discharged into the environment".

On appeal, the court found that the ditch constituted "works" within the meaning of the Act. The term "works" included "all things used by people which either created pollution or helped to control pollution. By contrast, 'environment' suggested something that was considered helpful to life and was worth preserving." The two terms were distinct and mutually exclusive. The court held that the purpose of the ditch was to collect run-off, which was covered by "works" and not considered part of the environment. The conviction of violation of the WMA was reversed.

## **6.5 Conclusions and Comments**

Generally speaking, there has been a tightening of regulations for controlling waste management, e.g., in the U.K., the addition and imposition of a "duty of care" on those holding a waste management licence; and, the duty imposed on WCA's to recycle household and commercial wastes collected.

Deposition of MSW is far more safe and reliable in 1996 than a decade ago with the increased regulation of waste control and with the advances made in landfill technology



by waste management, e.g., preventing ground water pollution by leachates, utilisation of the concept of total containment rather than the former attenuation, landfill HDPE liners of tougher and better qualities, self-repairing of ruptured liners, treatment of contaminating waters and leachates by biotechnics, collecting and greater utilisation of landfill gas for energy production, et al. Educating and making the public aware of the vast technical advances for prevention of water contamination, along with site aesthetics, control traffic, noise and odours, should lessen their opposition to landfill sites. With decreased public opposition to siting of landfills, the urgency of future MSW depository space should also lessen. Though opposition to “bad neighbour” landfills will likely die hard, the public must be educated to place trust and confidence in the public authorities and agencies appointed and trained to protect the environment while administering the public welfare.

Inter-regional commercial movement by long distance haulage of MSW from generating points to waste site depositories has made decided in-roads against waste disposal as a local matter restricted to local government management and decisions. Similarly and simultaneously, in-roads are being made against the former position that aggregate quarries cannot tolerate long, uneconomic hauls to construction centres. The combination of more distant aggregate quarries and landfill sites makes the dual purpose of surface mining and reclamation of the land by MSW backfilling immensely attractive.